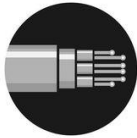


**25**  
**YEARS**  
SYSTEM WARRANTY



### Description

DME PROLINK's Multi Loose tube/ Multi Ribbon Tube cable provides excellent optical transmission and physical performance. Loose tube cable is a design that has high tensile strength and flexibility in a compact cable size. Single mode fiber is manufactured by the vapour axial deposition (VAD) process to produce the highest quality glass with excellent geometry, high strength characteristics, and attenuation that approaches theoretical minimum. The single mode fiber is fully compatible with other commercially available single mode fibers and has the zero dispersion wavelength around 1310nm. The main operating wavelength region of the fiber is around 1285nm and 1625nm. Its optical properties are achieved through a germanium doped silica based core with a pure silica cladding. An acrylate protective coating is applied over glass cladding to provide the necessary maximum fiber lifetime.

DME PROLINK ensure a continuing level of quality in our cable products through several quality control programs including ISO 9001. Also, it ensure product reliability through rigorous qualification testing of each product family. Both initial and periodic qualification testing are performed to assure the cable's performance and durability in the field environments.

### Reference:

IEC 60793, IEC 60794, ITU-T G 650, G 652D

### Cable Design (4 – 300 Core):

The cable core contains single mode fibers in loose tubes and required number of filler which are stranded (S-Z stranding method) around central strength member with water blocking yarn or tape. The interstices in the loose tubes are filled with jelly compound. And then wrapping tape, glass yarn and Flame Retardant PVC sheath apply over the cable core.

### Cable Design (400 – 1000 Core):

The cable core contains consist of parallel arranged 12-primary coated fiber (ribbon fiber) in loose tubes and required number of filler which are stranded (S-Z stranding method) around central strength member with water blocking yarn or tape. The interstices in the loose tubes are filled with jelly compound. And then wrapping tape, corrugated steel tape and flame retardant PVC sheath apply over the cable core

## Optical Fiber G.652D Specification

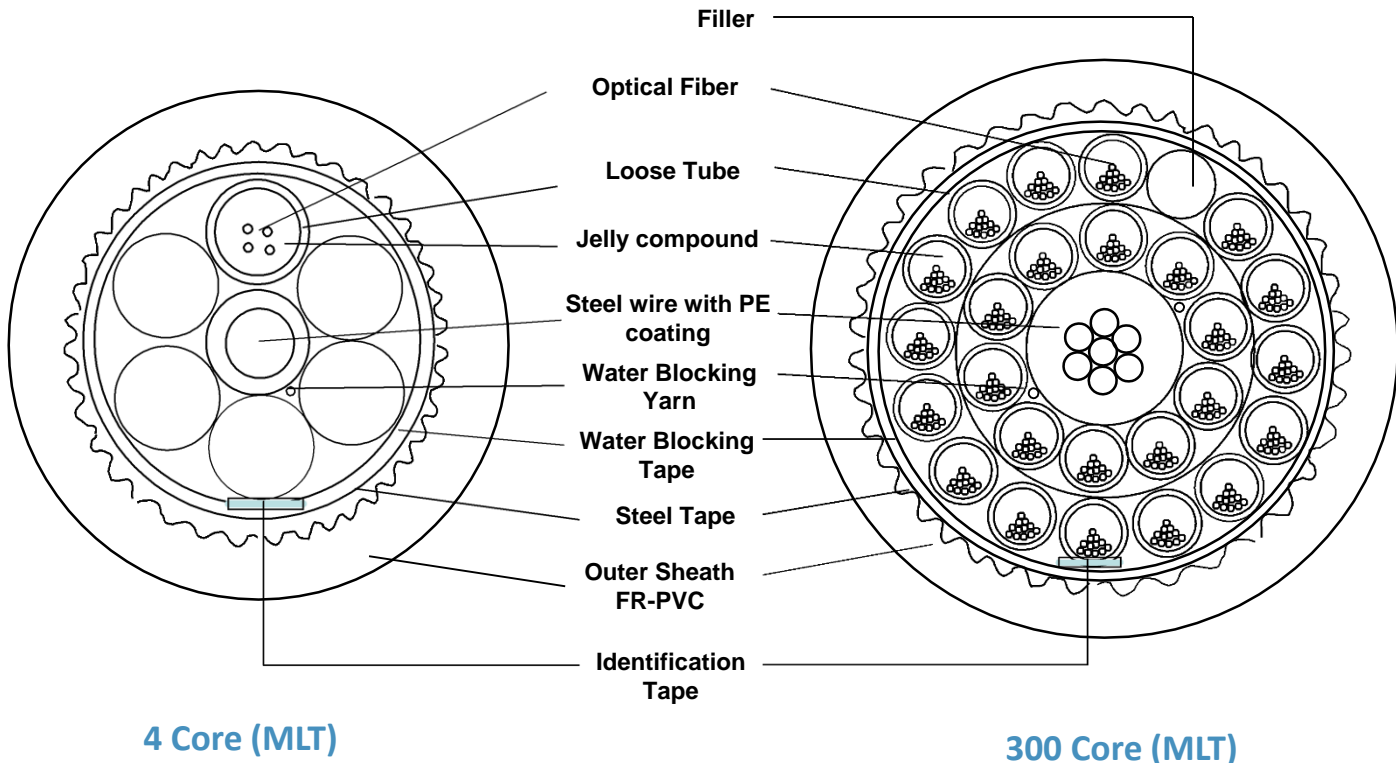
Category	Description	Values
<b>Optical Specifications</b>	Attenuation @1310 nm	≤0.40 dB/km
	Attenuation @1550 nm	≤0.25 dB/km
	Chromatic Dispersion at 1285~1330nm	≤3.5 ps/nm·km
	Chromatic Dispersion at 1550nm	≤18 ps/nm·km
	Zero Dispersion Wavelength	1300~1324 nm
	Zero Dispersion Slope	≤0.093 ps/nm <sup>2</sup> ·km
	Cable Cutoff Wavelength (λ <sub>cc</sub> )	≤1100 to 1330 nm
<b>Dimensional Specifications</b>	Mode Field Diameter @1310 nm	9.2 ± 0.5μm
	Cladding Diameter	125 ±1μm
	Cladding non circularity	≤1.0%
	Coating diameter	245 ± 5μm
<b>Mechanical Specifications</b>	Mode Field concentricity error	≤0.8 μm
	Fiber Proof Test Level	≥ 1% x 1 Sec

## Factory Tests

Cable Bend Test		Crush Resistance Test	
Test standard	IEC 60794-1-2 E11	Test standard	IEC 60794-1-2 E3
Bending Radius	20 x diameter of cable	Applied Load	2000 N/100mm plate
Bending Turns	1 Turn	Duration time	10 sec
Cycles	5 cycles	Test results	Additional attenuation: ≤ 0.1 dB
Test results	Additional attenuation: ≤ 0.1 dB No damage to outer jacket and inner elements		No damage to outer jacket and inner elements
Impact Resistance Test			
Test standard	IEC 60794-1-2 E4		
Test Load	1Kg x 1m		
Test results	Additional attenuation: ≤ 0.1 dB		
	No damage to outer jacket and inner elements		

**Construction of Optical fiber cable (Loose Fiber Core)**

Description		Construction										
Total Fiber Core		4	6	8	12	16	24	48	72	100	200	300
Number of Loose Tube		1	1	2	2	3	4	4	6	9	17	25
Number of Fillers		5	5	4	4	3	2	2	0	1	1	1
Number of Fiber per Tube		4	6	6,2	6	6,4	6	12	12	12,4	12,8	12
Tube Material		PBT (Polybutylene Terephthalate)										
Filler Material		PE String										
Central Strength Member		Single or stranded steel wire with PE coating										
Filling Material		Water blocking yarn or Tape										
Wrapping Material		Water Blocking Tape										
Armoring		Corrugated Steel Tape										
Outer Sheath Material		Nom. 2.0mm Flame Retardant PVC										
Cable	Nom. Diameter (mm)	12.0					12.7	12.7	15.6	17.5	20.4	
	Nom. Weight (kg/km)	175					194	196	288	355	445	
Max. Tensile Strength		270Kg during Installation / 100Kg after Installation										
Operating Temperature Range		- 30 to 70°C										

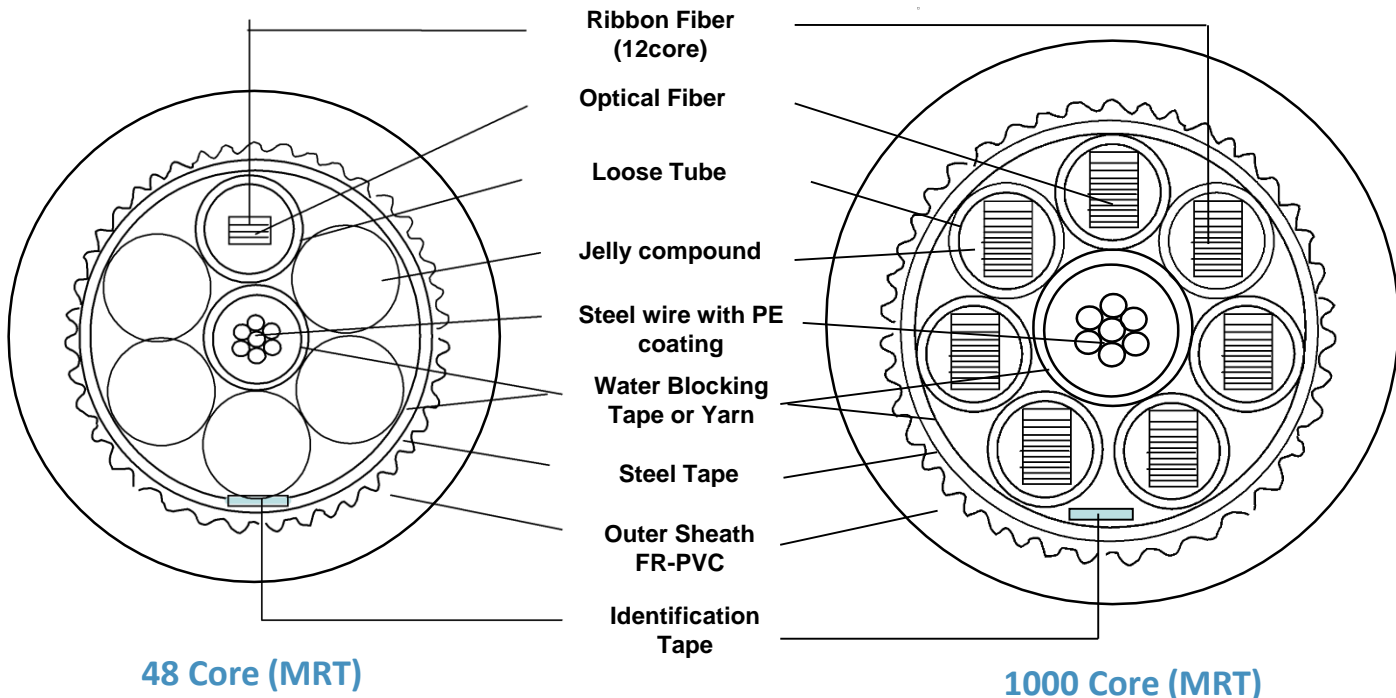


**4 Core (MLT)**

**300 Core (MLT)**

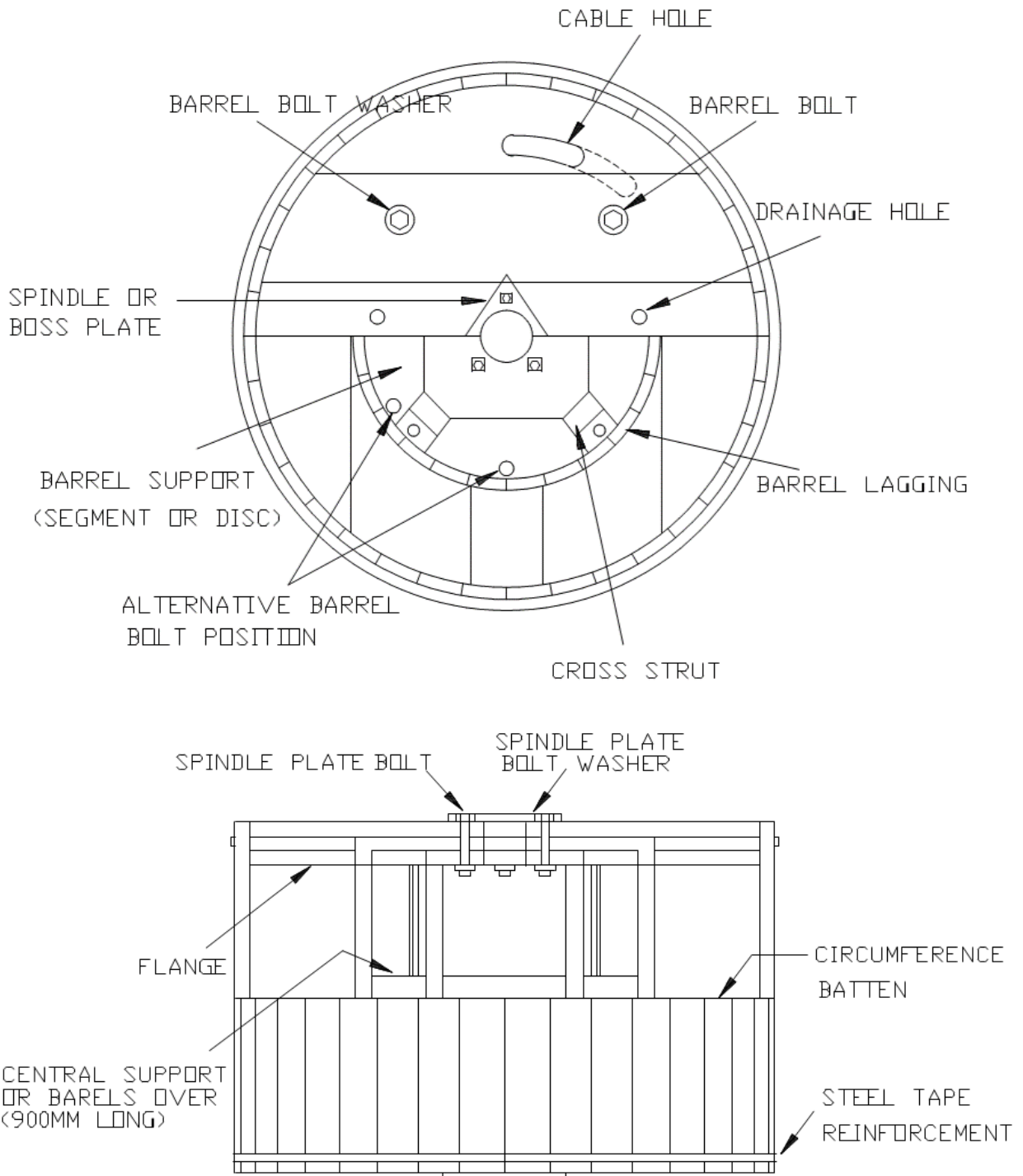
**Construction of Optical fiber cable (Ribbon Fiber Core)**

Description		Construction								
Total Fiber Core		48	72	100	200	300	400	600	800	1000
Number of Loose Tube		1	1	2	3	5	6	9	6	7
Number of Ribbon		4	6	9	17	25	34	50	67	84
Consist of Ribbon	12 Fiber Ribbon	3	5	8	16	24	33	49	66	83
	Last Ribbon	1 (12 Fiber)	1 (12 Fiber)	1 (4 + 8 Spare)	1 (8 + 4 Spare)	1 (12 Fiber)	1 (4 + 8 Spare)	1 (12 Fiber)	1 (8 + 4 Spare)	1 (4 + 8 Spare)
Number of Fiber per Tube		48	72	72,36	72,60	72,12	72,48	72,24	144,84	144
Tube Material		Plastic Material (TPEE etc.)								
Filler Material		PE String								
Central Strength Member		Single or stranded steel wires with PE coating								
Filling Material		Water blocking yarns or Tape								
Wrapping Material		Water Blocking Tape								
Armoring		Corrugated Steel Tape for Anti Rodent								
Outer Sheath Material		Nom. 2.0mm Flame Retardant PVC								
Cable	Nom. Diameter (mm)	24.8			30.6	31.0	34.0			
	Nom. Weight (kg/km)	590			885	924	1125			
Max. Tensile Strength		270Kg during Installation / 100Kg after Installation								
Operating Temperature Range		- 30 to 70°C								



**Drum Packing and Marking**

DME PROLINK's each length of cable will have both ends effective sealed. Each cable drum will be marked to indicate the direction of rotating for reeling of the cable. On both side of the cable drum, required marking will be printed. The minimum barrel diameter of the drums will be 40 times the nominal diameter of the cable. Required letters will be distinctly marked on a weather proof material on both outer sides of the drum flange. The marking plates will be made of a non-corrodible material.



### Color coding of Optical Fiber in Multi Loose Tube / Multi Ribbon Tube

No. of Fiber Per Tube	1	2	3	4	5	6	7	8	9	10	11	12
6 Cores	Blue	Orange	Green	Red	Yellow	Violet						
12 Cores	Blue	Orange	Green	Red	Yellow	Violet	Brown	Black	White	Slate	Aqua	Pink
12 Core (R) *	Blue	Orange	Green	Red	Yellow	Violet	Brown	Black	White	Slate	Aqua	Pink

(R)\* : Ribbon fiber (12core)

### Part Number

D 1 1 1 x - n t m j p s c

x	Pin assigned by ECS
0-9	Inventory Management Index

c	Color
BK	Black

n	Number of Fiber Core
04 - 1000	4 – 1000 Fiber Core

s	Specification
2D	G.652D

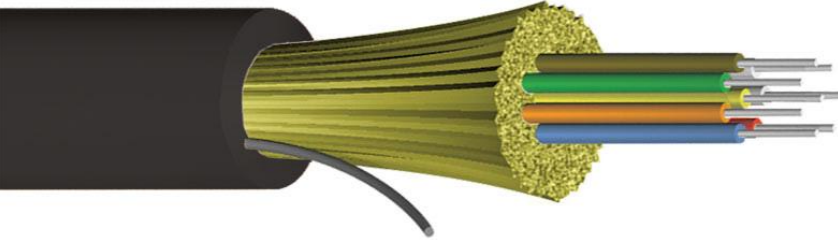
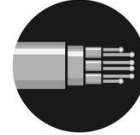
t	Type
LF	Loose Fiber
RF	Ribbon Fiber

m	Mode
6	OS1
7	OS2

j	Outer Jacket Material
PV	Polyvinyl Chloride
PE	Polyethylene
FRPV	Flame Retardant Polyvinyl Chloride

p	Physical Construction
ST	Steel Tape Armor





## Description

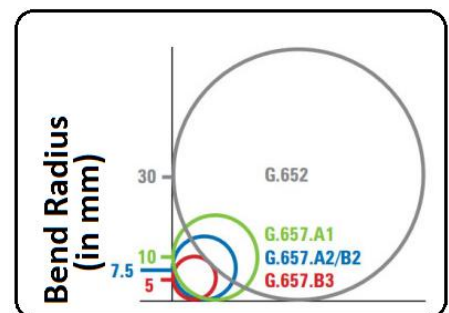
DME PROLINK's Tight-Buffered Distribution cable is designed specifically for indoor and outdoor distribution applications requiring low to higher core-counts. The Single-mode FO cable comes in either G.652D or G.657A1/A2 specifications. The multimode FO cables come in OM3 and OM4 specifications. Cable with G.657A1/A2 specifications provides the bend-insensitivity and robustness essential to a successful FTTH deployment

Circular construction and a Kevlar yarn strength member make this cable ideal for mainly indoor deployments where riser and/or containment spaces are limited. Also, this cable can be used for partial outdoor application laid within Outdoor rated ducts. Indoor/Outdoor Tight Buffered cables are specified for campus network cabling between buildings where inter-building lengths are short enough that the installer can recognize savings from the lower costs of terminating tight buffered cables.

The Fiber used in DME PROLINK's Fiber Optic cables, are made of pure silica and germanium doped silica. A UV curable acrylate material is applied over the Fiber Cladding as primary protective coating. DME PROLINK quality personals ensures product reliability through rigorous qualification testing to assure cable performance and durability in adverse field environments. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001.

## Features & Benefits

- Available as G.652D, G.657A1/A2,
- Outer jacket is moisture-resistant, fungus-resistant and UV resistant
- Approved by Service Providers
- LSZH and OFNR Rated
- Predictable lifetime of 30 years
- Complies with Telcordia GR-20 core
- Color code scheme: According to EIA/TIA 598



The Fiber within FO cable are designed, Manufactured and tested according to below standards:

- IEC 60793-1: Optical Fiber Part 1: Generic Specification
- IEC 60793-2: Optical Fiber Part 2: Product Specification
- IEC 60794-2: Optical Fiber Cables Part 2 Indoor cables- Sectional Specification
- ITU-T G.651: Characteristics of multi-mode optical fiber and cable
- ITU-T G.652: Characteristics of a Single-mode optical fiber and cable
- ITU-T G.655: Characteristics of a non-zero dispersion-shifted single-mode optical fiber and cable
- ITU-T G.657: Characteristics of a bending-loss insensitive single-mode optical fiber

### Optical Fiber G.652D Specification

Category	Description	Values	
		Before Cabling	After Cabling
Optical Specifications	Attenuation @1310 nm	≤0.34 dB/km	≤0.40 dB/km
	Attenuation @1550 nm	≤0.20 dB/km	≤0.30 dB/km
	Zero Dispersion Slope	≤0.092 ps/nm <sup>2</sup> -km	
	Cable Cutoff Wavelength (λ <sub>cc</sub> )	≤1260 nm	
	Macro bending Loss (100 turns; Φ60 mm) @1550 nm (100 turns; Φ60 mm) @1625 nm	≤ 0.05 dB ≤ 0.10 dB	
	Mode Field Diameter @1310 nm	8.6 ± 0.4μm	
	Mode Field Diameter @1550 nm	9.8 ± 0.5μm	
Dimensional Specifications	Cladding Diameter	125 ±1μm	
	Primary Buffer Coating diameter	245 ± 7μm	
	Tight Buffer Coating diameter	0.9mm ± 5μm	
	Cladding non circularity	≤1.0%	
	Cladding / coating concentricity error	≤12μm	
	Core/clad concentricity error	≤0.6μm	
Mechanical Specifications	Proof stress	≥0.69Gp	
Environmental Specification	Operation temperature range	-20°C to + 60°C	
	Installation temperature range	-10°C to + 60°C	
	Transport and storage temperature range	-20°C to + 60°C	



### Optical Fiber G.657A1 Specification

Category	Description	Values	
		Before Cabling	After Cabling
Optical Specifications	Attenuation @ 1310 nm	≤0.34 dB/km	≤0.40 dB/km
	Attenuation @ 1550 nm	≤0.20 dB/km	≤0.30 dB/km
	Zero Dispersion Slope	≤0.092 ps/nm <sup>2</sup> ·km	
	Zero Dispersion Wavelength	1300 – 1324 nm	
	Cable Cutoff Wavelength (λ <sub>cc</sub> )	≤1260 nm	
	Macro bending Loss (10 turns; Φ30 mm) @1550 nm (10 turns; Φ30 mm) @1625 nm (1 turns; Φ20 mm) @1550 nm (1 turns; Φ20 mm) @1625 nm	≤ 0.25 dB ≤ 1.0 dB ≤ 0.75 dB ≤ 1.5 dB	
	Mode Field Diameter @1310 nm	9.0 ± 0.4μm	
Dimensional Specifications	Cladding Diameter	125 ±1μm	
	Cladding non circularity	≤1.0%	
	Coating diameter	245 ± 7μm	
	Coating non circularity	≤ 6%	
	Cladding / coating concentricity error	≤ 6μm	
	Core/clad concentricity error	≤0.6μm	
Mechanical Specifications	Proof stress	≥0.69Gp	
Environmental Specification	Operation temperature range	-20°C to + 60°C	
	Installation temperature range	-10°C to + 60°C	
	Transport and storage temperature range	-20°C to + 60°C	

### Optical Fiber G.657A2 Specification

Category	Description	Values	
		Before Cabling	After Cabling
Optical Specifications	Attenuation @ 1310 nm	≤0.34 dB/km	≤0.40 dB/km
	Attenuation @ 1550 nm	≤0.20 dB/km	≤0.30 dB/km
	Zero Dispersion Slope	≤0.092 ps/nm <sup>2</sup> ·km	
	Zero Dispersion Wavelength	1300 – 1324 nm	
	Cable Cutoff Wavelength (λ <sub>cc</sub> )	≤1260 nm	

## Optical Fiber G.657A2 Specification

Category	Description	Values	
		Before Cabling	After Cabling
Optical Specifications	Macro bending Loss (10 turns; $\Phi$ 30 mm) @1550 nm		$\leq 0.03$ dB
	(10 turns; $\Phi$ 30 mm) @1625 nm		$\leq 0.1$ dB
	(1 turns; $\Phi$ 20 mm) @1550 nm		$\leq 0.1$ dB
	(1 turns; $\Phi$ 20 mm) @1625 nm		$\leq 0.2$ dB
	1 turns; $\Phi$ 15 mm) @1550 nm		$\leq 0.5$ dB
	(1 turns; $\Phi$ 15 mm) @1625 nm		$\leq 1.0$ dB
	Mode Field Diameter @1310 nm		$8.6 \pm 0.4\mu\text{m}$
Dimensional Specifications	Cladding Diameter		$125 \pm 1\mu\text{m}$
	Cladding non circularity		$\leq 1.0\%$
	Coating diameter		$245 \pm 7\mu\text{m}$
	Coating non circularity		$\leq 6\%$
	Cladding / coating concentricity error		$\leq 6\mu\text{m}$
	Core/clad concentricity error		$\leq 0.6\mu\text{m}$
Mechanical Specifications	Proof stress		$\geq 0.69\text{Gp}$
Environmental Specification	Operation temperature range		$-20^{\circ}\text{C}$ to $+60^{\circ}\text{C}$
	Installation temperature range		$-10^{\circ}\text{C}$ to $+60^{\circ}\text{C}$
	Transport and storage temperature range		$-20^{\circ}\text{C}$ to $+60^{\circ}\text{C}$

## Physical / Mechanical Characteristics of Fiber Optic Cable

Physical	Fiber count	6	8	12	24
	Tight buffer fiber diameter	0.9mm ± 50µm			
	Strength member	Aramid yarns			
	Cable OD	5 mm ± 5%	5.5 mm ± 5%	6.0 mm ± 5%	8.0 mm ± 5%
	Cable weight	20 kg/km ± 15%	25 kg/km ± 15%	30 kg/km ± 15%	42 kg/km ± 15%
Mechanical	Max. tensile load	200N			
	Crush resistance	500N/10cm			
	Minimal installation bending radius	20 x OD			
	Minimal operation bending radius	10 x OD			
Environmental	Operation temperature range	-20°C to + 60°C			
	Installation temperature range	-10°C to + 50°C			
	Transport and storage temperature range	-20°C to + 60°C			

Note: The Physical, Mechanical and Environmental characteristics of FO cable mentioned here is the minimum. It can be customized based on client requirement where like Crush Resistance and Tensile load can be improved if required and hence accordingly the dimension of the cable will also change.

### Routine Factory tests of single-mode Optical fiber

Parameters	Test Standards
Mode field diameter	IEC 60793-1-45.
Mode field Core/clad concentricity	IEC 60793-1-20
Cladding diameter	IEC 60793-1-20
Cladding non-circularity	IEC 60793-1-20
Attenuation coefficient	IEC 60793-1-40
Chromatic dispersion	IEC 60793-1-42
Cable cut-off wavelength	IEC 60793-1-44

### Routine Factory tests of Multimode Optical fiber

Parameters	Test Standards
Cladding diameter	IEC 60793-1-20
Cladding non-circularity	IEC 60793-1-20
Attenuation coefficient	IEC 60793-1-40

## Factory Test List for Fiber Optic Cable\*

### Tension Loading Test

Test Standard	IEC 60794-1-2 E1
Sample Length	No less than 50 meters
Load	Max. tension load
Duration time	1 minute
Test results	Additional attenuation $\leq$ 0.4dB
	No damage to outer jacket and inner elements

### Crush / Compression Test

Test Standard	IEC 60794-1-2 E3
Load	Crush load
Duration time	1 minute
Test number	1
Test results	Additional attenuation $\leq$ 0.4dB
	No damage to outer jacket and inner elements

### Impact Resistance Test

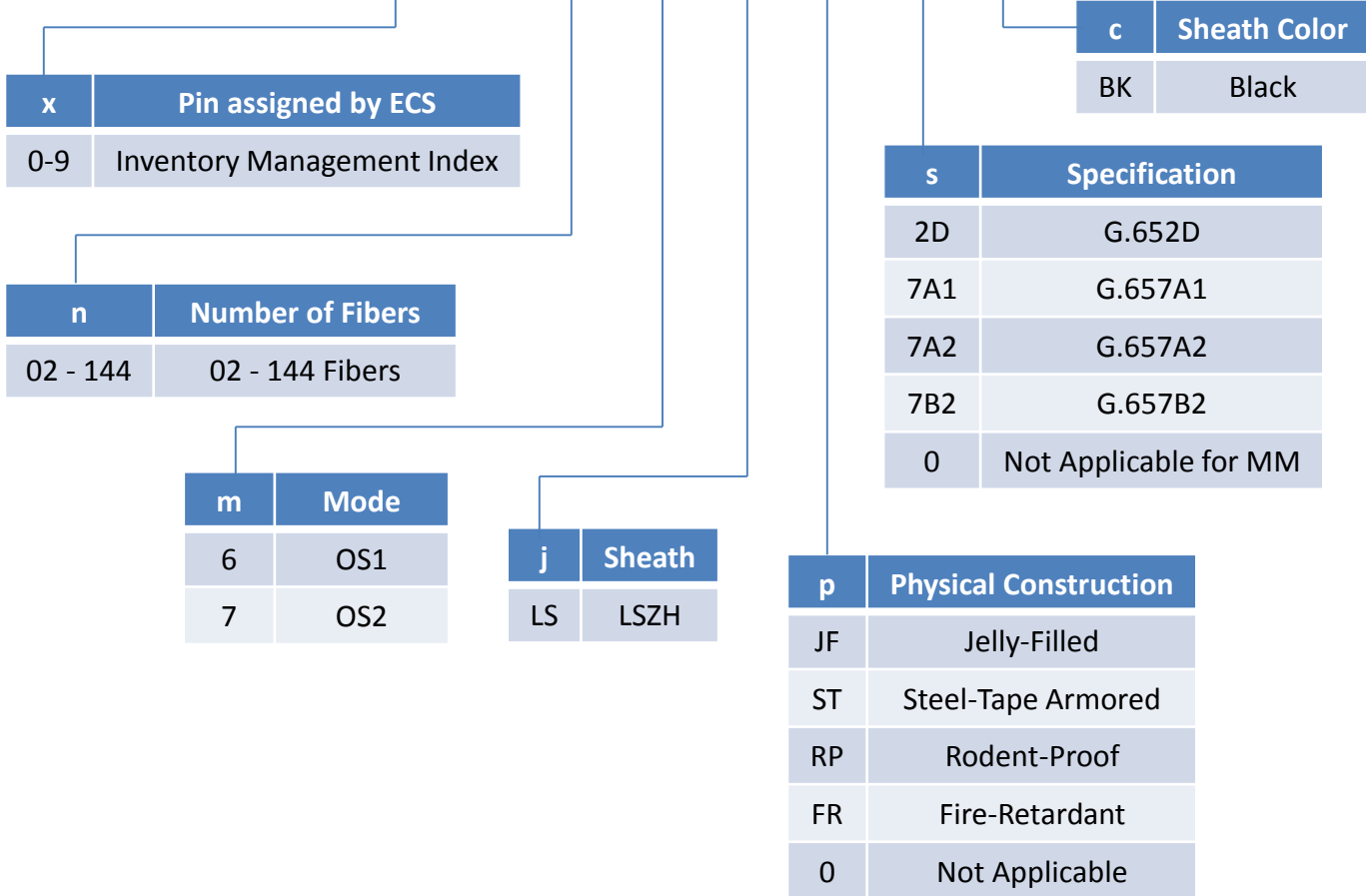
Test Standard	IEC 60794-1-2 E4
Impact energy	1J
Radius	12.5mm
Impact Points	3
Impact Number	1
Test results	Additional attenuation $\leq$ 0.4dB
	No damage to outer jacket and inner elements

### Bend Test

Test Standard	IEC 60794-1-2 E11A
Bending Radius	20 x diameter of cable
Turn number	4
Number of cycles	1
Test results	Additional attenuation $\leq$ 0.4dB
	No damage to outer jacket and inner elements

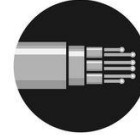
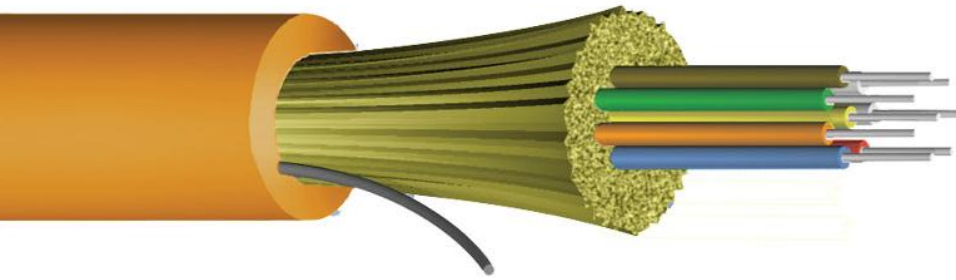
**Part Number**

D 1 1 2 x - n m j p s c



**Examples**

D112x-127LS02DBK	Fiber Optic Indoor/Outdoor Cable, 12 Core, Distribution TB, Single-mode OS2, LSZH, G.652D, Black
D112x-247LS02DBK	Fiber Optic Indoor/Outdoor Cable, 24 Core, Distribution TB, Single-mode OS2, LSZH, G.652D, Black
D112x-127LS0A1BK	Fiber Optic Indoor/Outdoor Cable, 12 Core, Distribution TB, Single-mode OS2, LSZH, G.657A1, Black
D112x-247LS0A1BK	Fiber Optic Indoor/Outdoor Cable, 24 Core, Distribution TB, Single-mode OS2, LSZH, G.657A1, Black



## Description

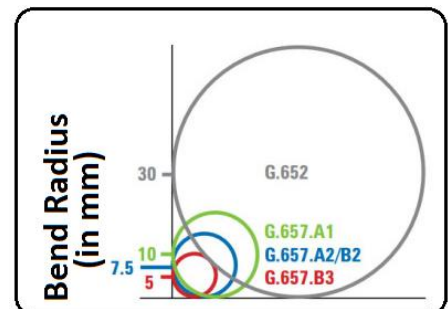
DME PROLINK's Tight-Buffered Distribution cable is designed specifically for indoor distribution applications requiring low to higher core-counts. The Single-mode FO cable comes in G.652D, G.657A1/A2 and G.657B2 specifications. It provides the bend-insensitivity and robustness essential to a successful FTTH deployment

Circular construction and a Kevlar yarn strength member make this cable ideal for indoor deployments where riser and/or containment spaces are limited.

The Fiber used in DME PROLINK's Fiber Optic cables, are made of pure silica and germanium doped silica. A UV curable acrylate material is applied over the Fiber Cladding as primary protective coating. DME PROLINK quality personals ensures product reliability through rigorous qualification testing to assure cable performance and durability in adverse field environments. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001.

## Features & Benefits

- Available as G.652D, G.657A1/A2 and G.657B2
- Approved by Service Providers
- LSZH and OFNR Rated
- Predictable lifetime of 30 years
- Complies with Telcordia GR-20 core
- Color code scheme: According to EIA/TIA 598



**The Fiber within FO cable are designed, Manufactured and tested according to below standards:**

- IEC 60793-1: Optical Fiber Part 1: Generic Specification
- IEC 60793-2: Optical Fiber Part 2: Product Specification
- IEC 60794-2: Optical Fiber Cables Part 2 Indoor cables- Sectional Specification
- ITU-T G652: Characteristics of a Single-mode optical fiber and cable
- ITU-T G.655: Characteristics of a non-zero dispersion-shifted single-mode optical fiber and cable
- ITU-T G.657: Characteristics of a bending-loss insensitive single-mode optical fiber

### Optical Fiber G.652D Specification

Category	Description	Values	
		Before Cabling	After Cabling
Optical Specifications	Attenuation @1310 nm	≤0.34 dB/km	≤0.40 dB/km
	Attenuation @1550 nm	≤0.20 dB/km	≤0.30 dB/km
	Zero Dispersion Slope	≤0.092 ps/nm <sup>2</sup> ·km	
	Cable Cutoff Wavelength (λ <sub>cc</sub> )	≤1260 nm	
	Macro bending Loss (100 turns; Φ60 mm) @1550 nm (100 turns; Φ60 mm) @1625 nm	≤ 0.05 dB ≤ 0.10 dB	
	Mode Field Diameter @1310 nm	8.6 ± 0.4μm	
	Mode Field Diameter @1550 nm	9.8 ± 0.5μm	
Dimensional Specifications	Cladding Diameter	125 ±1μm	
	Primary Buffer Coating diameter	245 ± 7μm	
	Tight Buffer Coating diameter	0.9mm ± 5μm	
	Cladding non circularity	≤1.0%	
	Cladding / coating concentricity error	≤12μm	
	Core/clad concentricity error	≤0.6μm	
Mechanical Specifications	Proof stress	≥0.69Gp	
Environmental Specification	Operation temperature range	-20°C to + 60°C	
	Installation temperature range	-10°C to + 60°C	
	Transport and storage temperature range	-20°C to + 60°C	

### Optical Fiber G.657A1 Specification

Category	Description	Values	
		Before Cabling	After Cabling
Optical Specifications	Attenuation @1310 nm	≤0.34 dB/km	≤0.40 dB/km
	Attenuation @1550 nm	≤0.20 dB/km	≤0.30 dB/km
	Zero Dispersion Slope	≤0.092 ps/nm <sup>2</sup> ·km	
	Zero Dispersion Wavelength	1300 – 1324 nm	
	Cable Cutoff Wavelength (λ <sub>cc</sub> )	≤1260 nm	
	Macro bending Loss (10 turns; Φ30 mm) @1550 nm (10 turns; Φ30 mm) @1625 nm (1 turns; Φ20 mm) @1550 nm (1 turns; Φ20 mm) @1625 nm	≤ 0.25 dB ≤ 1.0 dB ≤ 0.75 dB ≤ 1.5 dB	
	Mode Field Diameter @1310 nm	9.0 ± 0.4μm	



### Optical Fiber G.657A1 Specification

Category	Description	Values	
		Before Cabling	After Cabling
Dimensional Specifications	Cladding Diameter	125 ±1µm	
	Cladding non circularity	≤1.0%	
	Coating diameter	245 ± 7µm	
	Coating non circularity	≤ 6%	
	Cladding / coating concentricity error	≤ 6µm	
	Core/clad concentricity error	≤0.6µm	
Mechanical Specifications	Proof stress	≥0.69Gp	
Environmental Specification	Operation temperature range	-20°C to + 60°C	
	Installation temperature range	-10°C to + 60°C	
	Transport and storage temperature range	-20°C to + 60°C	

### Optical Fiber G.657A2 Specification

Category	Description	Values	
		Before Cabling	After Cabling
Optical Specifications	Attenuation @ 1310 nm	≤0.34 dB/km	≤0.40 dB/km
	Attenuation @ 1550 nm	≤0.20 dB/km	≤0.30 dB/km
	Zero Dispersion Slope	≤0.092 ps/nm <sup>2</sup> ·km	
	Zero Dispersion Wavelength	1300 – 1324 nm	
	Cable Cutoff Wavelength (λ <sub>cc</sub> )	≤1260 nm	
	Macro bending Loss (10 turns; Φ30 mm) @1550 nm	≤ 0.03 dB	
	(10 turns; Φ30 mm) @1625 nm	≤ 0.1 dB	
	(1 turns; Φ20 mm) @1550 nm	≤ 0.1 dB	
	(1 turns; Φ20 mm) @1625 nm	≤ 0.2 dB	
	1 turns; Φ15 mm) @1550 nm	≤ 0.5 dB	
(1 turns; Φ15 mm) @1625 nm	≤ 1.0 dB		
	Mode Field Diameter @1310 nm	8.6 ± 0.4µm	
Dimensional Specifications	Cladding Diameter	125 ±1µm	
	Cladding non circularity	≤1.0%	
	Coating diameter	245 ± 7µm	
	Coating non circularity	≤ 6%	
	Cladding / coating concentricity error	≤ 6µm	
	Core/clad concentricity error	≤0.6µm	

### Optical Fiber G.657A2 Specification

Category	Description	Values	
		Before Cabling	After Cabling
Mechanical Specifications	Proof stress	≥0.69Gp	
	Operation temperature range	-20°C to + 60°C	
Environmental Specification	Installation temperature range	-10°C to + 60°C	
	Transport and storage temperature range	-20°C to + 60°C	

### Optical Fiber G.657B2 Specification

Category	Description	Values	
		Before Cabling	After Cabling
Optical Specifications	Attenuation @1310 nm	≤0.35 dB/km	≤0.40 dB/km
	Attenuation @1550 nm	≤0.21 dB/km	≤0.30 dB/km
	Zero Dispersion Slope	≤0.11 ps/nm <sup>2</sup> ·km	
	Zero Dispersion Wavelength	1250 – 1350 nm	
	Dispersion coefficient	@1288~1339nm	≤ 3.5ps/nm·km
		@1271~1360nm	≤ 5.3ps/nm·km
		@1550nm	≤ 18ps/nm·km
		@1625nm	≤ 22ps/nm·km
Dimensional Specifications	Macro bending Loss (10 turns; Φ30 mm) @1550 nm	≤ 0.03 dB	
	(10 turns; Φ30 mm) @1625 nm	≤ 0.1 dB	
	(1 turns; Φ20 mm) @1550 nm	≤ 0.1 dB	
	(1 turns; Φ20 mm) @1625 nm	≤ 0.2 dB	
	1 turns; Φ15 mm) @1550 nm	≤ 0.5 dB	
	(1 turns; Φ15 mm) @1625 nm	≤ 1.0 dB	
	Mode Field Diameter @1310 nm	8.6~9.5 ± 0.4μm	
Mechanical Specifications	Cladding Diameter	125 ±0.7μm	
	Cladding non circularity	≤1.0%	
	Coating diameter	245 ± 10μm	
	Coating non circularity	≤ 6%	
	Cladding / coating concentricity error	≤ 6μm	
	Core/clad concentricity error	≤0.5μm	
Environmental Specification	Proof stress	≥1.05%	
	Operation temperature range	-20°C to + 60°C	
	Installation temperature range	-10°C to + 60°C	
	Transport and storage temperature range	-20°C to + 60°C	

## Physical / Mechanical Characteristics of Fiber Optic Cable

<b>Physical</b>	Fiber count	16	24
	Tight buffer fiber diameter	0.9mm ± 50µm	
	Strength member	Aramid yarns	
	Cable OD	7.0 mm ± 5%	8.0 mm±5%
	Cable weight	32 kg/km ± 15%	42 kg/km ± 15%
<b>Mechanical</b>	Max. tensile load	400N	
	Crush resistance	500N/10cm	
	Minimal installation bending radius	20 x OD	
	Minimal operation bending radius	10 x OD	

## Routine Factory tests of single-mode fiber

Parameters	Test Standards
Mode field diameter	IEC 60793-1-45.
Mode field Core/clad concentricity	IEC 60793-1-20
Cladding diameter	IEC 60793-1-20
Cladding non-circularity	IEC 60793-1-20
Attenuation coefficient	IEC 60793-1-40
Chromatic dispersion	IEC 60793-1-42
Cable cut-off wavelength	IEC 60793-1-44

## Factory Test List for Fiber Optic Cable\*

### Tension Loading Test

Test Standard	IEC 60794-1-2 E1
Sample Length	No less than 50 meters
Load	Max. tension load
Duration time	1 minute
Test results	Additional attenuation ≤ 0.4dB
	No damage to outer jacket and inner elements

## Factory Test List for Fiber Optic Cable\*

### Crush / Compression Test

Test Standard	IEC 60794-1-2 E3
Load	Crush load
Duration time	1 minute
Test number	1
Test results	Additional attenuation $\leq$ 0.4dB No damage to outer jacket and inner elements

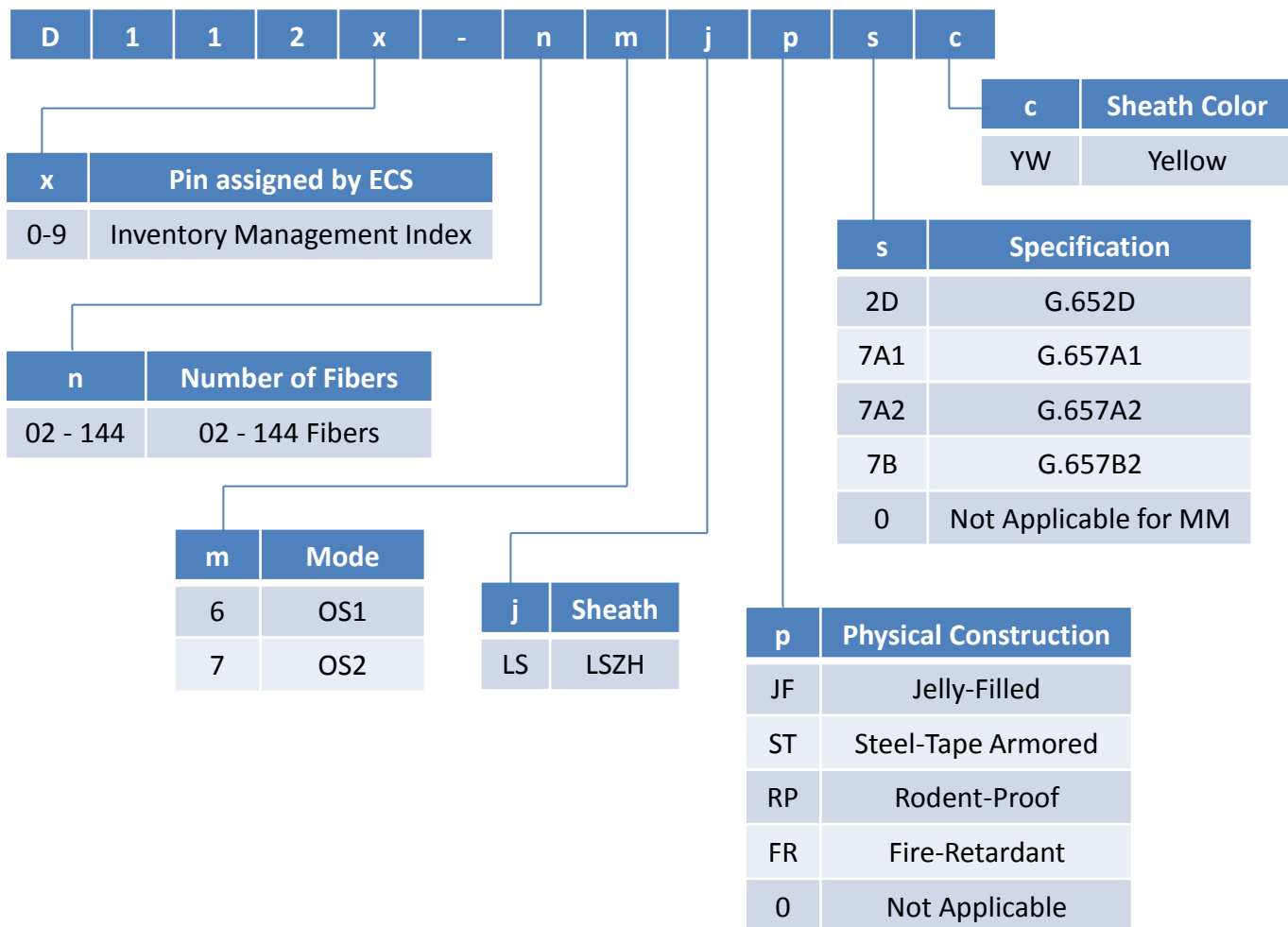
### Impact Resistance Test

Test Standard	IEC 60794-1-2 E4
Impact energy	1J
Radius	12.5mm
Impact Points	3
Impact Number	1
Test results	Additional attenuation $\leq$ 0.4dB No damage to outer jacket and inner elements

### Bend Test

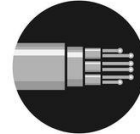
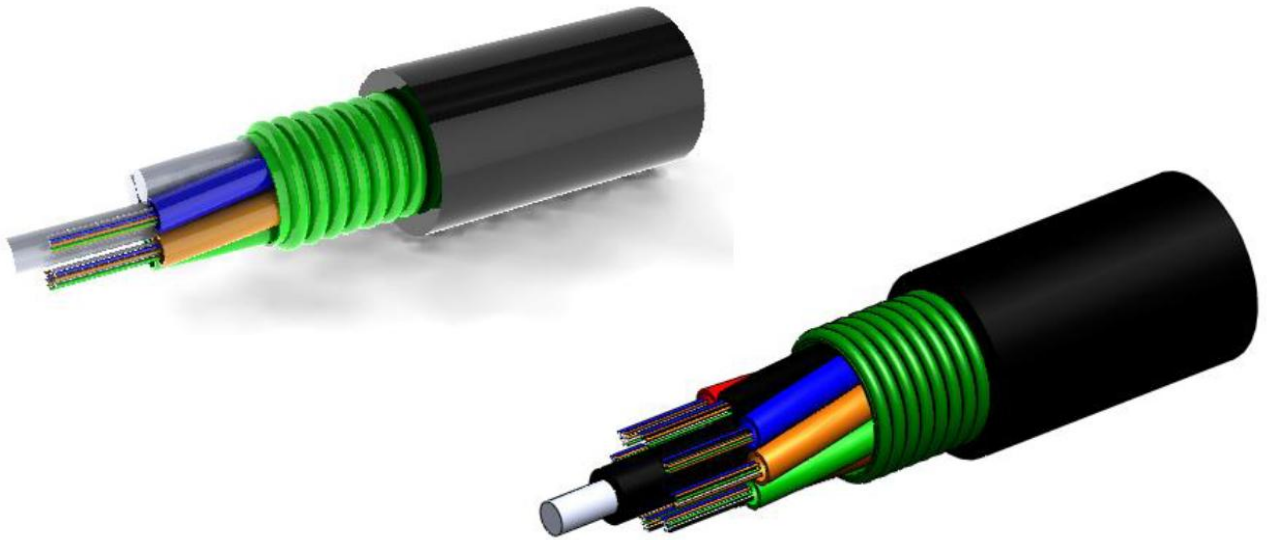
Test Standard	IEC 60794-1-2 E11A
Bending Radius	20 x diameter of cable
Turn number	4
Number of cycles	1
Test results	Additional attenuation $\leq$ 0.4dB No damage to outer jacket and inner elements

## Part Number



## Examples

D112x-087LS07BYW	Fiber Optic Indoor Cable, 8 Core, Distribution TB, Single-mode OS2, LSZH, G.657B, Yellow
D1129-127LS02DYW	Fiber Optic Indoor Cable, 12 Core, Distribution TB, Single-mode OS2, LSZH, G.652D, Yellow
D1129-127LS07BYW	Fiber Optic Indoor Cable, 12 Core, Distribution TB, Single-mode OS2, LSZH, G.657B, Yellow
D1129-167LS07BYW	Fiber Optic Indoor Cable, 16 Core, Distribution TB, Single-mode OS2, LSZH, G.657B, Yellow
D1129-247LS02DYW	Fiber Optic Indoor Cable, 24 Core, Distribution TB, Single-mode OS2, LSZH, G.652D, Yellow
D1129-247LS07BYW	Fiber Optic Indoor Cable, 24 Core, Distribution TB, Single-mode OS2, LSZH, G.657B, Yellow



## Description

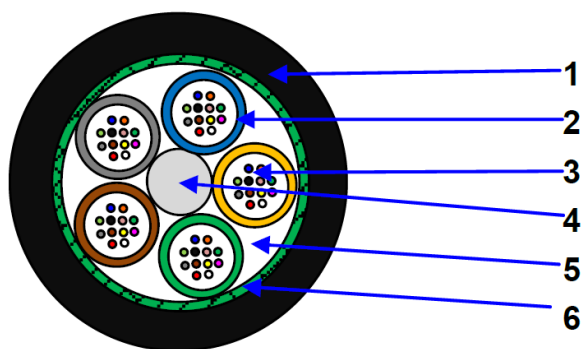
The Fiber used in *DME PROLINK*'s Fiber Optic cable, is made of high pure silica and germanium doped silica. A UV curable acrylate material is applied over the Fiber Cladding as primary protective coating. *DME PROLINK* cable possesses high tensile strength and flexibility in compact cable sizes. At the same time, it provides excellent optical transmission and physical performance. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001. Initial and periodic product qualification tests for performance and durability are performed rigorously to ensure product reliability.

## Technical Characteristics

- The unique extruding technology provides the fibers in the tube with good flexibility and bending endurance
- The unique fiber excess length control method provides the cable with excellent mechanical and environmental properties.
- Multiple water blocking material filling provides dual water blocking function

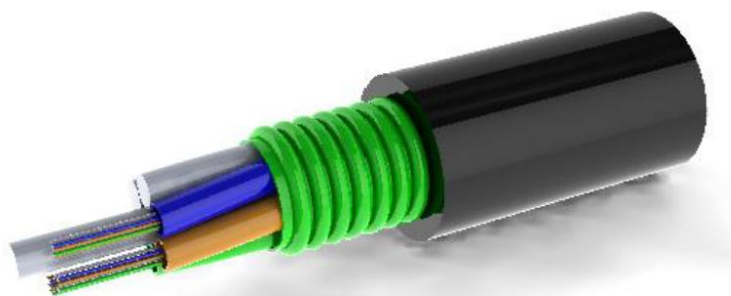
## The Fiber optic cable are designed, Manufactured and tested according to below standards:

- IEC 60793-1: Optical Fiber Part 1: Generic Specification
- IEC 60793-2: Optical Fiber Part 2: Product Specification
- IEC 60794-3-10: Optical fiber cables – Part 3-10: Outdoor cables – family specification for Duct and directly buried optical telecommunication cables
- ITU-T G.650: Definition and test methods for the relevant parameters of Single mode Fibers.
- ITU-T G657: Characteristics of a bending-loss insensitive Single-mode optical fiber
- EIA/TIA 598: Color code of Fiber optic cables



### Construction

1. Outer sheath (PE Black)
2. Loose Tube
3. Fiber and Jelly
4. Central Strength Member (Coated Steel Wire)
5. Cable Jelly
6. Armored Tape (Steel Tape)



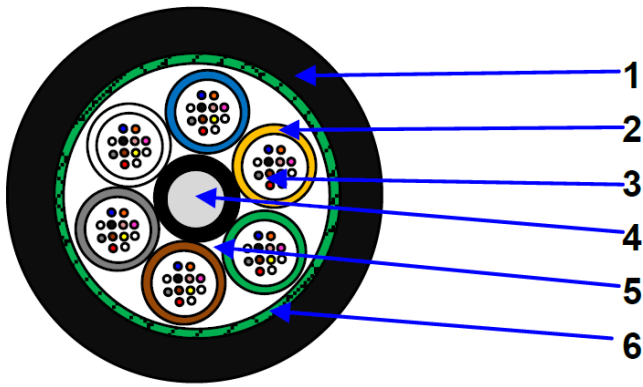
### Dimension and Properties

Fiber Count (G.657A1)	4	12	24	36	48	60
No. of Loose Tube / Filler	1/ 4	2/3	4/1	3/2	4/1	5/0
No. of Fiber per Tube	4	6		12		
Cable Outer Dia	9.0mm ± 5%			9.9mm ± 5%		
Cable weight	95kg/km ± 15%			110kg/km ± 15%		
Operating Temperature Range	-40°C to +70°C					
Installation Temperature Range	-10°C to +60°C					
Transport and Storage Temperature Range	-40°C to +70°C					
Max. Tensile Load	1500N					
Crush Resistance	1000 N/10cm					
Minimal Installation bending radius	20 x OD					
Minimal Operating bending radius	10 x OD					

### Color code scheme: According to EIA/TIA 598

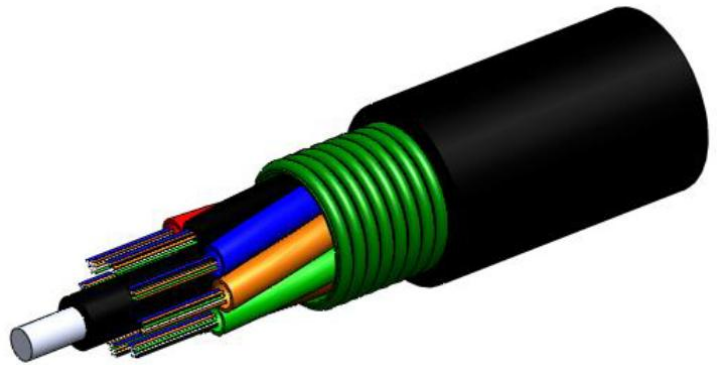
<b>Fiber color</b>	Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow	Violet	Pink	Aqua
<b>Tube color</b>	Blue	Orange	Green	Brown	Gray							





### Construction

1. Outer sheath (PE Black)
2. Loose Tube
3. Fiber and Jelly
4. Central Strength Member (Coated Steel Wire)
5. Cable Jelly
6. Armored Tape (Steel Tape)

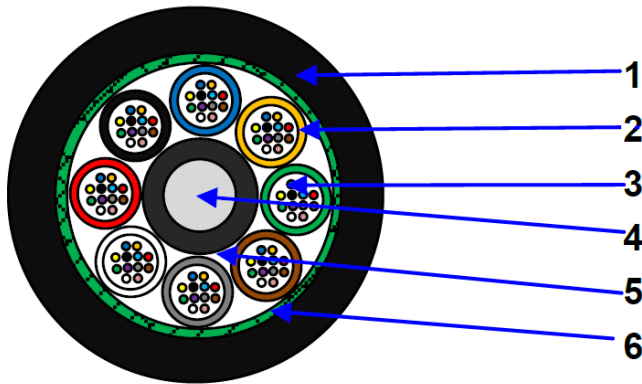


### Dimension and Properties

Fiber Count	72 G.657A1
No. of Loose Tube / Filler	6/ 0
No. of Fiber per Tube	12
Cable Outer Dia	10.6mm ± 5%
Cable weight	121kg/km ± 15%
Operating Temperature Range	-40°C to +70°C
Installation Temperature Range	-10°C to +60°C
Transport and Storage Temperature Range	-40°C to +70°C
Max. Tensile Load	1500N
Crush Resistance	1000 N/10cm
Minimal Installation bending radius	20 x OD
Minimal Operating bending radius	10 x OD

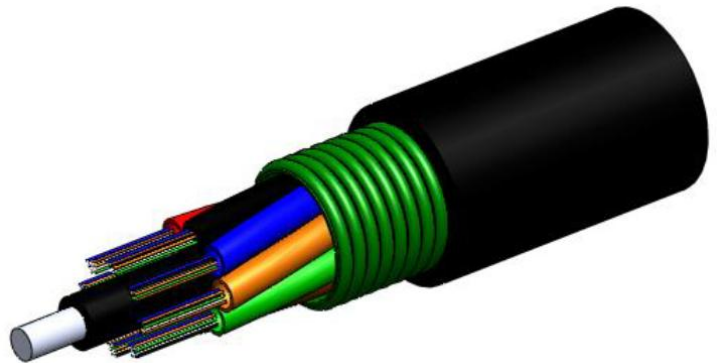
### Color code scheme: According to EIA/TIA 598

Fiber color	Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow	Violet	Pink	Aqua
Tube color	Blue	Orange	Green	Brown	Gray	White						



### Construction

1. Outer sheath (PE Black)
2. Loose Tube
3. Fiber and Jelly
4. Central Strength Member (Coated Steel Wire)
5. Cable Jelly
6. Armored Tape (Steel Tape)

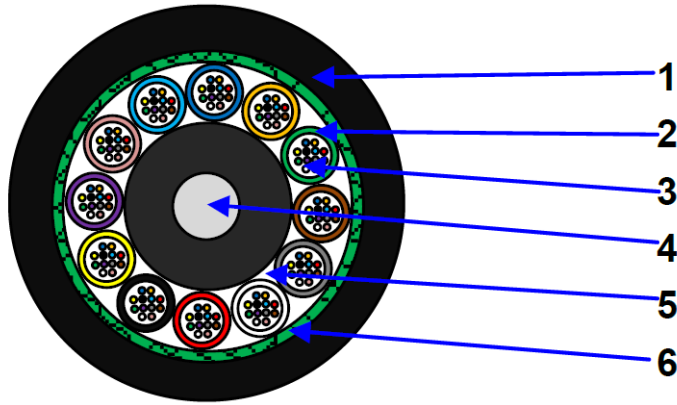


### Dimension and Properties

Fiber Count	96 G.657A1
No. of Loose Tube / Filler	8/ 0
No. of Fiber per Tube	12
Cable Outer Dia	12.0mm ± 5%
Cable weight	153kg/km ± 15%
Operating Temperature Range	-40°C to +70°C
Installation Temperature Range	-10°C to +60°C
Transport and Storage Temperature Range	-40°C to +70°C
Max. Tensile Load	1500N
Crush Resistance	1000 N/10cm
Minimal Installation bending radius	20 x OD
Minimal Operating bending radius	10 x OD

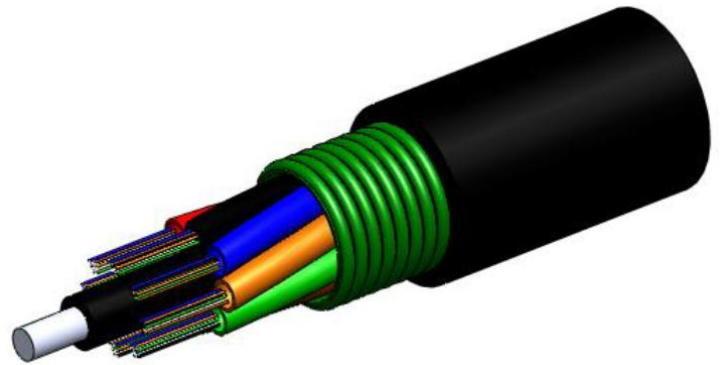
### Color code scheme: According to EIA/TIA 598

Fiber color	Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow	Violet	Pink	Aqua
Tube color	Blue	Orange	Green	Brown	Gray	White	Red	Black				



### Construction

1. Outer sheath (PE Black)
2. Loose Tube
3. Fiber and Jelly
4. Central Strength Member (Coated Steel Wire)
5. Cable Jelly
6. Armored Tape (Steel Tape)



### Dimension and Properties

Fiber Count	144 G.657A1
No. of Loose Tube / Filler	12/ 0
No. of Fiber per Tube	12
Cable Outer Dia	15.0mm ± 5%
Cable weight	223kg/km ± 15%
Operating Temperature Range	-40°C to +70°C
Installation Temperature Range	-10°C to +60°C
Transport and Storage Temperature Range	-40°C to +70°C
Max. Tensile Load	1500N
Crush Resistance	1000 N/10cm
Minimal Installation bending radius	20 x OD
Minimal Operating bending radius	10 x OD

### Color code scheme: According to EIA/TIA 598

Fiber color	Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow	Violet	Pink	Aqua
Tube color	Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow	Violet	Pink	Aqua

**Cable Length :** 2KM / 3KM / 4KM per Drum

### Optical Fiber G.657A1 Specification

Category	Description	Values	
		Before Cable	After Cable
Optical Specifications	Attenuation @1310 nm	≤0.35 dB/km	≤0.36dB/km
	Attenuation @1550 nm	≤0.21 dB/km	≤0.22dB/km
	Zero Dispersion Wavelength	1300 – 1324nm	
	Zero Dispersion Slope	≤0.092 ps/nm <sup>2</sup> ·km	
	PMD Link value (M=20cables Q=0.01% )	≤0.2ps/√km	
	Cable Cutoff Wavelength (λ <sub>cc</sub> )	≤1260 nm	
	Macro bending Loss (10 turns; Φ30 mm) @1550 nm (10 turns; Φ30 mm) @1625 nm (1 turns; Φ20 mm) @1550 nm (1 turns; Φ20 mm) @1625 nm	≤ 0.25 dB ≤ 1.0 dB ≤ 0.75 dB ≤1.5 dB	
	Mode Field Diameter @1310 nm	(8.6 – 9.2) ± 0.4μm	
Dimensional Specifications	Cladding Diameter	125 ±0.7μm	
	Cladding non circularity	≤1.0%	
	Core/clad concentricity error	≤0.5μm	
Mechanical Specifications	Proof stress	≥0.69Gpa	

### Routine tests of Optical Fiber:

- IEC 60793-1-45: Mode Field Diameter
- IEC 60793-1-20: Core/Clad Concentricity, Cladding diameter, Cladding Non-circularity
- IEC 60793-1-40: Attenuation coefficient
- IEC 60793-1-42: Chromatic dispersion
- IEC 60793-1-44: Cable cut-off wavelength

## Factory Tests

### Tension Loading Test

Test standard	IEC 60794-1-2 E1
Sample Length	Not less than 50 meters
Load	Max. tension load
Duration time	1 minute
Test results	Fiber strain: $\leq 0.60\%$
	Additional attenuation: $\leq 0.1$ dB
	No damage to outer jacket and inner elements

### Crush / Compression Test

Test standard	IEC 60794-1-2 E3
Load	Crush Load
Duration time	1 minute
Test results	Additional attenuation: $\leq 0.05$ dB after test
	No damage to outer jacket and inner elements

### Impact Resistance Test

Test standard	IEC 60794-1-2 E4
Impact Energy	10J
Radius	300mm
Impact Points	3
Impact Number	1
Test results	Additional attenuation: $\leq 0.1$ dB
	No damage to outer jacket and inner elements

### Repeated Bending Test

Test standard	IEC 60794-1-2 E6
Bending Radius	20 x Outer diameter of cable
Cycles	25 cycles
Test results	Additional attenuation: $\leq 0.05$ dB after test
	No damage to outer jacket and inner elements

**Torsion/Twist Test**

Test standard	IEC 60794-1-2 E7
Sample Length	2 meter
Angles	±90 degree
Cycles	5
Test results	Additional attenuation: ≤ 0.05 dB after test No damage to outer jacket and inner elements

**Bend Test**

Test standard	IEC 60794-1-2 E11
Mandrel Diameter	20 x diameter of cable
Turn number	4
Number of cycles	3
Test results	Additional attenuation: ≤ 0.05 dB after test No damage to outer jacket and inner elements

**Temperature Cycling Test**

Test standard	IEC 60794-1-2 F1
Temperature Step	+20°C → -40°C → +70°C → +20°C
Time per each Step	12 Hrs
Cycles	2
Test results	Attenuation variation for reference value (the attenuation to be measured before test at +20 ± 3°C) ≤ 0.15 dB/km and is reversible during last cycle

**Water Penetration Test**

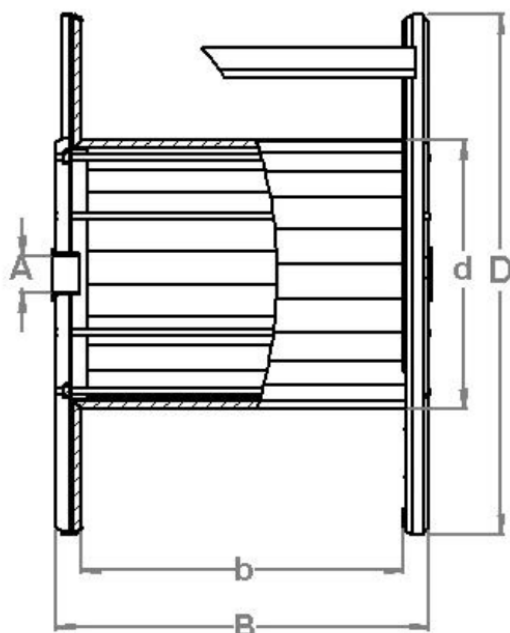
Test standard	IEC 60794-1-2 F5
Height of water column	1m
Sample Length	3m
Test Time	24 Hrs
Test results	No water leakage from the opposite side of the sample

**Drip Test**

Test standard	IEC 60794-1-2 E14
Sample Length	0.3m
Temperature	70°C
Test Time	24 Hrs
Test results	No filling compound shall drip from tubes

### Packing

DME PROLINK cables are coiled on Bakelite, wooden or ironwood drum with Strong wooden batten protection. During transportation, right tools should be used to avoid damaging the package and to handle with ease. Cables should be protected from moisture; kept away from high temperature and fire sparks; protected from over bending and crushing; protected from mechanical stress and damage. The color of cable marking is white. (The printing shall be carried out at interval of 1 meter on the outer sheath of cable) The inner end of cable is then sealed with heat shrinkable end cap to prevent ingress of water and is made available for testing. The outer end of cable is equipped with heat shrinkable end cap. Outer sheath marking legend can be changed according to user's requests.



**Wooden Drum Dimension & Weight: D x d x B cm (Weight – Kg)**

Type of Cable	Length of Reel		
	2KM / Reel	3KM / Reel	4KM / Reel
4F, 12F, 24F	95 x 40 x 75 (264)	105 x 40 x 75 (368)	115 x 50 x 75 (480)
36F, 48F, 60F	105 x 50 x 75 (308)	115 x 50 x 75 (430)	125 x 50 x 75 (553)
72F	105 x 50 x 75 (342)	115 x 50 x 75 (461)	125 x 50 x 75 (597)
96F	115 x 50 x 75 (404)	125 x 50 x 75 (572)	135 x 50 x 75 (758)
144F	145 x 70 x 75 (616)	155 x 70 x 75 (857)	155 x 70 x 105 (1108)

**Note:** The drum size and cable weight mentioned above is estimated. The Final size and weight shall be confirmed before shipment.



**Part Number**

D 1 1 3 x - n t m j p s c

<b>x</b>	<b>Pin assigned by ECS</b>
0-9	Inventory Management Index

<b>c</b>	<b>Color</b>
BK	Black

<b>n</b>	<b>Number of Fiber Core</b>
04 - 1000	4 – 1000 Fiber Core

<b>t</b>	<b>Type</b>
LF	Loose Fiber
RF	Ribbon Fiber

<b>m</b>	<b>Mode</b>
6	OS1
7	OS2

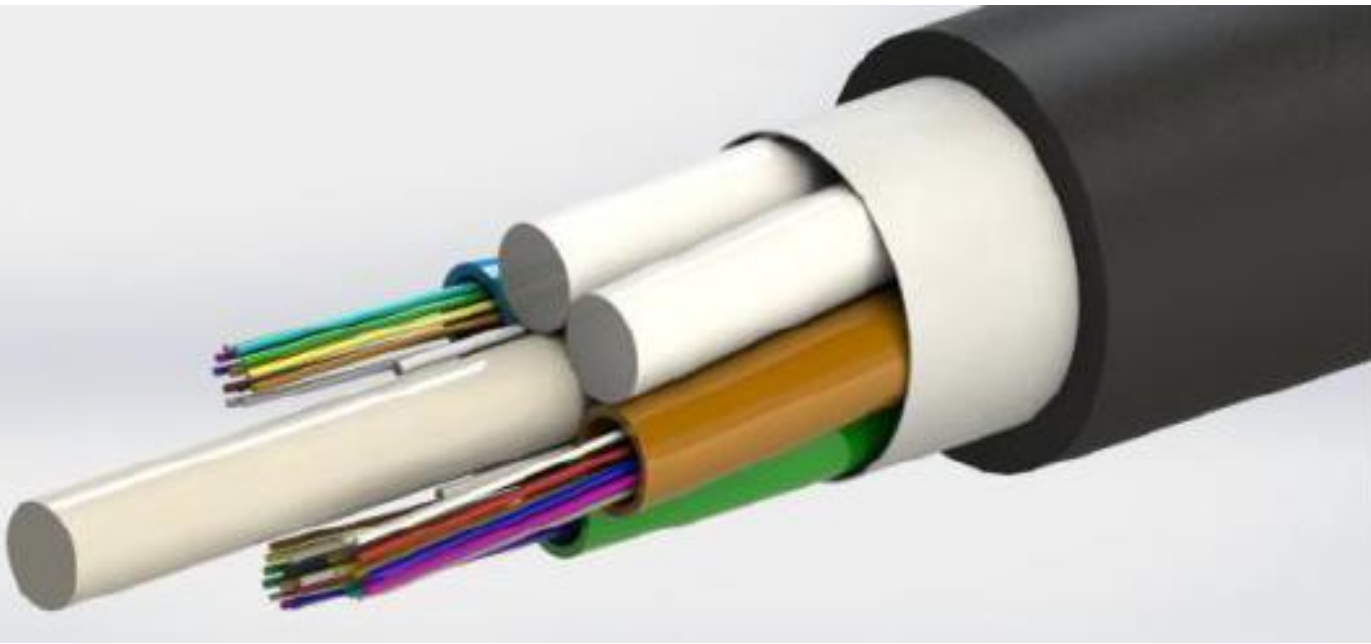
<b>s</b>	<b>Specification</b>
2D	G.652D
7A1	G.657A1
7A2	G.657A2

<b>j</b>	<b>Outer Jacket Material</b>
PV	Polyvinyl Chloride
PE	Polyethylene
FRPV	Flame Retardant Polyvinyl Chloride

<b>p</b>	<b>Physical Construction</b>
ST	Steel Tape Armor

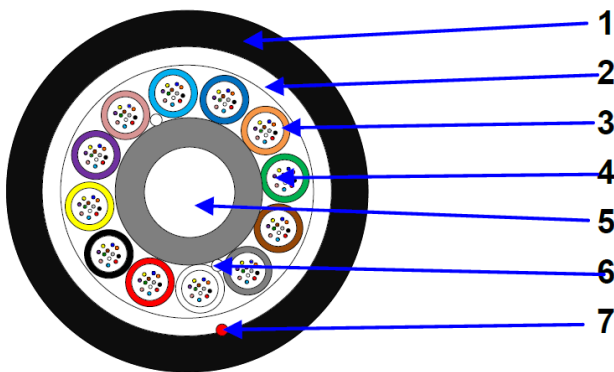
**Examples**

D1139-04LF7PEST7A1BK	Fiber Optic Outdoor Duct Armored Cable, 4 Core, Multi Loose Tube, Single-mode OS2, PE, G.657A1, Black
D1139-72LF7PEST7A1BK	Fiber Optic Outdoor Duct Armored Cable, 72 Core, Multi Loose Tube, Single-mode OS2, PE, G.657A1, Black
D1139-144LF7PEST7A1BK	Fiber Optic Outdoor Duct Armored Cable, 144 Core, Multi Loose Tube, Single-mode OS2, PE, G.657A1, Black



### Description

The Fiber used in *DME PROLINK's* Fiber Optic cable, is made of pure silica and germanium doped silica. A UV curable acrylate material is applied over the Fiber Cladding as primary protective coating. *DME PROLINK* cable possesses high tensile strength and flexibility in compact cable sizes. At the same time, it provides excellent optical transmission and physical performance. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001. Initial and periodic product qualification tests for performance and durability are performed rigorously to ensure product reliability.



### Construction

1. Outer sheath (LSZH)
2. Water Blocking Tape
3. Loose Tube
4. Fiber and Jelly
5. Central Strength Member (Coated FRP)
6. Water Blocking Yarns
7. Ripcord

## Technical Characteristics

- The unique extruding technology provides the fibers in the tube with good flexibility and bending endurance
- The unique fiber excess length control method provides the cable with excellent mechanical and environmental properties.
- Multiple water blocking material filling provides dual water blocking function
- Provides good tension performance.

## The Fiber optic cable are designed, Manufactured and tested according to below standards:

- IEC 60793-1: Optical Fiber Part 1: Generic Specification
- IEC 60793-2: Optical Fiber Part 2: Product Specification
- IEC 60794-3-10: Optical fiber cables – Part 3-10: Outdoor cables – family specification for Duct and directly buried optical telecommunication cables
- ITU-T G.650: Definition and test methods for the relevant parameters of Single mode Fibers.
- ITU-T G652: Characteristics of a Single-mode optical fiber and cable
- EIA/TIA 598: Color code of Fiber optic cables

## Dimension and Properties

Fiber Count	144 G.652D
No. of Loose Tube / Filler	12/ 0
No. of Fiber per Tube	12
Cable Outer Dia	14.5mm ± 5%
Cable weight	194 kg/km ± 15%
Operating Temperature Range	-30°C to +70°C
Installation Temperature Range	-5°C to +50°C
Transport and Storage Temperature Range	-40°C to +70°C
Max. Tensile Load	2700N
Crush Resistance	2000 N/10cm
Minimal Installation bending radius	20 x OD
Minimal Operating bending radius	10 x OD

## Color code scheme: According to EIA/TIA 598

Fiber color	Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow	Violet	Pink	Aqua
Tube color	Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow	Violet	Pink	Aqua

**Cable Length :** 4KM per Drum

## Optical Fiber G.652D Specification

Category	Description	Values	
		Before Cabling	After Cabling
<b>Optical Specifications</b>	Attenuation @1310 nm	≤0.34 dB/km	≤0.35 dB/km
	Attenuation @1383 nm	≤0.34 dB/km	≤0.35 dB/km
	Attenuation @1550 nm	≤0.20 dB/km	≤0.22 dB/km
	Chromatic Dispersion at 1285~1330nm	≤3.5 ps/nm·km	
	Chromatic Dispersion at 1550nm	≤18 ps/nm·km	
	Zero Dispersion Wavelength	1300~1324 nm	
	Zero Dispersion Slope	≤0.092 ps/nm <sup>2</sup> ·km	
	PMD Max. Link value (before cable)	0.06 ps/√km	
	Cable Cutoff Wavelength (λ <sub>cc</sub> )	≤1260 nm	
	Mode Field Diameter @1310 nm	9.2 ± 0.4μm	
	Macro Bending Loss (100 turns;Φ 50mm) @ 1550 nm (100 turns;Φ 50mm) @ 1625 nm	≤0.05 dB	≤0.10 dB
<b>Dimensional Specifications</b>	Cladding Diameter	125 ±0.7μm	
	Cladding non circularity	≤1.0%	
	Coating diameter	242 ± 5μm	
	Core/clad concentricity error	≤0.6 μm	
<b>Mechanical Specifications</b>	Proof stress	≥0.69Gpa	

## Routine tests of Optical Fiber:

- IEC 60793-1-45: Mode Field Diameter
- IEC 60793-1-20: Core/Clad Concentricity, Cladding diameter, Cladding Non-circularity
- IEC 60793-1-40: Attenuation coefficient
- IEC 60793-1-42: Chromatic dispersion
- IEC 60793-1-44: Cable cut-off wavelength

## Factory Tests

### Tension Loading Test

Test standard	IEC 60794-1-2 E1
Sample Length	Not less than 50 meters
Load	Max. tension load
Duration time	1 minute
Test results	Fiber strain: $\leq 0.60\%$
	Additional attenuation: $\leq 0.1$ dB
	No damage to outer jacket and inner elements

### Crush / Compression Test

Test standard	IEC 60794-1-2 E3
Load	Crush Load
Duration time	1 minute
Test results	Additional attenuation: $\leq 0.1$ dB
	No damage to outer jacket and inner elements

### Impact Resistance Test

Test standard	IEC 60794-1-2 E4
Impact Energy	5J
Radius	300mm
Impact Points	3
Impact Number	1
Test results	Additional attenuation: $\leq 0.1$ dB
	No damage to outer jacket and inner elements

### Repeated Bending Test

Test standard	IEC 60794-1-2 E6
Bending Radius	20 x diameter of cable
Cycles	30 cycles
Test results	Additional attenuation: $\leq 0.1$ dB
	No damage to outer jacket and inner elements

**Torsion/Twist Test**

Test standard	IEC 60794-1-2 E7
Sample Length	2 meter
Angles	±180 degree
Cycles	5
Test results	Additional attenuation: ≤ 0.1 dB
	No damage to outer jacket and inner elements

**Bend Test**

Test standard	IEC 60794-1-2 E11A
Mandrel Diameter	20 x diameter of cable
Turn number	4
Number of cycles	3
Test results	Additional attenuation: ≤ 0.1 dB
	No damage to outer jacket and inner elements

**Temperature Cycling Test**

Test standard	IEC 60794-1-2 F1
Temperature Step	+20°C → -40°C → +70°C → -40°C → +70°C → +20°C
Time per each Step	12 Hrs
Cycles	2
Test results	Attenuation variation for reference value (the attenuation to be measured before test at +20 ± 3°C) ≤ 0.1 dB/km at 1550nm

**Water Penetration Test**

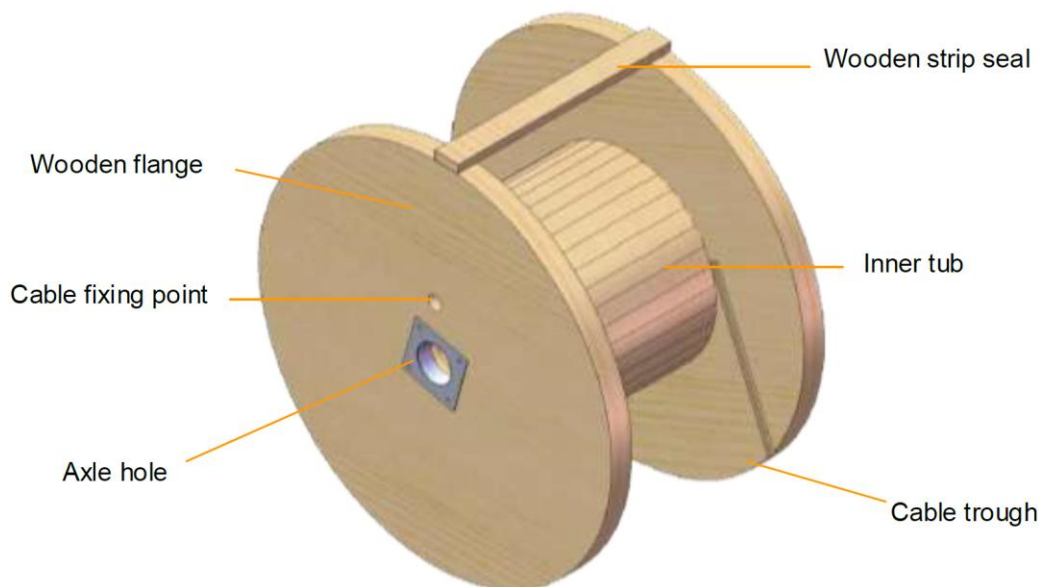
Test standard	IEC 60794-1-2 F5
Height of water column	1m
Sample Length	3m
Test Time	24 Hrs
Test results	No water leakage from the other side of the sample

**Drip Test**

Test standard	IEC 60794-1-2 E14
Sample Length	0.3m
Temperature	70°C
Duration	24 Hrs
Test results	No filling compound shall drip from tubes

### Packing

DME PROLINK cables are packed in carton, coiled on Bakelite & wooden drum. During transportation, right tools should be used to avoid damaging the package and to handle with ease. Cables should be protected from moisture; kept away from high temperature and fire sparks; protected from over bending and crushing; protected from mechanical stress and damage. The color of cable marking is white. (The printing shall be carried out at interval of 1 meter on the outer sheath of cable) The inner end of cable is then sealed with heat shrinkable end cap to prevent ingress of water and is made available for testing. The outer end of cable is equipped with heat shrinkable end cap. Outer sheath marking legend can be changed according to user's requests.

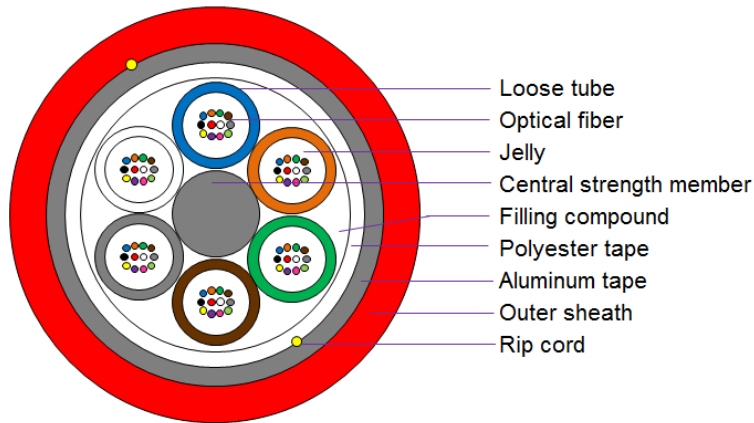


### Part Number

D1139-1447LSJF2DBK

Fiber Optic Outdoor Duct Cable, 144 Core, Multi Loose Tube, Single-mode OS2, LSZH, G.652D, Black





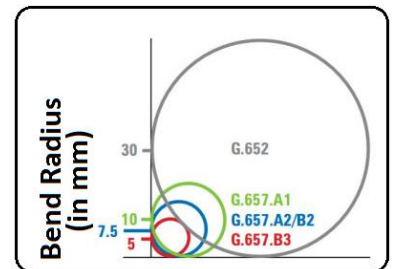
## Description

DME PROLINK's Outdoor Armored MLT FO cable is designed specifically for FTTx applications requiring low to Higher core-counts. The Single-mode FO cable is with G.652D specifications. Multi Loose Tube construction with Steel wire as Central Strength member (CST). The polyester tape is used to bind the cable core and the filling compound. Aluminum Tape applied over polyester tape which will act as moisture barrier.

The Fiber used in DME PROLINK's Fiber Optic cables, are made of pure silica and germanium doped silica. A UV curable acrylate material is applied over the Fiber Cladding as primary protective coating. DME PROLINK quality personals ensures product reliability through rigorous qualification testing to assure cable performance and durability in adverse field environments. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001.

## Features & Benefits

- Fiber Specification G.652D
- PE Outer Sheath
- Multi Loose Tubes filled with Jelly
- Color code scheme: According to EIA/TIA 598
- 2 Ripcords provided for easy stripping
- Polyester Tape / Aluminum Tape for Moisture Barrier
- Filling compound for Water Ingress resistance
- Central Strength Member: Phosphatized Steel Wire for additional strength
- Predictable lifetime of 30 years



**The Fiber within FO cable are designed, Manufactured and tested according to below standards:**

- IEC 60793-1: Optical Fiber Part 1: Generic Specification
- IEC 60793-2: Optical Fiber Part 2: Product Specification
- IEC 60794-2: Optical Fiber Cables Part 2 Indoor cables- Sectional Specification
- ITU-T G.652: Characteristics of a Single-mode optical fiber and cable
- ITU-T G.655: Characteristics of a non-zero dispersion-shifted single-mode optical fiber and cable

## Optical Fiber G.652D Specification

Category	Description	Values
Optical Specifications	Attenuation @1310 nm	≤0.35 dB/km
	Attenuation @1550 nm	≤0.22dB/km
	Zero Dispersion Slope	≤0.092 ps/nm <sup>2</sup> ·km
	Dispersion in the range 1288 to 1339nm:	≤3.5ps/ (nm*km)
	Dispersion in the range 1530 to 1565nm:	≤18ps/ (nm*km)
	Polarization mode dispersion link value:	≤0.2ps/√km
	Cable Cutoff Wavelength (λ <sub>cc</sub> )	≤1260 nm
	Macro bending Loss (100 turns; Φ30 mm) @1550 nm (100 turns; Φ30 mm) @1625 nm	≤ 0.05 dB ≤ 0.05 dB
	Mode Field Diameter @1310 nm	9.2 ± 0.4μm
	Mode Field Diameter @1550 nm	10.4 ± 0.8μm
	Dimensional Specifications	Cladding Diameter
Cladding non circularity		≤1.0%
Core/cladding concentricity error		≤0.6μm
Environmental Specification	Operation temperature range	-20°C to + 70°C
	Installation temperature range	0°C to + 60°C
	Transport and storage temperature range	-20°C to + 70°C

### Color coding for Optical Fiber

1	2	3	4	5	6	7	8	9	10	11	12
Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow	Purple	Pink	Aqua

### Color coding for Loose Tubes (For 2 to 144 Fiber Cable)

1	2	3	4	5	6	7	8	9	10	11	12
Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow	Purple	Pink	Aqua

## Color coding for Loose Tubes (288 Fiber Cable)

### 1<sup>st</sup> Layer Code

1	2	3	4	5	6	7	8	9	10	11	12
Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow	Purple	Pink	Aqua

### 2<sup>nd</sup> Layer Code

1	2	3	4	5	6	7	8	9	10	11	12
Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow	Purple	Pink	Aqua
13	14	15									
Blue	Orange	Green									

## Physical / Mechanical Characteristics of Fiber Optic Cable

<b>Physical</b>	Fiber count	2	4/8	12/24/36	72	96	144	288
	No. of Fiber per tube	2	4	12	12	12	12	12
	No. of Elements (Tubes and Filler rods)	5	5	5	6	8	12	9+15
	Cable OD (mm ±5%)	11.2	11.2	11.2	11.8	13.1	15.8	17.8
	Cable weight (kg/km ± 10%)	107	109	112	142	165	233	307
<b>Mechanical</b>	Short Term Tension	1500						
	Short Term Crush	1500N/100mm						
	Minimal installation bending radius (Dynamic)	20 x OD						
	Minimal operation bending radius (Static)	10 x OD						

## Routine Factory tests of single-mode fiber

Parameters	Test Standards
Mode field diameter	IEC 60793-1-45.
Mode field Core/clad concentricity	IEC 60793-1-20
Cladding diameter	IEC 60793-1-20
Cladding non-circularity	IEC 60793-1-20
Attenuation coefficient	IEC 60793-1-40
Chromatic dispersion	IEC 60793-1-42
Cable cut-off wavelength	IEC 60793-1-44

## Factory Test List for Fiber Optic Cable\*

### Tension Loading Test

Test Standard	IEC 60794-1-2 E1
Sample Length	No less than 50 meters
Load	Short term tension
Duration time	1 minute
Test results	Fiber strain $\leq$ 0.33%
	Additional attenuation $\leq$ 0.1dB @1550nm
	No damage to outer jacket and inner elements

### Crush Test

Test Standard	IEC 60794-1-2 E3
Load	Short Term crush
Duration time	1 minute
Test results	Additional attenuation $\leq$ 0.1dB @1550nm
	No damage to outer jacket and inner elements

### Torsion Resistance Test

Test Standard	IEC 60794-1-2 E7
Sample Length	1m
Twist angle	$\pm$ 180°
Number of Cycles	10
Test results	Additional attenuation $\leq$ 0.1dB @1550nm
	No damage to outer jacket and inner elements

### Temperature Cycling Test

Test Standard	IEC 60794-1-2 F1
Temperature Range	-20°C to +70°C
Time of each step	12H
Number of cycles	2
Test results	Additional attenuation $\leq$ 0.1 dB/km @1550nm
	No damage to outer jacket and inner elements

## Factory Test List for Fiber Optic Cable\*

### Impact Test

Test Standard	IEC 60794-1-2 E4
Points of impact	3
No. of Times per point	1
Impact Energy	5J (Striking surface radius: 300mm)
Test results	Additional attenuation $\leq 0.1\text{dB @}1550\text{nm}$ No damage to outer jacket and inner elements

### Cable Bend Test

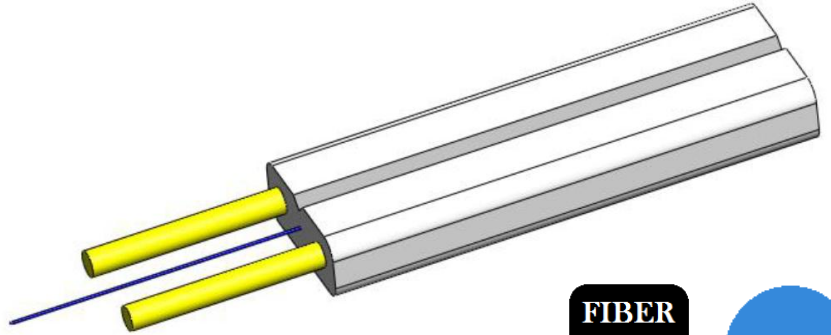
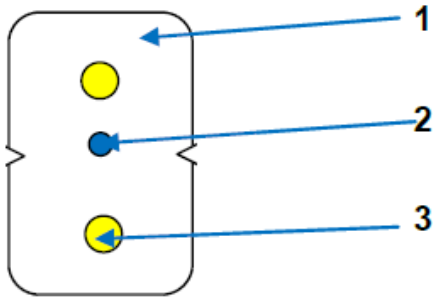
Test Standard	IEC 60794-1-2 E11
Diameter of Mandrel	20 x OD
Number of turns	4
Number of Cycles	3
Test results	Additional attenuation $\leq 0.1\text{dB @}1550\text{nm}$ No damage to outer jacket and inner elements

### Water Penetration Test

Test Standard	IEC 60794-1-2 F5B
Height of water	1m
Sample length	3m
Time	24H
Test results	No water leak from the cable core of the opposite end

## Part Number

D11311-027PEATN2DRD	Fiber Optic Outdoor Armored Cable, 2 Core, MLT, with 2 Ripcords, Polyester/Aluminum Tape, Steel Wire CST, Single-mode OS2, PE, G.652D, Red
D11311-047PEATN2DRD	Fiber Optic Outdoor Armored Cable, 4 Core, MLT, with 2 Ripcords, Polyester/Aluminum Tape, Steel Wire CST, Single-mode OS2, PE, G.652D, Red
D11311-087PEATN2DRD	Fiber Optic Outdoor Armored Cable, 8 Core, MLT, with 2 Ripcords, Polyester/Aluminum Tape, Steel Wire CST, Single-mode OS2, PE, G.652D, Red
D11311-127PEATN2DRD	Fiber Optic Outdoor Armored Cable, 12 Core, MLT, with 2 Ripcords, Polyester/Aluminum Tape, Steel Wire CST, Single-mode OS2, PE, G.652D, Red
D11311-247PEATN2DRD	Fiber Optic Outdoor Armored Cable, 24 Core, MLT, with 2 Ripcords, Polyester/Aluminum Tape, Steel Wire CST, Single-mode OS2, PE, G.652D, Red
D11311-367PEATN2DRD	Fiber Optic Outdoor Armored Cable, 36 Core, MLT, with 2 Ripcords, Polyester/Aluminum Tape, Steel Wire CST, Single-mode OS2, PE, G.652D, Red
D11311-727PEATN2DRD	Fiber Optic Outdoor Armored Cable, 72 Core, MLT, with 2 Ripcords, Polyester/Aluminum Tape, Steel Wire CST, Single-mode OS2, PE, G.652D, Red
D11311-967PEATN2DRD	Fiber Optic Outdoor Armored Cable, 96 Core, MLT, with 2 Ripcords, Polyester/Aluminum Tape, Steel Wire CST, Single-mode OS2, PE, G.652D, Red
D11311-1447PEATN2DRD	Fiber Optic Outdoor Armored Cable, 144 Core, MLT, with 2 Ripcords, Polyester/Aluminum Tape, Steel Wire CST, Single-mode OS2, PE, G.652D, Red
D11311-2887PEATN2DRD	Fiber Optic Outdoor Armored Cable, 288 Core, MLT, with 2 Ripcords, Polyester/Aluminum Tape, Steel Wire CST, Single-mode OS2, PE, G.652D, Red



1. Outer Sheath (Low Friction LSZH)
2. 1 or 2 or 4 Fiber G.657A2
3. Strength Member (KFRP)



## Description

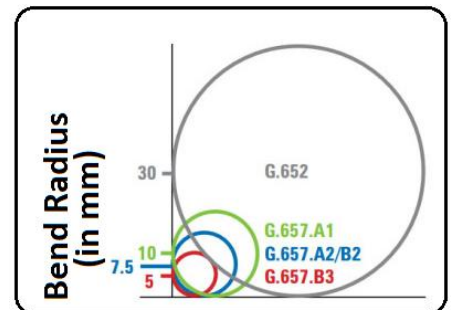
DME PROLINK's 1 or 2 or 4 Core Indoor Drop Fiber cable is designed and manufactured to the highest standards. Available as Single-mode (G.657A2 compliant), it provides the bend-insensitivity and robustness essential to a successful FTTx deployment

The Aramid Reinforced Plastic Rod strength member offers more than adequate strength to pull long lengths of this cable while significantly reducing the weight of the cable.

The Fiber used in DME PROLINK's Fiber Optic cables, are made of pure silica and germanium doped silica. A UV curable acrylate material is applied over the Fiber Cladding as primary protective coating. DME PROLINK quality personals ensures product reliability through rigorous qualification testing to assure cable performance and durability in adverse field environments. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001.

## Features & Benefits

- Available as G.652D and G.657A1/A2
- Approved by Service Providers
- LSZH and OFN Rated
- Predictable lifetime of 30 years
- Complies with Telcordia GR-20 core
- Color code scheme: According to EIA/TIA 598
- Compact Figure & Easy to Install
- Suitable for Indoor Connections within Multi Dwelling Units (MDU)
- Designed as per Etisalat standards for FTTH Deployments and applications



The Fiber within FO Drop cable are designed, Manufactured and tested according to below standards:

- IEC 60793-1: Optical Fiber Part 1: Generic Specification
- IEC 60793-2: Optical Fiber Part 2: Product Specification
- IEC 60794-2: Optical Fiber Cables Part 2 Indoor cables- Sectional Specification
- ITU-T G650: Definition and test methods for the relevant parameters of single-mode fibers
- ITU-T G.655: Characteristics of a non-zero dispersion-shifted single-mode optical fiber and cable
- ITU-T G.657: Characteristics of a bending-loss insensitive single-mode optical fiber

## Optical Fiber G.657A2 Specification

Category	Description	Values	
		Before Cabling	After Cabling
Optical Specifications	Attenuation @1310 nm	≤0.35 dB/km	≤0.40 dB/km
	Attenuation @1550 nm	≤0.21 dB/km	≤0.30 dB/km
	Zero Dispersion Slope	≤0.092 ps/nm <sup>2</sup> -km	
	Zero Dispersion Wavelength	1300 – 1324 nm	
	Cable Cutoff Wavelength (λ <sub>cc</sub> )	≤1260 nm	
	Macro bending Loss (10 turns; Φ30 mm) @1550 nm	≤ 0.03 dB	
	(10 turns; Φ30 mm) @1625 nm	≤ 0.10dB	
	(1 turn; Φ20 mm) @1550 nm	≤ 0.10 dB	
(1 turn; Φ20 mm) @1625 nm	≤ 0.20 dB		
1 turn; Φ15 mm) @1550 nm	≤ 0.50 dB		
(1 turn; Φ15 mm) @1625 nm	≤ 1.00 dB		
	Mode Field Diameter @1310 nm	8.6 ± 0.4μm	
Dimensional Specifications	Cladding Diameter	125 ±1μm	
	Cladding non circularity	≤1.0%	
	Coating diameter	245 ± 7μm	
	Coating non circularity	≤ 6%	
	Cladding / coating concentricity error	≤ 6μm	
	Core/clad concentricity error	≤0.5μm	
Mechanical Specifications	Proof stress	≥1.05%	
Environmental Specification	Operation temperature range	-20°C to + 60°C	
	Installation temperature range	-20°C to + 60°C	
	Transport and storage temperature range	-20°C to + 60°C	



## Physical / Mechanical Characteristics of Fiber Optic Cable

<b>Physical</b>	Fiber count	1 or 2 or 4 G.657A2
	Tight buffer fiber diameter	0.9mm ± 50µm
	Strength member	FRP
	Cable OD	(2.0*3.0mm) ± 5%
	Cable weight	10 kg/km ± 15%
<b>Mechanical</b>	Max. tensile load	80N
	Crush resistance	500N/10cm
	Minimal installation bending radius	20 x OD
	Minimal operation bending radius	10 x OD

## Routine Factory tests of single-mode fiber

Parameters	Test Standards
Mode field diameter	IEC 60793-1-45.
Mode field Core/clad concentricity	IEC 60793-1-20
Cladding diameter	IEC 60793-1-20
Cladding non-circularity	IEC 60793-1-20
Attenuation coefficient	IEC 60793-1-40
Chromatic dispersion	IEC 60793-1-42
Cable cut-off wavelength	IEC 60793-1-44

## Part Number

D114x-ID2F77A2YW	Fiber Optic Indoor Drop Cable, 2 Core, Single-mode OS2, LSZH, G.657A2, Yellow
D114x-ID1F77A2WT	Fiber Optic Indoor Drop Cable, 1 Core, Single-mode OS2, LSZH, G.657A2, white
D114x-ID2F72DWT	Fiber Optic Indoor Drop Cable, 2 Core, Single-mode OS2, LSZH, G.652D, white
D114x-ID4F77A2WT	Fiber Optic Indoor Drop Cable, 4Core, Single-mode OS2, LSZH, G.657A2, White

## Factory Test List for Fiber Optic Cable\*

### Tension Loading Test

Test Standard	IEC 60794-1-2 E1
Sample Length	No less than 50 meters
Load	Max. tension load
Duration time	1 minute
Test results	Additional attenuation $\leq 0.4\text{dB}$ No damage to outer jacket and inner elements

### Crush / Compression Test

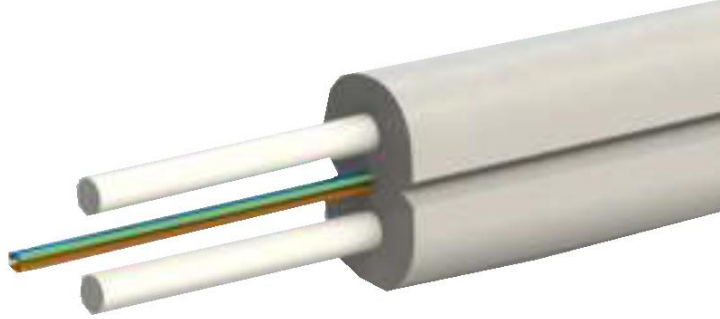
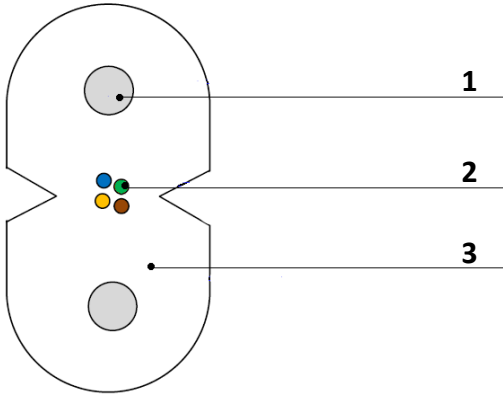
Test Standard	IEC 60794-1-2 E3
Load	Crush load
Duration time	1 minute
Test number	1
Test results	Additional attenuation $\leq 0.4\text{dB}$ No damage to outer jacket and inner elements

### Impact Resistance Test

Test Standard	IEC 60794-1-2 E4
Impact energy	1J
Radius	12.5mm
Impact Points	3
Impact Number	1
Test results	Additional attenuation $\leq 0.4\text{dB}$ No damage to outer jacket and inner elements

### Bend Test

Test Standard	IEC 60794-1-2 E11A
Bending Radius	20 x diameter of cable
Turn number	4
Number of cycles	1
Test results	Additional attenuation $\leq 0.4\text{dB}$ No damage to outer jacket and inner elements



1. Strength Member (Steel Wire)
2. Colored 4 Fibers G.657A2
3. Outer Sheath (Low Friction LSZH)



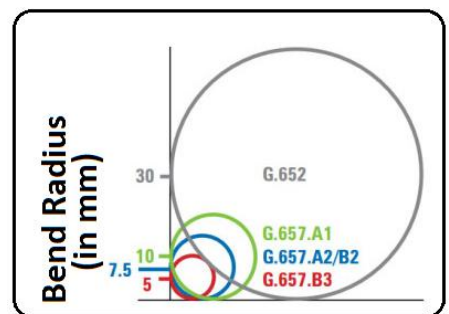
## Description

DME PROLINK's 4-Core Indoor Drop Fiber cable is designed and manufactured to the highest standards. Available as Single-mode (G.657A2 compliant), it provides the bend-insensitivity and robustness essential to a successful FTTx deployment

The Steel wire strength member offers more than adequate strength to pull long lengths of this cable. The Fiber used in DME PROLINK's Fiber Optic cables, are made of pure silica and germanium doped silica. A UV curable acrylate material is applied over the Fiber Cladding as primary protective coating. DME PROLINK quality personals ensures product reliability through rigorous qualification testing to assure cable performance and durability in adverse field environments. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001.

## Features & Benefits

- Available as G.657A1/A2
- Approved by Service Providers
- LSZH and OFN Rated
- Predictable lifetime of 30 years
- Complies with Telcordia GR-20 core
- Color code scheme: According to EIA/TIA 598
- Compact Figure & Easy to Install
- Suitable for Indoor Connections within Multi Dwelling Units (MDU)
- Designed as per Taawun standards for FTTH Deployments and applications



The Fiber within FO Drop cable are designed, Manufactured and tested according to below standards:

- IEC 60793-1: Optical Fiber Part 1: Generic Specification
- IEC 60793-2: Optical Fiber Part 2: Product Specification
- IEC 60794-2: Optical Fiber Cables Part 2 Indoor cables- Sectional Specification
- ITU-T G650: Definition and test methods for the relevant parameters of single-mode fibers
- ITU-T G.655: Characteristics of a non-zero dispersion-shifted single-mode optical fiber and cable
- ITU-T G.657: Characteristics of a bending-loss insensitive single-mode optical fiber

## Optical Fiber G.657A2 Specification

Category	Description	Values	
		Before Cabling	After Cabling
Optical Specifications	Attenuation @1310 nm	≤0.35 dB/km	≤0.40 dB/km
	Attenuation @1550 nm	≤0.21 dB/km	≤0.30 dB/km
	Zero Dispersion Slope	≤0.092 ps/nm <sup>2</sup> -km	
	Zero Dispersion Wavelength	1300 – 1324 nm	
	Cable Cutoff Wavelength (λ <sub>cc</sub> )	≤1260 nm	
	Macro bending Loss (10 turns; Φ30 mm) @1550 nm	≤ 0.03 dB	
	(10 turns; Φ30 mm) @1625 nm	≤ 0.10dB	
	(1 turn; Φ20 mm) @1550 nm	≤ 0.10 dB	
(1 turn; Φ20 mm) @1625 nm	≤ 0.20 dB		
1 turn; Φ15 mm) @1550 nm	≤ 0.50 dB		
(1 turn; Φ15 mm) @1625 nm	≤ 1.00 dB		
	Mode Field Diameter @1310 nm	8.6 ± 0.4μm	
Dimensional Specifications	Cladding Diameter	125 ±1μm	
	Cladding non circularity	≤1.0%	
	Coating diameter	245 ± 7μm	
	Coating non circularity	≤ 6%	
	Cladding / coating concentricity error	≤ 6μm	
	Core/clad concentricity error	≤0.6μm	
Mechanical Specifications	Proof stress	≥1.05%	
Environmental Specification	Operation temperature range	-20°C to + 60°C	
	Installation temperature range	-20°C to + 60°C	
	Transport and storage temperature range	-20°C to + 60°C	

## Physical / Mechanical Characteristics of Fiber Optic Cable

<b>Physical</b>	Fiber count	4 G.657A2
	Tight buffer fiber diameter	0.9mm ± 50µm
	Strength member	Steel Wire
	Cable OD	(2.0*3.0mm) ± 5%
	Cable weight	10 kg/km ± 15%
<b>Mechanical</b>	Max. tensile load	Min. 220N
	Crush resistance	1000N/100mm
	Minimal installation bending radius	30mm
	Minimal operation bending radius	15mm

## Color Code Scheme

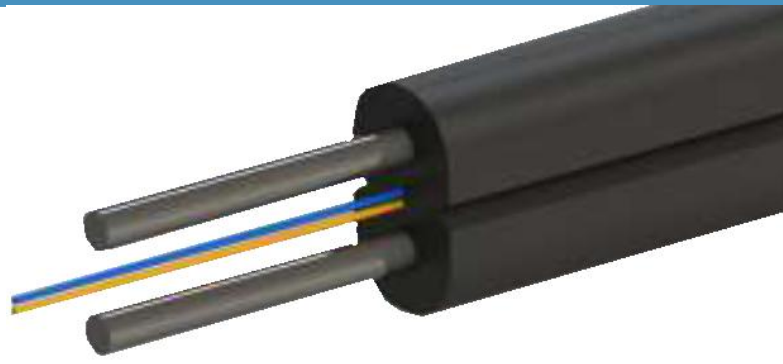
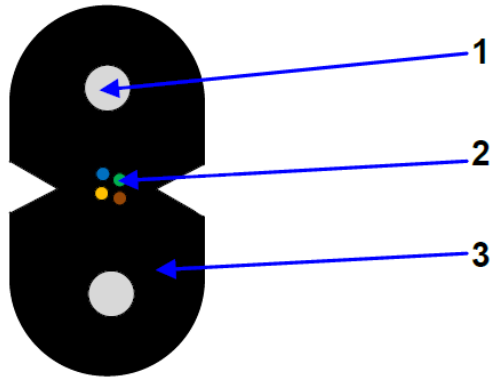
Fiber Color	Blue, Orange, Green, Brown
Sheath	White

## Routine Factory tests of single-mode fiber

Parameters	Test Standards
Mode field diameter	IEC 60793-1-45.
Mode field Core/clad concentricity	IEC 60793-1-20
Cladding diameter	IEC 60793-1-20
Cladding non-circularity	IEC 60793-1-20
Attenuation coefficient	IEC 60793-1-40
Chromatic dispersion	IEC 60793-1-42
Cable cut-off wavelength	IEC 60793-1-44

## Part Number

**D1149-ID477A2WT**      **Fiber Optic Indoor Drop Cable, 4 Core, Single-mode OS2, LSZH, G.657A2, White with Steel Strength Member**



1. Strength Member (**Steel Wire**)
2. Colored 4 Fibers **G.657A2**
3. Outer Sheath (UV-resistant, **Low Friction LSZH**)



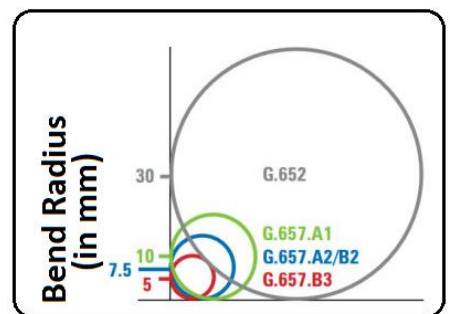
## Description

DME PROLINK's 4-Core Outdoor Drop Fiber cable is designed and manufactured to the highest standards. Available as Single-mode (G.657A2 compliant), it provides the bend-insensitivity and robustness essential to a successful FTTx deployment in outdoor environment.

The Steel wire strength member offers more than adequate strength to pull long lengths of this cable. The Fiber used in DME PROLINK's Fiber Optic cables, are made of pure silica and germanium doped silica. A UV curable acrylate material is applied over the Fiber Cladding as primary protective coating. DME PROLINK quality personals ensures product reliability through rigorous qualification testing to assure cable performance and durability in adverse field environments. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001.

## Features & Benefits

- Available as G.657A1/A2
- Approved by Service Providers
- UV resistant, LSZH and OFN Rated
- Predictable lifetime of 30 years
- Complies with Telcordia GR-20 core
- Color code scheme: According to EIA/TIA 598
- Compact Figure & Easy to Install
- Suitable for OSP network
- Designed as per Taawun standards for FTTH Deployments and applications



The Fiber within FO Drop cable are designed, Manufactured and tested according to below standards:

- IEC 60793-1: Optical Fiber Part 1: Generic Specification
- IEC 60793-2: Optical Fiber Part 2: Product Specification
- IEC 60794-2: Optical Fiber Cables Part 2 Indoor cables- Sectional Specification
- ITU-T G650: Definition and test methods for the relevant parameters of single-mode fibers
- ITU-T G.655: Characteristics of a non-zero dispersion-shifted single-mode optical fiber and cable
- ITU-T G.657: Characteristics of a bending-loss insensitive single-mode optical fiber

## Optical Fiber G.657A2 Specification

Category	Description	Values	
		Before Cabling	After Cabling
Optical Specifications	Attenuation @1310 nm	≤0.35 dB/km	≤0.40 dB/km
	Attenuation @1550 nm	≤0.21 dB/km	≤0.30 dB/km
	Zero Dispersion Slope	≤0.092 ps/nm <sup>2</sup> -km	
	Zero Dispersion Wavelength	1300 – 1324 nm	
	Cable Cutoff Wavelength (λ <sub>cc</sub> )	≤1260 nm	
	Macro bending Loss (10 turns; Φ30 mm) @1550 nm	≤ 0.03 dB	
	(10 turns; Φ30 mm) @1625 nm	≤ 0.10dB	
	(1 turn; Φ20 mm) @1550 nm	≤ 0.10 dB	
(1 turn; Φ20 mm) @1625 nm	≤ 0.20 dB		
1 turn; Φ15 mm) @1550 nm	≤ 0.50 dB		
(1 turn; Φ15 mm) @1625 nm	≤ 1.00 dB		
	Mode Field Diameter @1310 nm	8.6 ± 0.4μm	
Dimensional Specifications	Cladding Diameter	125 ±1μm	
	Cladding non circularity	≤1.0%	
	Coating diameter	245 ± 7μm	
	Coating non circularity	≤ 6%	
	Cladding / coating concentricity error	≤ 6μm	
	Core/clad concentricity error	≤0.6μm	
Mechanical Specifications	Proof stress	≥1.05%	
Environmental Specification	Operation temperature range	-10°C to + 70°C	
	Installation temperature range	-20°C to + 60°C	
	Transport and storage temperature range	-20°C to + 60°C	

## Physical / Mechanical Characteristics of Fiber Optic Cable

<b>Physical</b>	Fiber count	4 G.657A2
	Tight buffer fiber diameter	0.9mm ± 50µm
	Strength member	Steel Wire
	Cable OD	(2.0*3.0mm) ± 5%
	Cable weight	10 kg/km ± 15%
<b>Mechanical</b>	Max. tensile load	Min. 220N
	Crush resistance	1000N/100mm
	Minimal installation bending radius	30mm
	Minimal operation bending radius	15mm

## Color Code Scheme

Fiber Color	Blue, Orange, Green, Brown
Sheath	Black

## Routine Factory tests of single-mode fiber

Parameters	Test Standards
Mode field diameter	IEC 60793-1-45.
Mode field Core/clad concentricity	IEC 60793-1-20
Cladding diameter	IEC 60793-1-20
Cladding non-circularity	IEC 60793-1-20
Attenuation coefficient	IEC 60793-1-40
Chromatic dispersion	IEC 60793-1-42
Cable cut-off wavelength	IEC 60793-1-44

## Part Number

**D1149-OD477A2BK** Fiber Optic Outdoor Drop Cable, 4 Core, Single-mode OS2, LSZH, G.657A2, Black with Steel Strength Member



## Factory Test List for Fiber Optic Cable\*

### Tension Loading Test

Test Standard	IEC 60794-1-2 E1
Sample Length	No less than 50 meters
Load	Max. tension load
Duration time	1 minute
Test results	Additional attenuation $\leq$ 0.4dB No damage to outer jacket and inner elements

### Crush / Compression Test

Test Standard	IEC 60794-1-2 E3
Load	Crush load
Duration time	1 minute
Test number	1
Test results	Additional attenuation $\leq$ 0.4dB No damage to outer jacket and inner elements

### Impact Resistance Test

Test Standard	IEC 60794-1-2 E4
Impact energy	1J
Radius	12.5mm
Impact Points	3
Impact Number	1
Test results	Additional attenuation $\leq$ 0.4dB No damage to outer jacket and inner elements

### Repeated Bending Test

Test Standard	IEC 60794-1-2 E6
Bending Radius	20 x diameter of cable
Number of cycles	30 cycles
Test results	Additional attenuation $\leq$ 0.4dB No damage to outer jacket and inner elements

### **Packing**

DME PROLINK cables are packed in carton, coiled on Bakelite & plastic drum. During transportation, right tools should be used to avoid damaging the package and to handle with ease. Cables should be protected from moisture; kept away from high temperature and fire sparks; protected from over bending and crushing; protected from mechanical stress and damage. The color of cable marking is white. (The printing shall be carried out at interval of 1 meter on the outer sheath of cable) The inner end of cable is then sealed with heat shrinkable end cap to prevent ingress of water and is made available for testing. The outer end of cable is equipped with heat shrinkable end cap. Outer sheath marking legend can be changed according to user's requests.



## Description

DME PROLINK's Multi Loose tube/ Multi Ribbon Tube cable provides excellent optical transmission and physical performance. Loose tube cable is a design that has high tensile strength and flexibility in a compact cable size. Single mode fiber is manufactured by the vapour axial deposition (VAD) process to produce the highest quality glass with excellent geometry, high strength characteristics, and attenuation that approaches theoretical minimum. The single mode fiber is fully compatible with other commercially available single mode fibers and has the zero dispersion wavelength around 1310nm. The main operating wavelength region of the fiber is around 1285nm and 1625nm. Its optical properties are achieved through a germanium doped silica based core with a pure silica cladding. An acrylate protective coating is applied over glass cladding to provide the necessary maximum fiber lifetime.

DME PROLINK ensure a continuing level of quality in our cable products through several quality control programs including ISO 9001. Also, it ensure product reliability through rigorous qualification testing of each product family. Both initial and periodic qualification testing are performed to assure the cable's performance and durability in the field environments.

## Reference:

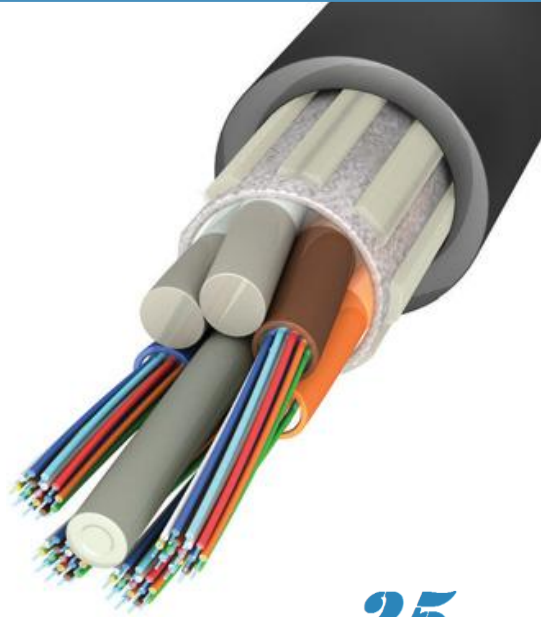
IEC 60793, IEC 60794, ITU-T G 650, G 652D

## Cable Design (4 – 300 Core):

The cable core contains single mode fibers in loose tubes and required number of filler which are stranded (S-Z stranding method) around central strength member with water blocking yarn or tape. The interstices in the loose tubes are filled with jelly compound. And then wrapping tape, glass yarn and polyethylene sheath apply over the cable core.

## Cable Design (400 – 1000 Core):

The cable core contains single mode fibers in loose tubes and required number of filler which are stranded (S-Z stranding method) around central strength member with water blocking yarn or tape. The interstices in the loose tubes are filled with jelly compound. And then wrapping tape, glass yarn and polyethylene sheath apply over the cable core. The cable core contains consist of parallel arranged 12-primary coated fiber (ribbon fiber) in loose tubes and required number of filler which are stranded (S-Z stranding method) around central strength member with water blocking yarn or tape. The interstices in the loose tubes are filled with jelly compound. And then wrapping tape, glass yarns and polyethylene sheath apply over the cable core.



**25**  
**YEARS**  
SYSTEM WARRANTY



## Optical Fiber G.652D Specification

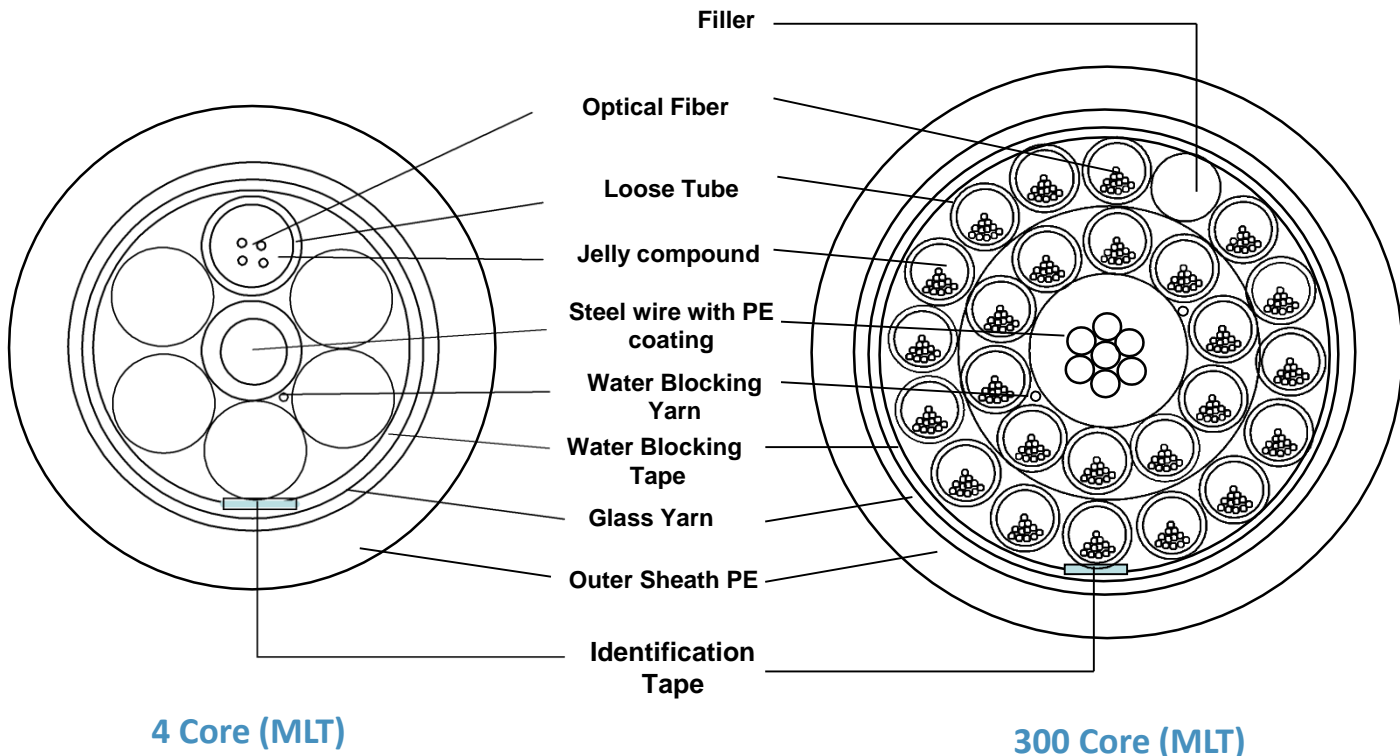
Category	Description	Values
<b>Optical Specifications</b>	Attenuation @1310 nm	≤0.40 dB/km
	Attenuation @1550 nm	≤0.25 dB/km
	Chromatic Dispersion at 1285~1330nm	≤3.5 ps/nm·km
	Chromatic Dispersion at 1550nm	≤18 ps/nm·km
	Zero Dispersion Wavelength	1300~1324 nm
	Zero Dispersion Slope	≤0.093 ps/nm <sup>2</sup> ·km
	Cable Cutoff Wavelength (λ <sub>cc</sub> )	≤1100 to 1330 nm
<b>Dimensional Specifications</b>	Mode Field Diameter @1310 nm	9.2 ± 0.5μm
	Cladding Diameter	125 ±1μm
	Cladding non circularity	≤1.0%
	Coating diameter	245 ± 5μm
<b>Mechanical Specifications</b>	Mode Field concentricity error	≤0.8 μm
	Fiber Proof Test Level	≥ 1% x 1 Sec

## Factory Tests

Cable Bend Test		Crush Resistance Test	
Test standard	IEC 60794-1-2 E11	Test standard	IEC 60794-1-2 E3
Bending Radius	20 x diameter of cable	Applied Load	1000 N/100mm plate
Bending Turns	1 Turn	Duration time	10 sec
Cycles	5 cycles	Test results	Additional attenuation: ≤ 0.1 dB
Test results	Additional attenuation: ≤ 0.1 dB No damage to outer jacket and inner elements		No damage to outer jacket and inner elements
Impact Resistance Test			
Test standard	IEC 60794-1-2 E4		
Test Load	1Kg x 1m		
Test results	Additional attenuation: ≤ 0.1 dB		
	No damage to outer jacket and inner elements		

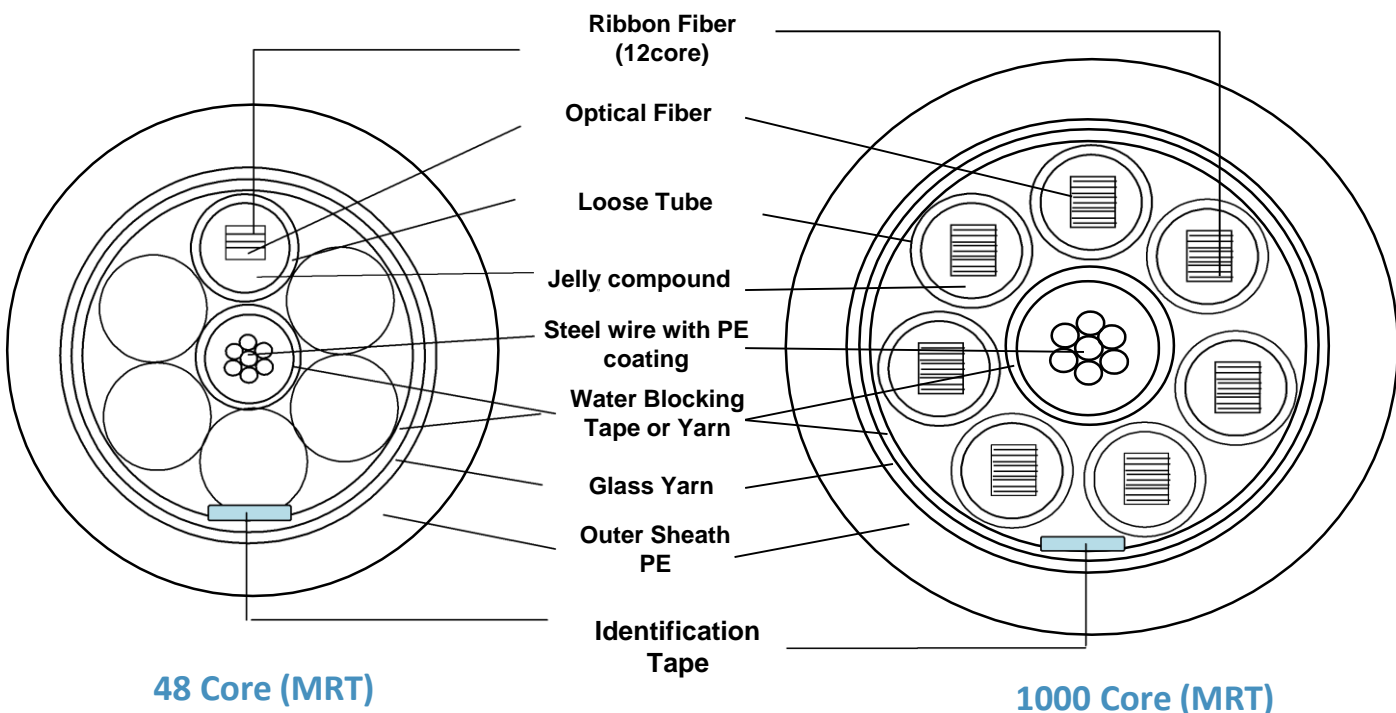
**Construction of Optical fiber cable (Loose Fiber Core)**

Description		Construction										
Total Fiber Core		4	6	8	12	16	24	48	72	100	200	300
Number of Loose Tube		1	1	2	2	3	4	4	6	9	17	25
Number of Fillers		5	5	4	4	3	2	2	0	1	1	1
Number of Fiber per Tube		4	6	6,2	6	6,4	6	12	12	12,4	8,12	12
Tube Material		PBT (Polybutylene Terephthalate)										
Filler Material		PE String										
Central Strength Member		Single or stranded steel wire with PE coating										
Filling Material		Water blocking yarn or Tape										
Wrapping Material		Water Blocking Tape										
Tensile Element		Glass Yarn										
Outer Sheath Material		Nom. 1.5mm Black color Polyethylene										
Cable	Nom. Diameter (mm)	10.0			10.7	10.7	13.6	15.5	18.4			
	Nom. Weight (kg/km)	80			94	96	160	180	270			
Max. Tensile Strength		200Kg during Installation / 100Kg after Installation										
Operating Temperature Range		- 30 to 70°C										



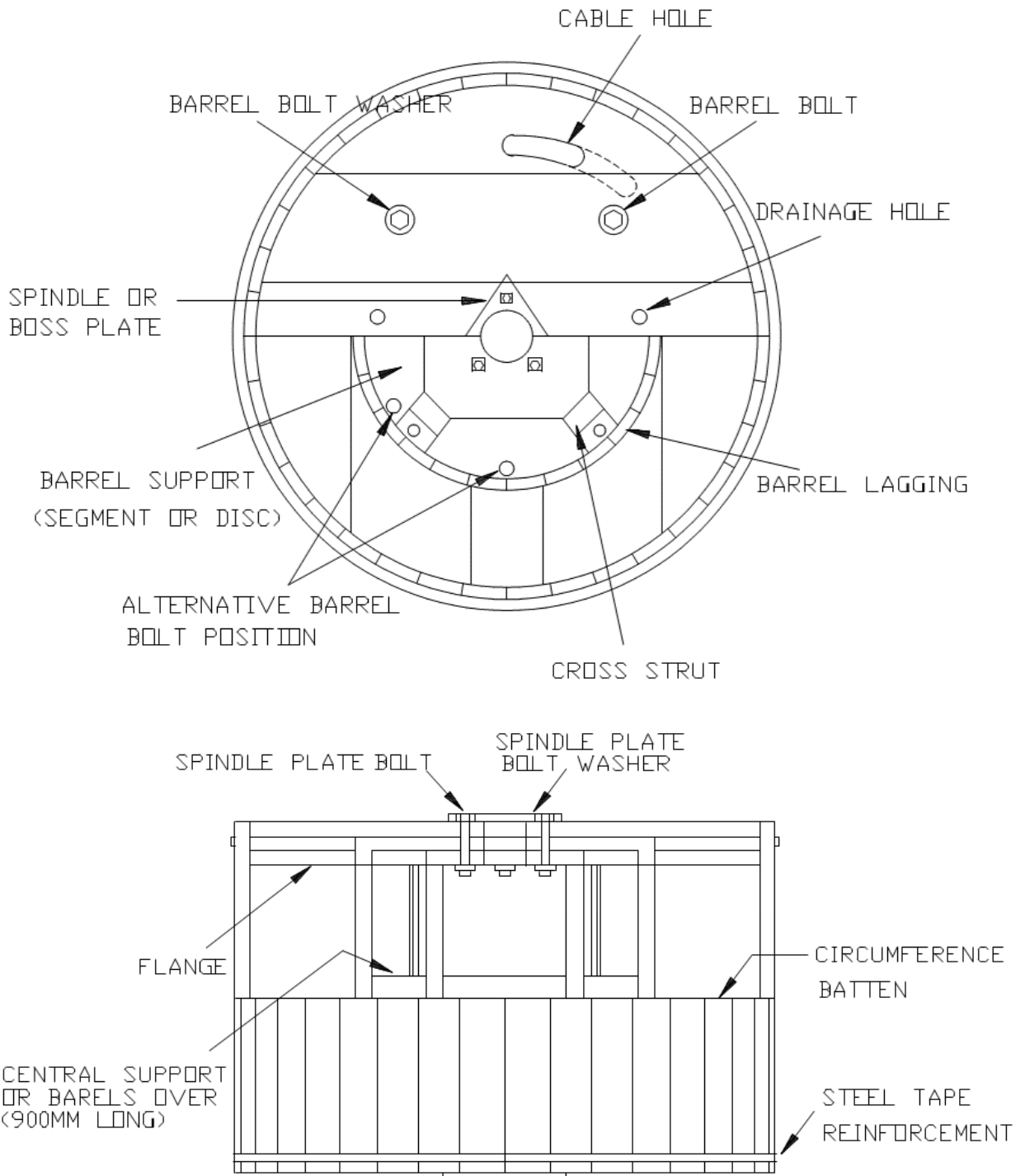
**Construction of Optical fiber cable (Ribbon Fiber Core)**

Description		Construction									
Total Fiber Core		48	72	96	100	200	300	400	600	800	1000
Number of Loose Tube		1	1	2	2	3	5	6	9	6	7
Number of Ribbon		4	6	8	9	17	25	34	50	67	84
Consist of Ribbon	12 Fiber Ribbon	3	5	7	8	16	24	33	49	66	83
	Last Ribbon	1 (12 Fiber)	1 (12 Fiber)	1 (12 Fiber)	1 (4 + 8 Spare)	1 (8 + 4 Spare)	1 (12 Fiber)	1 (4 + 8 Spare)	1 (12 Fiber)	1 (8 + 4 Spare)	1 (4 + 8 Spare)
Number of Fiber per Tube		48	72	72,36	72,24	72,36	72,12	72,48	72,24	144,84	144
Tube Material		Plastic Material (TPEE etc.)									
Filler Material		PE String									
Central Strength Member		Single or stranded steel wires with PE coating									
Filling Material		Water blocking yarns or Tape									
Wrapping Material		Water Blocking Tape									
Tensile Element		Glass Yarn									
Outer Sheath Material		Nom. 1.5mm Black color Polyethylene									
Cable	Nom. Diameter (mm)	22.6							28.4	29.2	32.2
	Nom. Weight (kg/km)	370							605	645	820
Max. Tensile Strength		200Kg during Installation / 100Kg after Installation									
Operating Temperature Range		- 30 to 70°C									



### Drum Packing and Marking

DME PROLINK's each length of cable will have both ends effective sealed. Each cable drum will be marked to indicate the direction of rotating for reeling of the cable. On both side of the cable drum, required marking will be printed. The minimum barrel diameter of the drums will be 40 times the nominal diameter of the cable. Required letters will be distinctly marked on a weather proof material on both outer sides of the drum flange. The marking plates will be made of a non-corrodible material.





**Color coding of Optical Fiber in Multi Loose Tube / Multi Ribbon Tube**

No. of Fiber Per Tube	1	2	3	4	5	6	7	8	9	10	11	12
6 Cores	Blue	Orange	Green	Red	Yellow	Violet						
12 Cores	Blue	Orange	Green	Red	Yellow	Violet	Brown	Black	White	Slate	Aqua	Pink
12 Core (R) *	Blue	Orange	Green	Red	Yellow	Violet	Brown	Black	White	Slate	Aqua	Pink

(R)\* : Ribbon fiber (12core)

**Part Number**

D 1 1 5 x - n t m j p s c

x	Pin assigned by ECS
0-9	Inventory Management Index

c	Color
BK	Black

n	Number of Fiber Core
04 - 1000	4 – 1000 Fiber Core

s	Specification
2D	G.652D

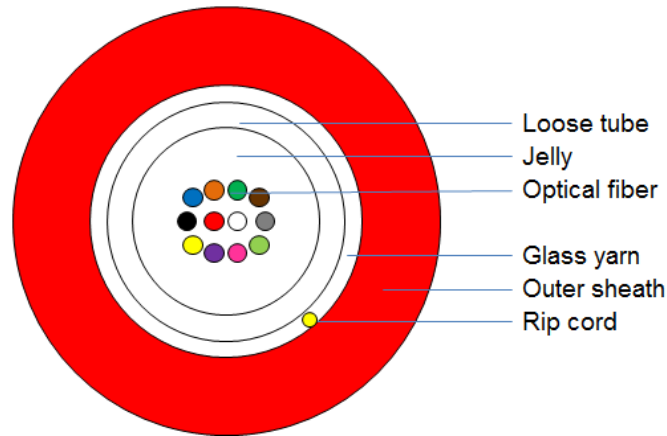
t	Type
LF	Loose Fiber
RF	Ribbon Fiber

m	Mode
6	OS1
7	OS2

j	Outer Jacket Material
PV	Polyvinyl Chloride
PE	Polyethylene
FRPL	Flame Retardant Polyethylene with LSZH

p	Physical Construction
JF	Jelly Filled





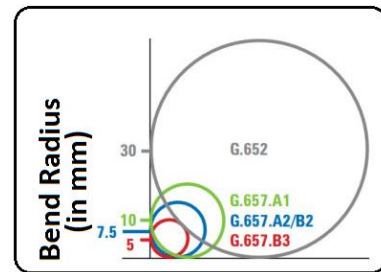
## Description

*DME PROLINK's* Indoor/Outdoor is designed specifically for FTTx applications requiring low to Medium core-counts. The Single-mode FO cable is with G.652D specifications. Central Loose Tube construction with Water blocking yarn reinforcement. The cable is designed in such a way that it is ideal for quick and easy installation.

The Fiber used in *DME PROLINK's* Fiber Optic cables, are made of pure silica and germanium doped silica. A UV curable acrylate material is applied over the Fiber Cladding as primary protective coating. *DME PROLINK* quality personals ensures product reliability through rigorous qualification testing to assure cable performance and durability in adverse field environments. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001.

## Features & Benefits

- Fiber Specification G.652D
- LSZH Outer Sheath
- Central Loose Tube filled with Jelly
- Color code scheme: According to EIA/TIA 598
- Water blocking yarns provided on the peripheral for rodent protection
- Ripcord provided for easy stripping
- Complies with IEC 60332-1
- Predictable lifetime of 30 years



**The Fiber within FO cable are designed, Manufactured and tested according to below standards:**

- IEC 60793-1: Optical Fiber Part 1: Generic Specification
- IEC 60793-2: Optical Fiber Part 2: Product Specification
- IEC 60794-2: Optical Fiber Cables Part 2 Indoor cables- Sectional Specification
- ITU-T G652: Characteristics of a Single-mode optical fiber and cable
- ITU-T G.655: Characteristics of a non-zero dispersion-shifted single-mode optical fiber and cable

## Optical Fiber G.652D Specification

Category	Description	Values
<b>Optical Specifications</b>	Attenuation @1310 nm	≤0.35 dB/km
	Attenuation @1550 nm	≤0.22dB/km
	Zero Dispersion Slope	≤0.092 ps/nm <sup>2</sup> ·km
	Dispersion in the range 1288 to 1339nm:	≤3.5ps/ (nm*km)
	Dispersion in the range 1530 to 1565nm:	≤18ps/ (nm*km)
	Polarization mode dispersion link value:	≤0.2ps/√km
	Cable Cutoff Wavelength (λ <sub>cc</sub> )	≤1260 nm
	Macro bending Loss (100 turns; Φ30 mm) @1550 nm (100 turns; Φ30 mm) @1625 nm	≤ 0.05 dB ≤ 0.05 dB
	Mode Field Diameter @1310 nm	9.2 ± 0.4μm
	Mode Field Diameter @1550 nm	10.4 ± 0.8μm
<b>Dimensional Specifications</b>	Cladding Diameter	125 ±1μm
	Cladding non circularity	≤1.0%
	Core/cladding concentricity error	≤0.6μm
<b>Environmental Specification</b>	Operation temperature range	-20°C to + 70°C
	Installation temperature range	0°C to + 60°C
	Transport and storage temperature range	-20°C to + 70°C

## Color coding for Optical Fiber

1	2	3	4	5	6	7	8	9	10	11	12
Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow	Purple	Pink	Aqua
13	14	15	16	17	18	19	20	21	22	23	24
Blue S100	Orange S100	Green S100	Brown S100	Gray S100	White S100	Red S100	Black S100	Yellow S100	Purple S100	Pink S100	Aqua S100

Note: "S100" means Black Circle at an interval of 100mm

## Factory Test List for Fiber Optic Cable\*

### Tension Loading Test

Test Standard	IEC 60794-1-2 E1
Sample Length	No less than 50 meters
Load	Short term tension
Duration time	1 minute
Test results	Fiber strain $\leq 0.6\%$ Additional attenuation $\leq 0.1\text{dB @}1550\text{nm}$ No damage to outer jacket and inner elements

### Crush Test

Test Standard	IEC 60794-1-2 E3
Load	Short Term crush
Duration time	1 minute
Test results	Additional attenuation $\leq 0.1\text{dB @}1550\text{nm}$ No damage to outer jacket and inner elements

### Torsion Resistance Test

Test Standard	IEC 60794-1-2 E7
Sample Length	1m
Twist angle	$\pm 180^\circ$
Number of Cycles	10
Test results	Additional attenuation $\leq 0.1\text{dB @}1550\text{nm}$ No damage to outer jacket and inner elements

### Impact Test

Test Standard	IEC 60794-1-2 E4
Points of impact	3
No. of Times per point	1
Impact Energy	5J (Striking Surface radius: 300mm)
Test results	Additional attenuation $\leq 0.1\text{dB @}1550\text{nm}$ No damage to outer jacket and inner elements

## Physical / Mechanical Characteristics of Fiber Optic Cable

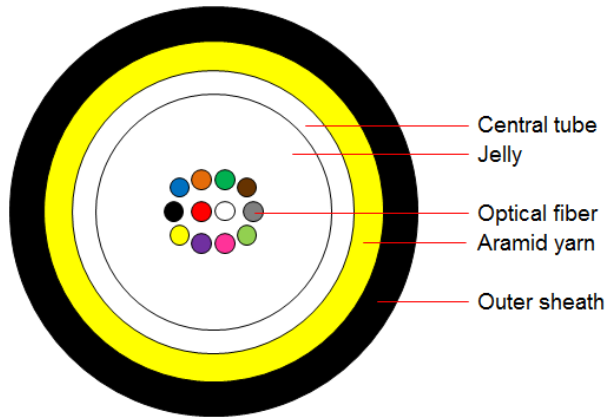
<b>Physical</b>	Fiber count	2/4/8/12	24
	Cable OD (mm $\pm 5\%$ )	7.4	7.9
	Cable weight (kg/km $\pm 10\%$ )	65	73
<b>Mechanical</b>	Short Term Tension	1000N	
	Short Term Crush	1000N/100mm	
	Minimal installation bending radius (Dynamic)	20 x OD	
	Minimal operation bending radius (Static)	10 x OD	

## Routine Factory tests of single-mode fiber

Parameters	Test Standards
Mode field diameter	IEC 60793-1-45.
Mode field Core/clad concentricity	IEC 60793-1-20
Cladding diameter	IEC 60793-1-20
Cladding non-circularity	IEC 60793-1-20
Attenuation coefficient	IEC 60793-1-40
Chromatic dispersion	IEC 60793-1-42
Cable cut-off wavelength	IEC 60793-1-44

## Part Number

D11811-027LSJF2DRD	Fiber Optic Indoor/Outdoor Dielectric Cable, 2 Core, CLT, Jelly Filled, with Glass yarn, Single-mode OS2, LSZH, G.652D, Red
D11811-047LSJF2DRD	Fiber Optic Indoor/Outdoor Dielectric Cable, 4 Core, CLT, Jelly Filled, with Glass yarn, Single-mode OS2, LSZH, G.652D, Red
D11811-087LSJF2DRD	Fiber Optic Indoor/Outdoor Dielectric Cable, 8 Core, CLT, Jelly Filled, with Glass yarn, Single-mode OS2, LSZH, G.652D, Red
D11811-127LSJF2DRD	Fiber Optic Indoor/Outdoor Dielectric Cable, 12 Core, CLT, Jelly Filled, with Glass yarn, Single-mode OS2, LSZH, G.652D, Red
D11811-247LSJF2DRD	Fiber Optic Indoor/Outdoor Dielectric Cable, 24 Core, CLT, Jelly Filled, with Glass yarn, Single-mode OS2, LSZH, G.652D, Red



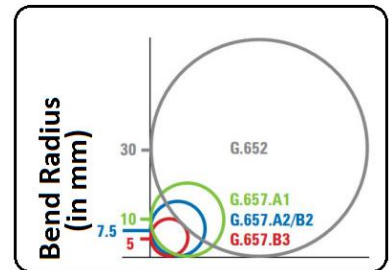
## Description

DME PROLINK's Micro cable is designed specifically for Air blown applications requiring low core-counts. The Single-mode FO cable comes in G.652D specifications. Circular Central Tube construction with Aramid yarn strength member at the peripheral will make this cable ideal for installation in Micro ducts using Air blowing equipment using air pressure up to 15 Bar.

The Fiber used in DME PROLINK's Fiber Optic cables, are made of pure silica and germanium doped silica. A UV curable acrylate material is applied over the Fiber Cladding as primary protective coating. DME PROLINK quality personals ensures product reliability through rigorous qualification testing to assure cable performance and durability in adverse field environments. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001.

## Features & Benefits

- Available as G.652D
- HDPE Outer Sheath
- Central Tube has natural color
- Tube is filled with Jelly
- Color code scheme: According to EIA/TIA 598
- Water blocking aramid yarns at the peripheral to bind the cable core
- Predictable lifetime of 30 years



**The Fiber within FO cable are designed, Manufactured and tested according to below standards:**

- IEC 60793-1: Optical Fiber Part 1: Generic Specification
- IEC 60793-2: Optical Fiber Part 2: Product Specification
- IEC 60794-2: Optical Fiber Cables Part 2 Indoor cables- Sectional Specification
- ITU-T G652: Characteristics of a Single-mode optical fiber and cable
- ITU-T G.655: Characteristics of a non-zero dispersion-shifted single-mode optical fiber and cable

## Optical Fiber G.652D Specification

Category	Description	Values
Optical Specifications	Attenuation @ 1310 nm	≤0.35 dB/km
	Attenuation @ 1550 nm	≤0.22dB/km
	Zero Dispersion Slope	≤0.092 ps/nm <sup>2</sup> ·km
	Dispersion in the range 1288 to 1339nm:	≤3.5ps/ (nm*km)
	Dispersion in the range 1530 to 1565nm:	≤18ps/ (nm*km)
	Polarization mode dispersion link value:	≤0.2ps/√km
	Cable Cutoff Wavelength (λ <sub>cc</sub> )	≤1260 nm
	Macro bending Loss (100 turns; Φ30 mm) @1550 nm (100 turns; Φ30 mm) @1625 nm	≤ 0.05 dB ≤ 0.05 dB
	Mode Field Diameter @1310 nm	9.2 ± 0.4μm
	Mode Field Diameter @1550 nm	10.4 ± 0.8μm
Dimensional Specifications	Cladding Diameter	125 ±1μm
	Cladding non circularity	≤1.0%
	Core/cladding concentricity error	≤0.6μm
Environmental Specification	Operation temperature range	-10°C to + 70°C
	Installation temperature range	-10°C to + 70°C
	Transport and storage temperature range	-10°C to + 70°C

## Color coding of Optical Fiber in Central Tube

No. of Fiber Per Tube	1	2	3	4	5	6	7	8	9	10	11	12
2 Cores	Blue	Orange										
4 Cores	Blue	Orange	Green	Brown								
8 Cores	Blue	Orange	Green	Brown	Gray	White	Red	Black				
12 Cores	Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow	Purple	Pink	Aqua

## Factory Test List for Fiber Optic Cable\*

### Tension Loading Test

Test Standard	IEC 60794-1-2 E1
Sample Length	No less than 50 meters
Load	Short Term Tension
Duration time	1 minute
Test results	Fiber strain $\leq 0.6\%$ Additional attenuation $\leq 0.1\text{dB @}1550\text{nm}$ No damage to outer jacket and inner elements

### Crush Test

Test Standard	IEC 60794-1-2 E3
Load	Short Term crush
Duration time	1 minute
Test number	1
Test results	Additional attenuation $\leq 0.1\text{dB @}1550\text{nm}$ No damage to outer jacket and inner elements

### Torsion Resistance Test

Test Standard	IEC 60794-1-2 E7
Sample Length	1m
Twist angle	$\pm 90^\circ$
Test results	Additional attenuation $\leq 0.1\text{dB @}1550\text{nm}$ No damage to outer jacket and inner elements

### Temperature Cycling Test

Test Standard	IEC 60794-1-2 F1
Temperature Range	$-10^\circ\text{C}$ to $+60^\circ\text{C}$
Time of each step	12H
Number of cycles	2
Test results	Additional attenuation $\leq 0.1\text{dB/km @}1550\text{nm}$ No damage to outer jacket and inner elements

## Physical / Mechanical Characteristics of Fiber Optic Cable

Physical	Fiber count	2	4	8	12
	Strength member	Aramid yarns			
	Cable OD	2.8mm ± 5%			
	Cable weight	7 kg/km ± 10%			
Mechanical	Short Term Tension	1*W			
	Crush resistance	100N/100mm			
	Minimal installation bending radius (Dynamic)	20 x OD			
	Minimal operation bending radius (Static)	10 x OD			

Note: Mechanical sizes are nominal values. "W" means cable weight per km

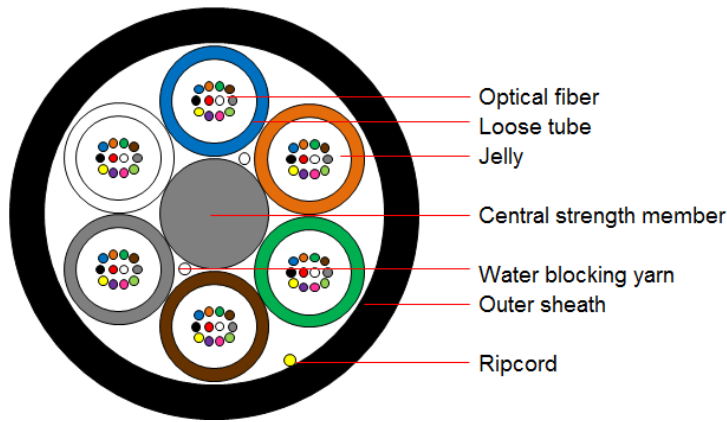
## Routine Factory tests of single-mode fiber

Parameters	Test Standards
Mode field diameter	IEC 60793-1-45.
Mode field Core/clad concentricity	IEC 60793-1-20
Cladding diameter	IEC 60793-1-20
Cladding non-circularity	IEC 60793-1-20
Attenuation coefficient	IEC 60793-1-40
Chromatic dispersion	IEC 60793-1-42
Cable cut-off wavelength	IEC 60793-1-44

## Part Number

D111211-027PEJF2DBK	Fiber Optic Air Blown Micro Cable, 2 Core, Central Tube, Aramid Yarn/Jelly Filled Single-mode OS2, G.652D, HDPE, Black
D111211-047PEJF2DBK	Fiber Optic Air Blown Micro Cable, 4 Core, Central Tube, Aramid Yarn/Jelly Filled Single-mode OS2, G.652D, HDPE, Black
D111211-087PEJF2DBK	Fiber Optic Air Blown Micro Cable, 8 Core, Central Tube, Aramid Yarn/Jelly Filled Single-mode OS2, G.652D, HDPE, Black
D111211-127PEJF2DBK	Fiber Optic Air Blown Micro Cable, 12 Core, Central Tube, Aramid Yarn/Jelly Filled Single-mode OS2, G.652D, HDPE, Black





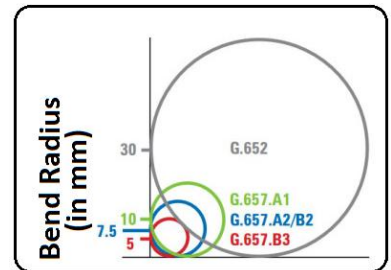
## Description

DME PROLINK's Mini cable is designed specifically for Air blown applications requiring low to higher core-counts. The Single-mode FO cable comes in G.652D specifications. Mini Multi Loose Tube construction with Water blocking yarn and Central strength member will make this cable ideal for installation in Mini ducts using Air blowing equipment using air pressure up to 15 Bar.

The Fiber used in DME PROLINK's Fiber Optic cables, are made of pure silica and germanium doped silica. A UV curable acrylate material is applied over the Fiber Cladding as primary protective coating. DME PROLINK quality personals ensures product reliability through rigorous qualification testing to assure cable performance and durability in adverse field environments. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001.

## Features & Benefits

- Available as G.652D
- HDPE Outer Sheath
- Loose Tubes are filled with Jelly
- Non-metallic Central Strength Member
- Color code scheme: According to EIA/TIA 598
- Water blocking yarns between tubes
- Ripcord provided for easy stripping
- Predictable lifetime of 30 years



**The Fiber within FO cable are designed, Manufactured and tested according to below standards:**

- IEC 60793-1: Optical Fiber Part 1: Generic Specification
- IEC 60793-2: Optical Fiber Part 2: Product Specification
- IEC 60794-2: Optical Fiber Cables Part 2 Indoor cables- Sectional Specification
- ITU-T G652: Characteristics of a Single-mode optical fiber and cable
- ITU-T G.655: Characteristics of a non-zero dispersion-shifted single-mode optical fiber and cable

## Optical Fiber G.652D Specification

Category	Description	Values
<b>Optical Specifications</b>	Attenuation @1310 nm	≤0.35 dB/km
	Attenuation @1550 nm	≤0.22dB/km
	Zero Dispersion Slope	≤0.092 ps/nm <sup>2</sup> ·km
	Dispersion in the range 1288 to 1339nm:	≤3.5ps/ (nm*km)
	Dispersion in the range 1530 to 1565nm:	≤18ps/ (nm*km)
	Polarization mode dispersion link value:	≤0.2ps/√km
	Cable Cutoff Wavelength (λ <sub>cc</sub> )	≤1260 nm
	Macro bending Loss (100 turns; Φ30 mm) @1550 nm (100 turns; Φ30 mm) @1625 nm	≤ 0.05 dB ≤ 0.05 dB
	Mode Field Diameter @1310 nm	9.2 ± 0.4μm
	Mode Field Diameter @1550 nm	10.4 ± 0.8μm
<b>Dimensional Specifications</b>	Cladding Diameter	125 ±1μm
	Cladding non circularity	≤1.0%
	Core/cladding concentricity error	≤0.6μm
<b>Environmental Specification</b>	Operation temperature range	-10°C to + 60°C
	Installation temperature range	-10°C to + 60°C
	Transport and storage temperature range	-20°C to + 70°C

### Color coding for Optical Fiber

1	2	3	4	5	6	7	8	9	10	11	12
Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow	Purple	Pink	Aqua

### Color coding for Loose Tubes

1	2	3	4	5	6	7	8	9	10	11	12
Blue	Orange	Green	Brown	Gray	White	Red	Black	Yellow	Purple	Pink	Aqua

## Factory Test List for Fiber Optic Cable\*

### Tension Loading Test

Test Standard	IEC 60794-1-2 E1
Sample Length	No less than 50 meters
Load	1KM cable weight
Duration time	1 minute
Test results	Fiber strain $\leq$ 0.6%
	Additional attenuation $\leq$ 0.1dB @1550nm
	No damage to outer jacket and inner elements

### Crush Test

Test Standard	IEC 60794-1-2 E3
Load	Short Term crush
Duration time	5 minute
Test results	Additional attenuation $\leq$ 0.1dB @1550nm
	No damage to outer jacket and inner elements

### Torsion Resistance Test

Test Standard	IEC 60794-1-2 E7
Sample Length	2m
Twist angle	$\pm$ 180°
Number of Cycles	5
Test results	Additional attenuation $\leq$ 0.1dB @1550nm
	No damage to outer jacket and inner elements

### Temperature Cycling Test

Test Standard	IEC 60794-1-2 F1
Temperature Range	-10°C to +60°C
Time of each step	12H
Number of cycles	2
Test results	Additional attenuation $\leq$ 0.15 dB/km @1550nm
	No damage to outer jacket and inner elements

## Factory Test List for Fiber Optic Cable\*

### Impact Test

Test Standard	IEC 60794-1-2 E4
Points of impact	3
No. of Times per point	1
Impact Energy	1J (with 300mm striking radius) or 0.3J (with 10 striking radius)
Test results	Additional attenuation $\leq$ 0.1dB @1550nm No damage to outer jacket and inner elements

### Repeated Bending Test

Test Standard	IEC 60794-1-2 E6
Bending Radius	The larger of two values: 300 mm or 40x cable diameter
Number of Cycles	25
Test results	Additional attenuation $\leq$ 0.1dB @1550nm No damage to outer jacket and inner elements

### Cable Bend Test

Test Standard	IEC 60794-1-2 E11
Diameter of Mandrel	20 x OD
Number of turns	4
Number of Cycles	3
Test results	Additional attenuation $\leq$ 0.1dB @1550nm No damage to outer jacket and inner elements

### Water Penetration Test

Test Standard	IEC 60794-1-2 F5B
Height of water	3m
Sample length	1m
Time	24H
Test results	No water leak from the cable core of the opposite end

## Physical / Mechanical Characteristics of Fiber Optic Cable

<b>Physical</b>	Fiber count	24/36/48	72	96	144
	No. of Fiber per tube	12	12	12	12
	No. of Elements (Tubes and Filler rods)	6	6	8	12
	Cable OD (mm ±5%)	6.5	6.5	6.2	7.9
	Cable weight (kg/km ± 10%)	37	40	36	58
<b>Mechanical</b>	Short Term Tension	300		400	500
	Short Term Crush	500N/10mm			
	Minimal installation bending radius (Dynamic)	20 x OD			
	Minimal operation bending radius (Static)	15 x OD			

## Routine Factory tests of single-mode fiber

Parameters	Test Standards
Mode field diameter	IEC 60793-1-45.
Mode field Core/clad concentricity	IEC 60793-1-20
Cladding diameter	IEC 60793-1-20
Cladding non-circularity	IEC 60793-1-20
Attenuation coefficient	IEC 60793-1-40
Chromatic dispersion	IEC 60793-1-42
Cable cut-off wavelength	IEC 60793-1-44

## Part Number

D111211-247PEJF2DBK	Fiber Optic Air Blown Mini Cable, 24 Core, MLT, Jelly Filled Single-mode OS2, G.652D, HDPE, Black
D111211-367PEJF2DBK	Fiber Optic Air Blown Mini Cable, 36 Core, MLT, Jelly Filled Single-mode OS2, G.652D, HDPE, Black
D111211-727PEJF2DBK	Fiber Optic Air Blown Mini Cable, 72 Core, MLT, Jelly Filled Single-mode OS2, G.652D, HDPE, Black
D111211-967PEJF2DBK	Fiber Optic Air Blown Mini Cable, 96 Core, MLT, Jelly Filled Single-mode OS2, G.652D, HDPE, Black
D111211-1447PEJF2DBK	Fiber Optic Air Blown Mini Cable, 144 Core, MLT, Jelly Filled Single-mode OS2, G.652D, HDPE, Black



## Description

DME PROLINK provides 19" Rack-mountable Fiber Optic Patch Panel for splicing and/or termination of optical fibers in an indoor environment. Also, loaded type available with Multimode or Single-mode pigtailed, splice accessories and adapters. The solution provides an optical channel that is guaranteed to be compliant with the ISO 11801 International Standard for Structured Cabling. DME PROLINK quality personnel ensures product reliability through rigorous qualification testing to assure cable performance and durability in adverse field environments. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001.

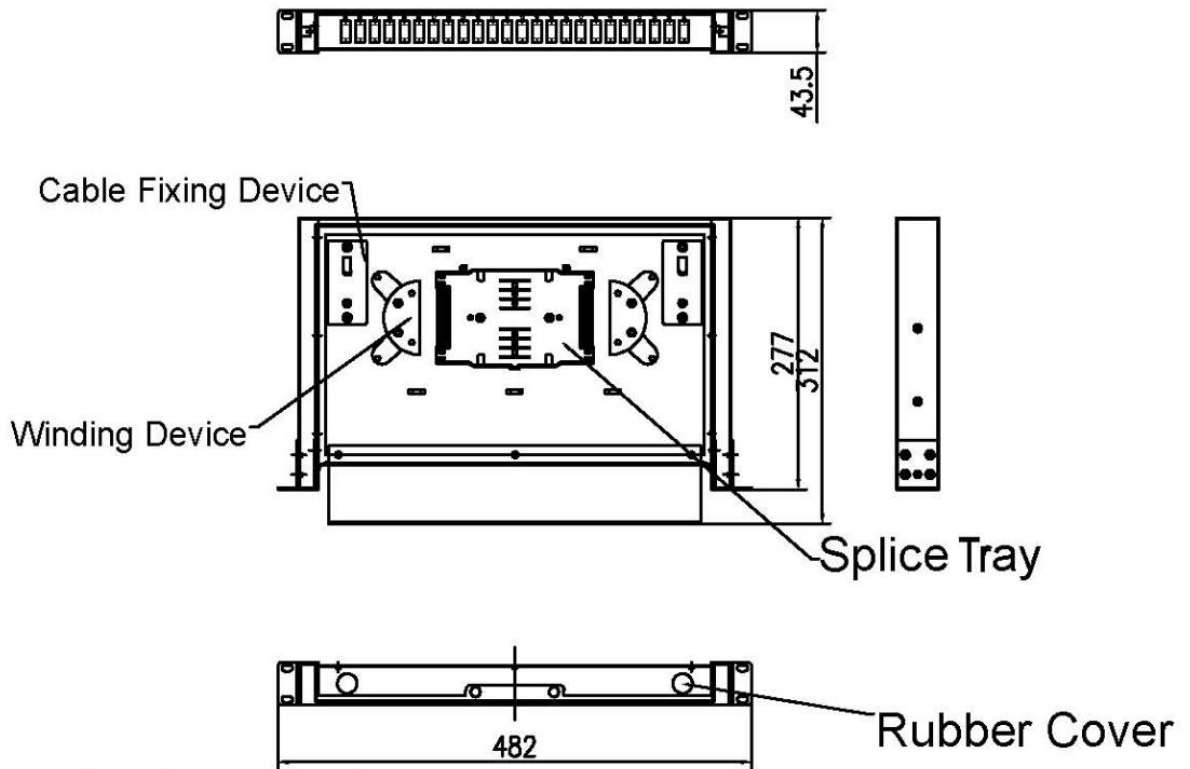
## Features & Benefits

- 19" Rack-mountable; 1RU
- Easy to install.
- Comes Unloaded (Capacity 24 Ports)
- With Plastic Sliding Rail- Sliding Out Design
- Cable Fixing and Grounding Devices installed within Patch Panel
- The body made of cold-rolled steel. The steel plate thickness is 1.5mm, molded by numerical controlling. Surface treated with static plastic spray.
- Internal cable management
- Accommodates Splicing and/or Direct Termination
- Complies with IEC 60068
- Accepts DME PROLINK compliant adapters/couplers.
- Panels can be ordered configured.
- 25 Years System Warranty



Technical requirement:

- 1.All sharp edges are blunted;
- 2.When assembled, to make sure the surface smooth, no scratch and spray defect;
- 3.All dimensions are in mm.



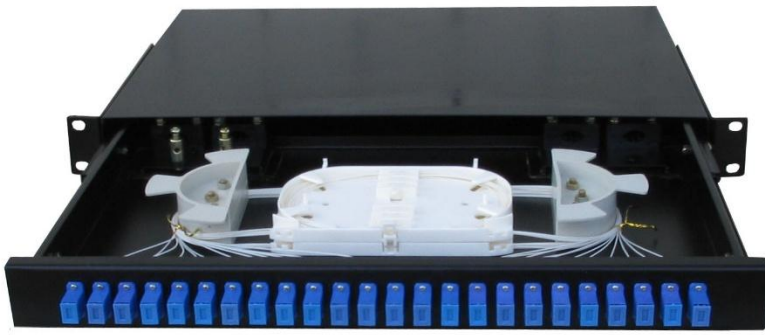
### Technical Specification

- Voltage Resistance  $\geq 3000\text{VDC}$
- Insulating resistance between the metal parts of the body and grounding fitting:  $\geq 2 \times 10^4 \text{ m}\Omega/500\text{V (DC)}$ .
- Product Dimension: 483mm (W) X44mm (H) X280mm (D) for 24D.

### Part Number

D121x-241EMN000BK	Fiber Optic Patch Panel, 24 Port, 1RU, No Adapters, No Pigtails, With Splice Tray, Black (Empty)
D121x-241EMN000GY	Fiber Optic Patch Panel, 24 Port, 1RU, No Adapters, No Pigtails, With Splice Tray, Grey (Empty)





## Description

DME PROLINK provides 19" Rack-mountable Fiber Optic Patch Panel for splicing and/or termination of optical fibers in an indoor environment. Also, loaded type available with Multimode or Single-mode pigtailed, splice accessories and adapters. The solution provides an optical channel that is guaranteed to be compliant with the ISO 11801 International Standard for Structured Cabling. DME PROLINK quality personals ensures product reliability through rigorous qualification testing to assure cable performance and durability in adverse field environments. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001.

## Features & Benefits

- 19" Rack-mountable; 1RU, 2RU, 3U or 4U
- Easy to install.
- Comes in Unloaded and loaded versions
- With Plastic Sliding Rail- Sliding Out Design
- Cable Fixing and Grounding Devices installed within Patch Panel
- Internal cable management
- Accommodates Splicing and/or Direct Termination
- Accepts DME PROLINK compliant adapters/couplers.
- Panels can be ordered configured.
- 25 Years System Warranty



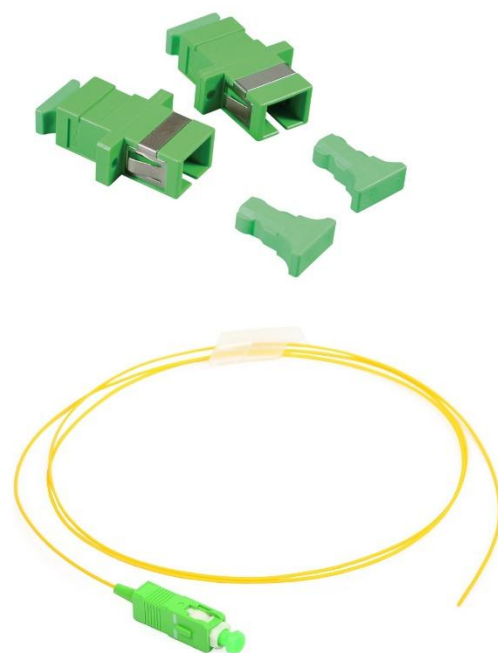


## Technical Specification

- Insulating resistance between the metal parts of the body and grounding fitting:  $\geq 2 \times 10^4$  M $\Omega$ /500VDC.
- Product Dimension for 1U: 483mm (W) X 1U (H) X331mm (D)
- Product Dimension for 2U: 483mm (W) X 2U (H) X331mm (D)
- Working Temperature: Indoor Type : -5°C to +40°C; Outdoor Type: -25°C to +55°C
- Storage Temperature: -25°C to +55°C
- Relative Humidity  $\leq 95\%$
- Atmospheric Pressure: 70kpa to 106kpa
- Dielectric Strength: Between Frame and Grounding Protection > 15KV/1min, no breakdown
- Optical Fiber cable storage radius is > 45mm

## Technical Characteristics of SC/APC Adapter

Fiber Type	Single mode
Adapter Type	SC
Insertion Loss (dB)	$\leq 0.5$
Repeatability (dB)	$\leq 0.5$
Interchangeability (dB)	$\leq 0.5$
Operating Temperature Range	-25°C to +70°C
Storage Temperature Range	-25°C to +70°C
Durability	> 500 times
Standard	IEC 601754-4



## Technical Characteristics of SC/APC Connectors

Fiber Type	Single mode OS2
Connector Type	SC
Connector Surface	APC (Angled Physical Contact)
Insertion Loss (dB)	$\leq 0.3$
Return Loss (dB)	$\geq 60$
Operating Temperature Range	-25°C to +70°C
Durability	> 500 times
Standard	IEC 601754-20

The Fiber Patch Panels are designed, Manufactured and tested according to below standards:

- YD/T 1272.3-2005: Optical Fiber Connector Part 3: Type SC
- YD/T 1272.1-2003: Optical Fiber Connector Part 1: Type LC
- YD/T 1272.4-2007: Optical Fiber Connector Part 4: Type FC
- YD/T 925-2009: Optical Fiber cable Terminal Case
- YD/T 1198-2002: Technical requirements of the ferrule of the optical fiber connector
- YD/T 1258.2-2003: A series of indoor optical cable: Simplex optical cable

## Part Number

D12111-121SCA712S12B	Fiber Optic Patch Panel, 12 Port, 1RU, 12 SC/APC Simplex Adapters, 12 SC/APC Pigtailed (G.652D), with Splice Tray, Black
D12111-241SCA724S24B	Fiber Optic Patch Panel, 24 Port, 1RU, 24 SC/APC Simplex Adapters, 24 SC/APC Pigtailed (G.652D), with Splice Tray, Black
D12111-362SCA736S36B	Fiber Optic Patch Panel, 36 Port, 2RU, 36 SC/APC Simplex Adapters, 36 SC/APC Pigtailed (G.652D), with Splice Tray, Black



**Note:** Image only for reference. The Splitter Panel actually comes with Front Panel Guide

## Description

DME PROLINK's Splitter panel is a vital component in any GPON/FTTx infrastructure. Designed in conjunction with leading Service Providers This compact, integrated panel offers pre-connectorised presentation of the input and output ports on the front of the panel. Each port is clearly labeled. The splitter consist of waveguides chip, optical fiber array and Pigtails. The Fiber used in DME PROLINK's splitter panel, is made of pure silica and germanium doped silica. A UV curable acrylate material is applied over the Fiber Cladding as primary protective coating.

DME PROLINK quality personals ensures product reliability through rigorous qualification testing to assure cable performance and durability in adverse field environments. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001.

## Features & Benefits

- Installed in 19" Standard Rack
- Small Size and aesthetic appearance.
- Quick Installation, Reliable Performance and Stable.
- Wide Operating wavelength range
- Good uniformity with respect to PON application
- Cassette Type Splitter - 2:32
- The PLC Splitter comes with pre-connectorised LC/APC connectors. The end faces are still curved but are angled at an industry standard 8°. This maintains a tight connection, and it reduces back reflection to about -70 dB. APC type connector back reflection does not degrade with repeated mating.
- Outer Sheath of Pigtail is PVC
- Fiber Type is G.657A1
- 25 Years System Warranty
- Length of Pigtail is 0.5m
- Diameter for Fiber cable of Pigtail is 2.0mm
- Product Dimension: 430mm (W) x 200mm (D) x 43.5mm (H)

## The Fiber Optic Splitter Panel are designed, Manufactured and tested according to below standards:

- IEC 60793-1: Optical Fiber Part 1: Generic Specification
- IEC 60793-2: Optical Fiber Part 2: Product Specification
- IEC 60794-2: Optical Fiber Cables Part 2 Indoor cables- Sectional Specification
- ITU-T G.652: Characteristics of a Single-mode optical fiber and cable
- ITU-T G.655: Characteristics of a non-zero dispersion-shifted single-mode optical fiber and cable
- ITU-T G.657: Characteristics of a bending-loss insensitive single-mode optical fiber
- YD/T 2000.1-2009: Integrated optical path devices based on planar light wave circuit Part 1: Optical power splitter based on PLC technology
- IEC61300-2-5: Fiber optic interconnecting devices and passive components-Basic test and measurement procedures-Part 2-5:Tests-Torsion
- IEC61300-2-17: Fiber optic interconnecting devices and passive components – Basic test and measurement procedures-Part 2-17: Tests –Cold
- IEC61300-2-22: Fiber optic interconnecting devices and passive components-Basic test and measurement procedures-Part 2-22: Tests-Change of temperature
- IEC61300-3-1: Fiber optic interconnecting devices and passive components-Basic test and measurement procedures-Visual examination
- IEC61300-3-6: Fiber optic interconnecting devices and passive components –Basic test and measurement procedures-Examinations and measurements -Return loss
- IEC61300-3-34: Fiber optic interconnecting devices and passive components –Basic test and measurement procedures-Examinations and measurements-Attenuation of random mated connectors.

### Optical Characteristics of PLC Splitter

Splitter Type	2x32
Channel wavelength (nm)	1260-1650
Insertion Loss (dB)	≤ 17.9
Loss Uniformity (dB)	≤ 1.5
Return Loss (dB)	≥ 50 (APC)
Polarization Dependent Loss (dB)	≤ 0.3
Directivity (dB)	≥ 55
Operating Temperature Range	-40°C to +85°C
Storage Temperature Range	-40°C to +85°C

**Note**

- 1: Above insertion loss values are measured at indoor temperature, including the connector loss;
- 2: Insertion loss of PLC splitter including adapters, should plus 0.2dB base on above insertion loss;
- 3: Insertion loss of PLC splitter without connectors, should minus 0.2dB base on above insertion loss.

### Technical Characteristics of LC Connector

Fiber Type	Single mode OS2
Connector Type	LC
Connector Surface	APC (Angled Physical Contact)
Insertion Loss (dB)	≤ 0.3
Return Loss (dB)	≥ 60
Operating Temperature Range	-25°C to +70°C
Storage Temperature Range	-25°C to +70°C
Durability	> 500 times
Standard	IEC 601754-20

### Technical Characteristics of LC Adapter

Fiber Type	Single mode
Adapter Type	LC
Insertion Loss (dB)	≤ 0.20
Repeatability (dB)	≤ 0.20
Interchangeability (dB)	≤ 0.20
Operating Temperature Range	-25°C to +70°C
Storage Temperature Range	-25°C to +70°C
Durability	> 500 times
Standard	IEC 601754-20

### Factory Tests

Tests	Test Content and Criteria Data
Visual Examination	Be smooth, clean, without oily be soiled, no scar and crack. The whole device is firm, the tail fiber without loosening or with the connector plug is smooth.
Insertion Loss	≤ 0.3dB (Connector)
Return Loss	≥ 60dB (Connector)
Mechanical Durability	Plug and pull out for 500 times, No scratch and meet optical performance
Cold	Temperature : -40°C, -20°C, -10°C.(Choose one according to requirements). Time: 96h. The rate of change of temperature shall not exceed 1 °C/min, averaged over a maximum period of 5 min. Result: no scar and crack.
Torsion	Load: 2N. Twist angle: 180°. Number of cycles: 25
Temperature Cycling	Range:-10°C~+60°C, 5 cycle. Change speed: (1±0.2) °C/min; Result: ΔIL ≤ 0.2dB, ΔRL < 5dB

### Tests done with reference to below standards

- IEC 61754-20: Fiber Optic interconnecting devices and passive components – Fiber Optic Connector Interfaces – Part 20: Type LC connector family
- IEC 61300-3-1: Fiber Optic interconnecting devices and passive components – Basic Test and Measurement procedures – Visual Examination
- IEC 61300-2-5: Fiber optic interconnecting devices and passive components – Basic test and measurement procedures- Tests –Torsion
- IEC 61300-2-17: Fiber optic interconnecting devices and passive components – Basic test and measurement procedures –Tests –Cold
- IEC 61300-2-22: Fiber Optic interconnecting devices and passive components – Basic Test and Measurement procedures – Examinations and Measurements – Change of Temperature.
- IEC 61300-3-6: Basic Test and Measurement procedures - Examinations and Measurements - Return loss
- IEC 61300-3-34: Basic Test and Measurement procedures - Examinations and Measurements - Attenuation of random mated connectors
- YDT 2000.1-2009 Integrated optical path devices based on planar lightwave circuit Part 1: Optical power splitter based on PLC technology

### Part Number

**D1249-LCA232X1**

**Fiber Optic Splitter Panel, 19" Rack-mount, LC/APC,  
2:32 Splitter, 1 Instance**





## Description

DME PROLINK's Splitter panel is a vital component in any GPoN/FTTx infrastructure. Designed in conjunction with leading Service Providers, this compact, integrated panel offers pre-connectorised presentation of the input and output ports on the front of the panel. Each port is clearly labeled. The solution provides an optical channel that is guaranteed to be compliant with the ISO 11801 International Standard for Structured Cabling. DME PROLINK quality personals ensures product reliability through rigorous qualification testing to assure cable performance and durability in adverse field environments. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001.

## Features & Benefits

- 19" Rack-mountable; 1RU
- Easy to install.
- Comes with Pre-connectorised - SC/APC
- With Plastic Sliding Rail- Sliding Out Design
- 1:32/2:32 Split Capacity or 12 instances of 1:2 Split Capacity
- The body made of cold-rolled steel. The steel plate thickness is 1.5mm, molded by numerical controlling. Surface treated with static plastic spray.
- Internal cable management
- Complies with IEC 60068
- Clear labeling for each port
- 25 Years System Warranty

## Test Methods Used

- ❖ Telcordia GR-1209-Core (2001) ; IL(CR), RL(CR), Fiber and Cable Retention, Fiber Flex Test
- ❖ Telcordia GR-1221-Core (1999); Variable Frequency Vibration Test, Mechanical Shock
- ❖ Telcordia GR-1221-Core (2001); Temperature Cycling Test, Low Temperature Storage Test, Cyclic Moisture Resistance Test, High Temperature Storage Test, Thermal Shock Test

### Testing Environment:

Temperature:  $(22.6 \pm 1.5)^{\circ}\text{C}$

Relative Humidity:  $(50 \pm 14)\%$  R.H



### Optical Characteristics of n:32 Splitter

Parameters (2:32 Splitter)	Value
Operating Wavelength (nm)	1260 – 1650
Maximum Insertion Loss (dB)	≤16.38
Uniformity Maximum (dB)	0.59
Polarization Dependent Loss - PDL (dB)	0.05 dB
Return Loss (dB)	≥ 50
Directivity (dB)	≥ 60
Storage Temperature Range	- 40 to 85 °C
Operating Temperature Range	- 40 to 85 °C
Connector	SC/APC

### Physical Configuration n:32 Splitter Panel

Parameter		Value
Description		2:32 / 1:32 Splitter Panel
Type		Drawer Type Rack Mount 19" 1RU Panel
Dimensions	W x D (mm)	435 x 222mm
	Height (RU)	1RU (44mm)
Tray	Splitter Tray	1:32 or 2:32 SC/APC Splitter included
Adapter	SC/APC	1 or 2 Inputs / 32 Outputs (34 SC/APC Adapters)

### Technical Specification

- Voltage Resistance ≥ 3000VDC
- Insulating resistance between the metal parts of the body and grounding fitting:  $\geq 2 \times 10^4$  mΩ/500V (DC).

### Part Number

D1249-SCA232X1

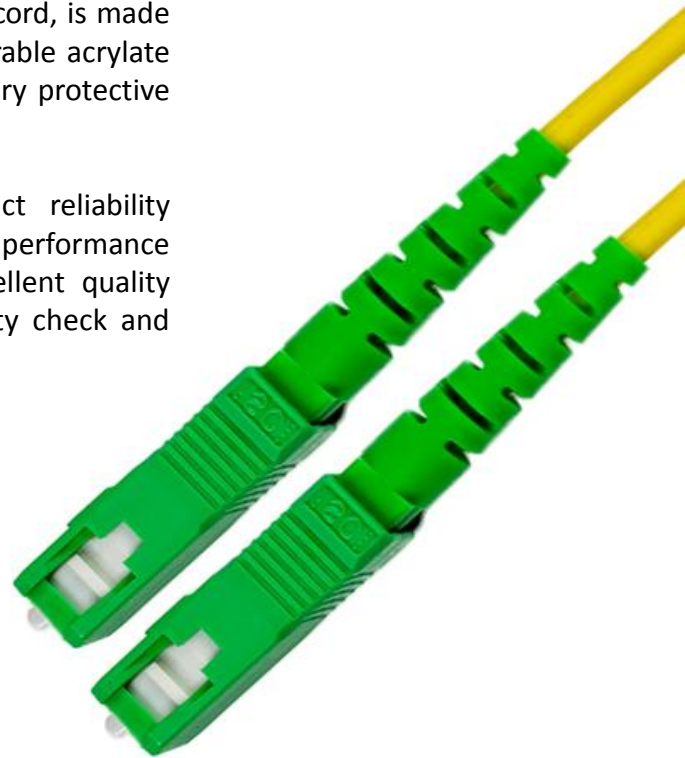
Fiber Optic Splitter Panel, 19" Rack-mount, SC/APC, 2:32 Splitter, 1 Instance

## Description

The FO Simplex Patch cord comes with SC/APC connector at both ends. The end faces of the connectors are still curved but are angled at an industry standard 8°. This maintains a tight connection, and it reduces back reflection to about -70 dB.

The Fiber used in *DME PROLINK's* Fiber Optic Patch cord, is made of pure silica and germanium doped silica. A UV curable acrylate material is applied over the Fiber Cladding as primary protective coating.

DME PROLINK quality personals ensures product reliability through rigorous qualification testing to assure cable performance and durability in adverse field environments. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001.

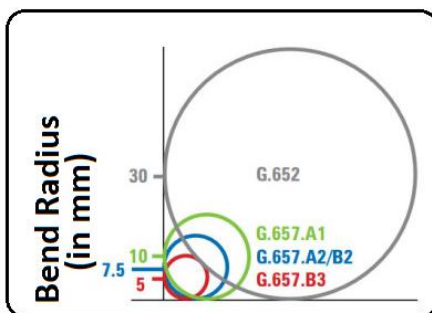


## Features & Benefits

- APC type connector back reflection does not degrade with repeated mating.
- Outer Sheath is Low Smoke Zero Halogen
- G.652D
- 25 Years System Warranty
- Length of Patch cords: 1m, 1.5m, 2m, 3m, 5m, 10m, 15m, 20m, 30m
- FO patch cord comes in Cable Diameter with either 2.0mm or 3.0mm

The Fiber within FO Patch cord are designed, Manufactured and tested according to below standards:

- IEC 60793-1: Optical Fiber Part 1: Generic Specification
- IEC 60793-2: Optical Fiber Part 2: Product Specification
- IEC 60794-2: Optical Fiber Cables Part 2 Indoor cables- Sectional Specification
- ITU-T G652: Characteristics of a Single-mode optical fiber and cable
- ITU-T G.655: Characteristics of a non-zero dispersion-shifted single-mode optical fiber and cable



The connector within FO Patch cord are designed, Manufactured and tested according to below standards:

- IEC 61300-1: Basic Test and Measurement procedures – Visual Examination
- IEC 61754: Fiber Optic Connector Interfaces
- IEC 61300-3-6: Basic Test and Measurement procedures - Examinations and Measurements - Return loss
- IEC 61300-3-34: Basic Test and Measurement procedures - Examinations and Measurements - Attenuation of random mated connectors

### Technical Characteristics of Connectors

Fiber Type	Single mode OS2
Connector Type	SC
Connector Surface	APC (Angled Physical Contact)
Insertion Loss (dB)	≤ 0.3
Return Loss (dB)	≥ 60
Operating Temperature Range	-25°C to +70°C
Durability	> 500 times
Standard	IEC 601754-4

## Optical Fiber G.652D Specification

Category	Description	Values	
		Before Cable	After Cable
Optical Specifications	Attenuation @1310 nm	≤0.35 dB/km	≤0.36dB/km
	Attenuation @1383 nm (After aging hydrogenation)	≤0.34dB/km	≤0.35dB/km
	Attenuation @1550 nm	≤0.21 dB/km	≤0.22dB/km
	Attenuation @1625 nm	≤0.23 dB/km	≤0.25dB/km
	Fiber irregularities point and whole length @1310 &1550nm	≤0.05dB	
	Attenuation inhomogeneity @1310 nm & 1550 nm	≤0.05dB	
	Zero Dispersion Slope	≤0.092 ps/nm <sup>2</sup> ·km	
	PMD Link value (M=20cables Q=0.01% )	0.1ps/√km	
	Cable Cutoff Wavelength (λ <sub>cc</sub> )	≤1260 nm	
	Mode Field Diameter @1310 nm	8.6 ± 0.4μm	
Dimensional Specifications	Cladding Diameter	125 ±1μm	
	Cladding non circularity	≤1.0%	
	Coating diameter	245 ± 7μm	
	Coating non circularity	≤ 6%	
	Cladding / coating concentricity error	≤12μm	
	Core/clad concentricity error	≤0.5μm	
	Fiber curl radius	≥4m	
Mechanical Specifications	Proof stress	≥1.05%	
	Fatigue Resistance Parameter (Nd)	≥22	
	Peak Coating Strip Force	1.0~8.9N	
Environmental Specification	Fiber temperature dependence (-60°C to +85°C)	≤0.05dB/km	
	Fiber temperature and humidity (+85 ± 2°C, 85% R.H. for 30 days)	≤0.05dB/km	
	Heat Aging Induced Attenuation(85 ± 2°C,for 30 days)	≤0.05dB/km	
	Water Immersion Induced (23 ± 2°C, for 30 days)	≤0.05dB/km	

## Factory Tests

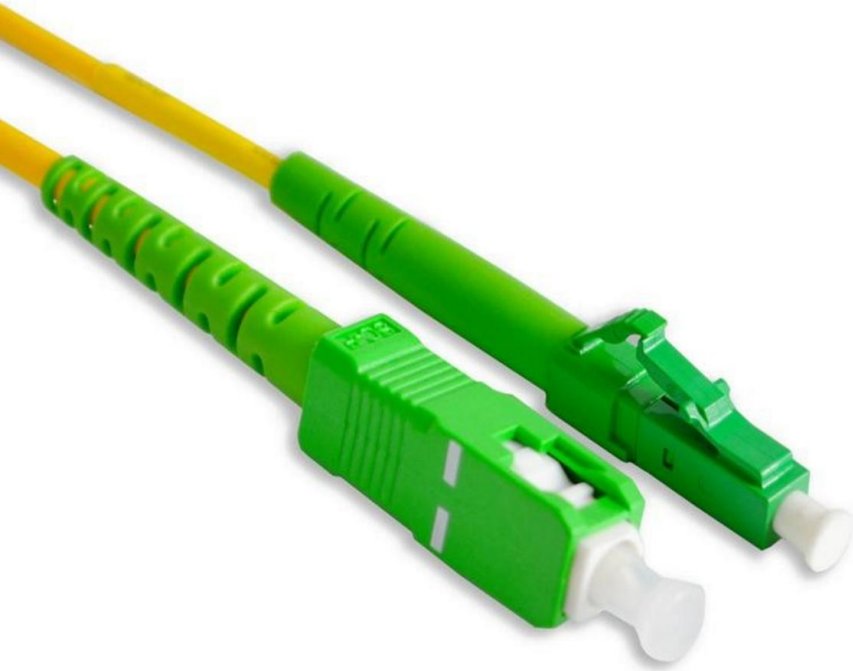
Tests	Criteria Data
Appearance	Connector surface is smooth, no burr, no scratch, color uniformity.
Insertion Loss	≤ 0.3dB
Return Loss	≥65dB
Mechanical Durability	Plug and pull out for 500 times, No scratch and meet optical performance
Temperature Cycling	-10°C~60°C5 cycle ; ΔIL≤0.2dB,ΔRL<5dB,

## Tests done with reference to below standards

- IEC 61754-4: Fiber Optic interconnecting devices and passive components – Fiber Optic Connector Interfaces – Part 4-1: Type SC connector family
- IEC 61300-3-1: Fiber Optic interconnecting devices and passive components – Basic Test and Measurement procedures – Visual Examination
- IEC 61300-3-6: Basic Test and Measurement procedures - Examinations and Measurements - Return loss
- IEC 61300-3-34: Basic Test and Measurement procedures - Examinations and Measurements - Attenuation of random mated connectors
- IEC 61300-2-22: Fiber Optic interconnecting devices and passive components – Basic Test and Measurement procedures – Examinations and Measurements – Change of Temperature.

## Part Number

D131x- SCASCA712L2DYW	Fiber Optic Patch Cord, Simplex, SC/APC, SC/APC, Single-mode OS2, 1m, 2.0mm, LSZH, G.652D, Yellow
D131x- SCASCA732L2DYW	Fiber Optic Patch Cord, Simplex, SC/APC, SC/APC, Single-mode OS2, 3m, 2.0mm, LSZH, G.652D, Yellow



### Description

The Fiber used in *DME PROLINK's* Fiber Optic Patch cord, is made of pure silica and germanium doped silica. A UV curable acrylate material is applied over the Fiber Cladding as primary protective coating. DME PROLINK quality personals ensures product reliability through rigorous qualification testing to assure cable performance and durability in adverse field environments. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001.

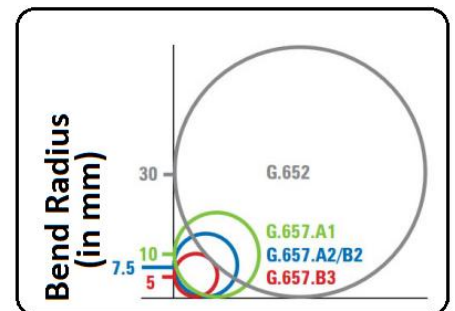


### Features & Benefits

- The FO Simplex Patch cord comes with SC/APC connector at one end and LC/APC connector at the other end. The end faces of the connectors are still curved but are angled at an industry standard 8°. This maintains a tight connection, and it reduces back reflection to about -70 dB.
- APC type connector back reflection does not degrade with repeated mating.
- Outer Sheath is Low Smoke Zero Halogen
- G.657A2
- Length of Patch cord: 1m, 1.5m, 2m, 3m, 5m, 10m, 15m, 20m, 30m
- FO patch cord comes in Cable Diameter with either 2.0mm or 3.0mm
- 25 Years System Warranty

**The Fiber within FO Patch cord are designed, Manufactured and tested according to below standards:**

- IEC 60793-1: Optical Fiber Part 1: Generic Specification
- IEC 60793-2: Optical Fiber Part 2: Product Specification
- IEC 60794-2: Optical Fiber Cables Part 2 Indoor cables-Sectional Specification
- ITU-T G.652: Characteristics of a Single-mode optical fiber and cable
- ITU-T G.655: Characteristics of a non-zero dispersion-shifted single-mode optical fiber and cable
- ITU-T G.657: Characteristics of a bending-loss insensitive single-mode optical fiber



The connector within FO Patch cord are designed, Manufactured and tested according to below standards:

- IEC 61300-1: Basic Test and Measurement procedures – Visual Examination
- IEC 61754: Fiber Optic Connector Interfaces
- IEC 61300-3-6: Basic Test and Measurement procedures - Examinations and Measurements - Return loss
- IEC 61300-3-34: Basic Test and Measurement procedures - Examinations and Measurements - Attenuation of random mated connectors

### Technical Characteristics of Connectors

Fiber Type	Single mode OS2	
Connector Type	SC	LC
Connector Surface	APC (Angled Physical Contact)	
Insertion Loss (dB)	≤ 0.3	≤ 0.3
Return Loss (dB)	≥ 65	≥ 65
Operating Temperature Range	-25°C to +70°C	
Durability	> 500 times	
Standard	IEC 601754-4	IEC 601754-20

### Optical Fiber G.657A2 Specification

Category	Description	Values	
		Before Cable	After Cable
Optical Specifications	Attenuation @ 1310 nm	≤0.35 dB/km	≤0.36dB/km
	Attenuation @ 1383 nm (After aging hydrogenation)	≤0.34dB/km	≤0.35dB/km
	Attenuation @ 1550 nm	≤0.21 dB/km	≤0.22dB/km
	Attenuation @ 1625 nm	≤0.23 dB/km	≤0.25dB/km
	Fiber irregularities point and whole length @1310 &1550nm	≤0.05dB	
	Attenuation inhomogeneity @ 1310 nm & 1550 nm	≤0.05dB	
	Zero Dispersion Slope	≤0.092 ps/nm <sup>2</sup> ·km	
	PMD Link value (M=20cables Q=0.01% )	0.1ps/√km	
	Cable Cutoff Wavelength (λ <sub>cc</sub> )	≤1260 nm	
	Macro bending Loss (10 turns; Φ30 mm) @1550 nm	≤ 0.03 dB	
	(10 turns; Φ30 mm) @1625 nm	≤ 0.10 dB	
	(1 turns; Φ20 mm) @1550 nm	≤ 0.10 dB	
	(1 turns; Φ20 mm) @1625 nm	≤ 0.20 dB	
(1 turns; Φ15 mm) @1550 nm	≤ 0.50 dB		
(1 turns; Φ15 mm) @1625 nm	≤ 1.00 dB		
Mode Field Diameter @1310 nm	8.6 ± 0.4μm		



## Specification

Category	Description	Values
<b>Dimensional Specifications</b>	Cladding Diameter	125 ±1µm
	Cladding non circularity	≤1.0%
	Coating diameter	245 ± 7µm
	Coating non circularity	≤ 6%
	Cladding / coating concentricity error	≤12µm
	Core/clad concentricity error	≤0.5µm
	Fiber curl radius	≥4m
<b>Mechanical Specifications</b>	Proof stress	≥1.05%
	Fatigue Resistance Parameter (Nd)	≥22
	Peak Coating Strip Force	1.0~8.9N
<b>Environmental Specification</b>	Fiber temperature dependence (-60°C to +85°C)	≤0.05dB/km
	Fiber temperature and humidity (+85 ± 2°C, 85% R.H. for 30 days)	≤0.05dB/km
	Heat Aging Induced Attenuation(85 ± 2°C,for 30 days)	≤0.05dB/km
	Water Immersion Induced (23 ± 2°C, for 30 days)	≤0.05dB/km

## Factory Tests

Tests	Criteria Data
Appearance	Connector surface is smooth, no burr, no scratch, color uniformity.
Insertion Loss	≤ 0.3dB
Return Loss	≥65dB
Mechanical Durability	Plug and pull out for 500 times, No scratch and meet optical performance
Temperature Cycling	-10°C~60°C5 cycle ; ΔIL≤0.2dB,ΔRL<5dB,

## Tests done with reference to below standards

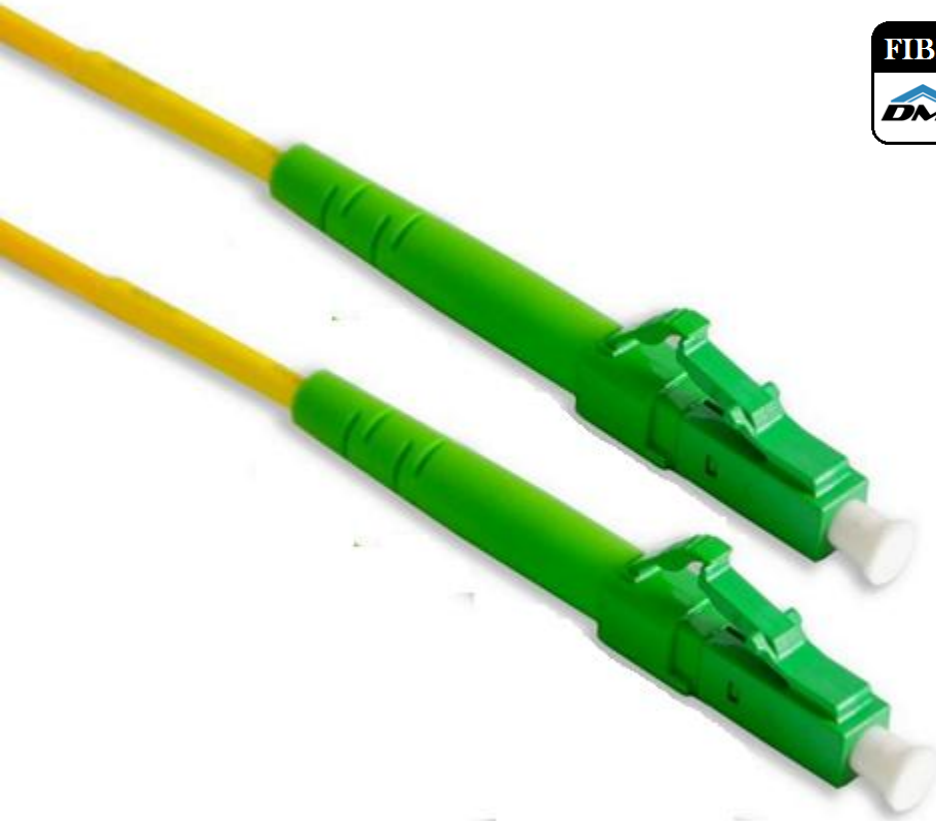
- IEC 61754-4: Fiber Optic interconnecting devices and passive components – Fiber Optic Connector Interfaces – Part 4-1: Type SC connector family
- IEC 61754-20: Fiber Optic interconnecting devices and passive components – Fiber Optic Connector Interfaces – Part 20: Type LC connector family
- IEC 61300-3-1: Fiber Optic interconnecting devices and passive components – Basic Test and Measurement procedures – Visual Examination
- IEC 61300-3-6: Basic Test and Measurement procedures - Examinations and Measurements - Return loss



- IEC 61300-3-34: Basic Test and Measurement procedures - Examinations and Measurements - Attenuation of random mated connectors
- IEC 61300-2-22: Fiber Optic interconnecting devices and passive components – Basic Test and Measurement procedures – Examinations and Measurements – Change of Temperature.

## Part Number

D1319-SCALCA712LA2YW	Fiber Optic Patch Cord, Simplex, SC/APC, LC/APC, Single-mode OS2, 1m, 2.0mm, LSZH, G.657A2, Yellow
D1319-SCALCA71H2LA2Y	Fiber Optic Patch Cord, Simplex, SC/APC, LC/APC, Single-mode OS2, 1.5m, 2.0mm, LSZH, G.657A2, Yellow
D1319-SCALCA722LA2YW	Fiber Optic Patch Cord, Simplex, SC/APC, LC/APC, Single-mode OS2, 2m, 2.0mm, LSZH, G.657A2, Yellow
D1319-SCALCA732LA2YW	Fiber Optic Patch Cord, Simplex, SC/APC, LC/APC, Single-mode OS2, 3m, 2.0mm, LSZH, G.657A2, Yellow
D1319-SCALCA752LA2YW	Fiber Optic Patch Cord, Simplex, SC/APC, LC/APC, Single-mode OS2, 5m, 2.0mm, LSZH, G.657A2, Yellow
D1319-SCALCA7102LA2Y	Fiber Optic Patch Cord, Simplex, SC/APC, LC/APC, Single-mode OS2, 10m, 2.0mm, LSZH, G.657A2, Yellow
D1319-SCALCA7152LA2Y	Fiber Optic Patch Cord, Simplex, SC/APC, LC/APC, Single-mode OS2, 15m, 2.0mm, LSZH, G.657A2, Yellow
D1319-SCALCA7202LA2Y	Fiber Optic Patch Cord, Simplex, SC/APC, LC/APC, Single-mode OS2, 20m, 2.0mm, LSZH, G.657A2, Yellow
D1319-SCALCA7302LA2Y	Fiber Optic Patch Cord, Simplex, SC/APC, LC/APC, Single-mode OS2, 30m, 2.0mm, LSZH, G.657A2, Yellow
D1319-SCALCA713LA2YW	Fiber Optic Patch Cord, Simplex, SC/APC, LC/APC, Single-mode OS2, 1m, 3.0mm, LSZH, G.657A2, Yellow
D1319-SCALCA71H3LA2Y	Fiber Optic Patch Cord, Simplex, SC/APC, LC/APC, Single-mode OS2, 1.5m, 3.0mm, LSZH, G.657A2, Yellow
D1319-SCALCA723LA2YW	Fiber Optic Patch Cord, Simplex, SC/APC, LC/APC, Single-mode OS2, 2m, 3.0mm, LSZH, G.657A2, Yellow
D1319-SCALCA733LA2YW	Fiber Optic Patch Cord, Simplex, SC/APC, LC/APC, Single-mode OS2, 3m, 3.0mm, LSZH, G.657A2, Yellow
D1319-SCALCA753LA2YW	Fiber Optic Patch Cord, Simplex, SC/APC, LC/APC, Single-mode OS2, 5m, 3.0mm, LSZH, G.657A2, Yellow
D1319-SCALCA7103LA2Y	Fiber Optic Patch Cord, Simplex, SC/APC, LC/APC, Single-mode OS2, 10m, 3.0mm, LSZH, G.657A2, Yellow
D1319-SCALCA7153LA2Y	Fiber Optic Patch Cord, Simplex, SC/APC, LC/APC, Single-mode OS2, 15m, 3.0mm, LSZH, G.657A2, Yellow
D1319-SCALCA7203LA2Y	Fiber Optic Patch Cord, Simplex, SC/APC, LC/APC, Single-mode OS2, 20m, 3.0mm, LSZH, G.657A2, Yellow
D1319-SCALCA7303LA2Y	Fiber Optic Patch Cord, Simplex, SC/APC, LC/APC, Single-mode OS2, 30m, 3.0mm, LSZH, G.657A2, Yellow



## Description

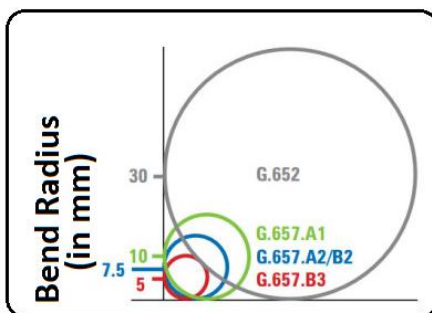
The Fiber used in *DME PROLINK's* Fiber Optic Patch cord, is made of pure silica and germanium doped silica. A UV curable acrylate material is applied over the Fiber Cladding as primary protective coating. DME PROLINK quality personals ensures product reliability through rigorous qualification testing to assure cable performance and durability in adverse field environments. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001.

## Features & Benefits

- The FO Duplex Patch cord comes with LC/APC connector at both ends. The end faces of the connectors are still curved but are angled at an industry standard 8°. This maintains a tight connection, and it reduces back reflection to about -70 dB.
- APC type connector back reflection does not degrade with repeated mating.
- Outer Sheath is Low Smoke Zero Halogen
- G.652D
- 25 Years System Warranty
- Length of Patch cord: 1m, 1.5m, 2m, 3m, 5m, 10m, 15m, 20m, 30m
- FO patch cord comes in Cable Diameter with either 2.0mm or 3.0mm

The Fiber within FO Patch cord are designed, Manufactured and tested according to below standards:

- IEC 60793-1: Optical Fiber Part 1: Generic Specification
- IEC 60793-2: Optical Fiber Part 2: Product Specification
- IEC 60794-2: Optical Fiber Cables Part 2 Indoor cables- Sectional Specification
- ITU-T G652: Characteristics of a Single-mode optical fiber and cable
- ITU-T G.655: Characteristics of a non-zero dispersion-shifted single-mode optical fiber and cable



The connector within FO Patch cord are designed, Manufactured and tested according to below standards:

- IEC 61300-1: Basic Test and Measurement procedures – Visual Examination
- IEC 61754: Fiber Optic Connector Interfaces
- IEC 61300-3-6: Basic Test and Measurement procedures - Examinations and Measurements - Return loss
- IEC 61300-3-34: Basic Test and Measurement procedures - Examinations and Measurements - Attenuation of random mated connectors

### Technical Characteristics of Connectors

Fiber Type	Single mode OS2
Connector Type	LC
Connector Surface	APC (Angled Physical Contact)
Insertion Loss (dB)	≤ 0.3
Return Loss (dB)	≥ 65
Operating Temperature Range	-25°C to +70°C
Durability	> 500 times
Standard	IEC 601754-20

## Optical Fiber G.652D Specification

Category	Description	Values	
		Before Cable	After Cable
Optical Specifications	Attenuation @1310 nm	≤0.35 dB/km	≤0.36dB/km
	Attenuation @1383 nm (After aging hydrogenation)	≤0.34dB/km	≤0.35dB/km
	Attenuation @1550 nm	≤0.21 dB/km	≤0.22dB/km
	Attenuation @1625 nm	≤0.23 dB/km	≤0.25dB/km
	Fiber irregularities point and whole length @1310 &1550nm	≤0.05dB	
	Attenuation inhomogeneity @1310 nm & 1550 nm	≤0.05dB	
	Zero Dispersion Slope	≤0.092 ps/nm <sup>2</sup> ·km	
	PMD Link value (M=20cables Q=0.01% )	0.1ps/√km	
	Cable Cutoff Wavelength (λ <sub>cc</sub> )	≤1260 nm	
	Mode Field Diameter @1310 nm	8.6 ± 0.4μm	
Dimensional Specifications	Cladding Diameter	125 ±1μm	
	Cladding non circularity	≤1.0%	
	Coating diameter	245 ± 7μm	
	Coating non circularity	≤ 6%	
	Cladding / coating concentricity error	≤12μm	
	Core/clad concentricity error	≤0.5μm	
	Fiber curl radius	≥4m	
Mechanical Specifications	Proof stress	≥1.05%	
	Fatigue Resistance Parameter (Nd)	≥22	
	Peak Coating Strip Force	1.0~8.9N	
Environmental Specification	Fiber temperature dependence (-60°C to +85°C)	≤0.05dB/km	
	Fiber temperature and humidity (+85 ± 2°C, 85% R.H. for 30 days)	≤0.05dB/km	
	Heat Aging Induced Attenuation(85 ± 2°C,for 30 days)	≤0.05dB/km	
	Water Immersion Induced (23 ± 2°C, for 30 days)	≤0.05dB/km	

## Factory Tests

Tests	Criteria Data
Appearance	Connector surface is smooth, no burr, no scratch, color uniformity.
Insertion Loss	$\leq 0.3\text{dB}$
Return Loss	$\geq 65\text{dB}$
Mechanical Durability	Plug and pull out for 500 times, No scratch and meet optical performance
Temperature Cycling	$-10^{\circ}\text{C}\sim 60^{\circ}\text{C}$ cycle ; $\Delta\text{IL}\leq 0.2\text{dB}, \Delta\text{RL}< 5\text{dB}$ ,

## Tests done with reference to below standards

- IEC 61754-20: Fiber Optic interconnecting devices and passive components – Fiber Optic Connector Interfaces – Part 20: Type LC connector family
- IEC 61300-3-1: Fiber Optic interconnecting devices and passive components – Basic Test and Measurement procedures – Visual Examination
- IEC 61300-3-6: Basic Test and Measurement procedures - Examinations and Measurements - Return loss
- IEC 61300-3-34: Basic Test and Measurement procedures - Examinations and Measurements - Attenuation of random mated connectors
- IEC 61300-2-22: Fiber Optic interconnecting devices and passive components – Basic Test and Measurement procedures – Examinations and Measurements – Change of Temperature.

## Part Number

**D132x-LCALCA732L2DYW**

**Fiber Optic Patch Cord, Duplex, LC/APC, LC/APC,  
Single-mode OS2, 3m, 2.0mm, LSZH, G652D, Yellow**



## Description

DME PROLINK's HD ODF, HIGH DENSITY OPTICAL DISTRIBUTION FRAME for Fiber aggregation in FTTx networks. Positioned in the Central Office, Switch Centre or POP locations. HD ODF offers a capacity of 4224 Fiber terminations (Splice & Patch) to accommodate the termination density essential in any highly congested Telco environment. This HD ODF consists of 2Nos. of 19" Cabinets each providing up to 2112 fiber terminations fully loaded with HD Patch Panels. The HD ODF is designed with a footprint of 1800mm x 600mm. Each cabinet occupies a space of 600mm X 600mm with a 600mm Cable/Patch cord Management Panel in between for patch cord management and extra length storage. This solution has been developed in conjunction with leading Service Providers and address the issues of both density as well as manageability.

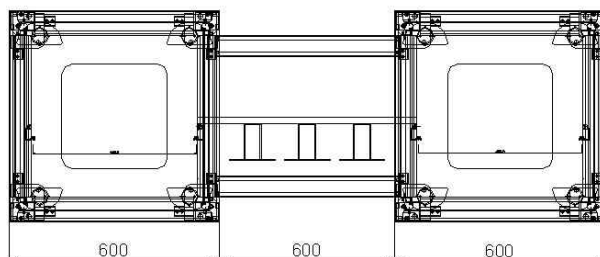
### A Fully Loaded HD ODF:

- Two 600mm x 600mm Cabinets
- One 600mm wide Inter-Bay Cable Manager (IMP)
- Eighty & eight 1RU High Density (HD) Patch Panels
- A Capacity of 4224 terminations (2112 terminations per cabinet)
- 4224 Pig-tails (48 per HD Patch Panel)
- Splice Cassettes for 4224 fusion-splices



## Features & Benefits

- Offers maximum of 4224 fiber Terminations with Fully loaded solution
- Optional rear doors and side panels (Must be ordered separately)
- 1800mm x 600mm footprint
- Top or bottom cable entry options
- Accepts DME PROLINK's HD Patch Panels.
- 44U height
- Accommodates Splicing and/or Direct Termination
- Durable Powder- coating finish.
- Cable Grounding kits are available.
- Complies with IEC 60068
- Easy to install.
- 25 Years System Warranty



## Physical Configuration of HD ODF

Parameter		Value
Dimension	W x H x D (mm)	1800 x 44U x 600
General	Doors	Optional
	Side Panels	Optional
	Color	NCS2502-B

## Part Number

**D 1 4 1 1 - g d p l**

g	Front Doors (Glass)
0	No Doors
2	2 Doors

d	Rear Doors (Metal)
0	No Doors
2	2 Doors

p	Side Panels (Metal)
0	No Panels
2	2 Panels

l	Loading
UL	Unloaded
SCU	Fully Loaded SC/UPC
SCA	Fully Loaded SC/APC
LCU	Fully Loaded LC/UPC
LCA	Fully Loaded LC/APC



## Description

DME PROLINK's Mini ODF is an indoor distribution frame for fiber counts up to 48 Fibers.

This closure offers patch & splice functionality in a configuration supporting demarcation, in which there are two separate independently secured chambers. This allows splicing access to the installation teams and independent access to the terminate/patching function for the operations teams.

The solution provides an optical channel that is guaranteed to be compliant with the ISO 11801 International Standard for Structured Cabling. DME PROLINK quality personals ensures product reliability through rigorous qualification testing to assure cable performance and durability in adverse field environments. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001.

## Features & Benefits

- 48 Fiber capacity accommodates both Direct Termination or Splicing options
- Top or bottom cable entry.
- Durable Powder- coating finish.
- Cable Grounding kits are available.
- Comes with locks & keys
- Comes with Splice trays – 48F
- Comes with SC/APC adapters Loaded
- The body made of cold-rolled steel. The steel plate thickness is 1.5mm, molded by numerical controlling. Surface treated with static plastic spray.
- Internal cable management provision
- Complies with IEC 60068
- Easy to install.
- 25 Years System Warranty

## Technical Specification

- Voltage Resistance  $\geq 3000\text{VDC}$
- Insulating resistance between the metal parts of the body and grounding fitting:  $\geq 2 \times 10^4 \text{ m}\Omega/500\text{V}$  (DC).





### Physical Configuration of Mini ODF

Parameter	Value	Remarks
Dimension	W x H x D (mm)	360 x 360 x 100
Capacity	Core	48C
Cable	2 Ingress	13-18mm
	2 Egress	13-18mm
SC/APC Adaptor	Number of Adapters	Maximum 48 Capacity 4 adaptor panels of 12 ea (SC/APC simplex)
Tray	Capacity	4 Max. capacity of 4 Trays

### Part Number

D1439-48SCA1

Fiber Optic Mini ODF, 48 Fibers, with 48 SC/APC, Simplex Adapters, with Lock, with Splice Tray



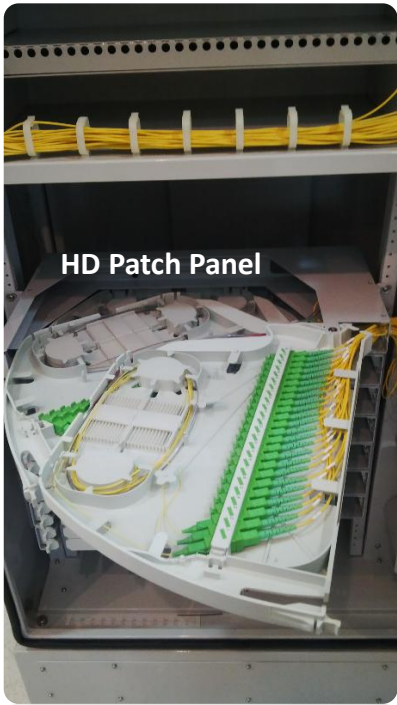
## Description

DME PROLINK's High-density Fiber Distribution Hub (HD-FDH) is specifically designed for OSP deployment in an FTTx architecture. This HD-FDH is designed to accommodate HD-Patch Panels as well as the associated Splitter and/or WDM modular components. DME PROLINK's HD-FDH can accommodate up to 12 Nos. of High Density Patch Panel which can take 576 D-side (Output) and 96 E-side (Input) termination alongside 30 Nos. of Passive Splitter modules. This closure can be customized to any FTTx requirement and has been developed in conjunction with leading Service Providers.

## Features & Benefits

- Offers maximum capacity of 576 fiber Terminations fully-loaded on SC/APC
- Accepts DME PROLINK's compliant HD Patch Panels (1U) and Splitter Modules (Ordered separately).
- IP67 Environment Compliant.
- Accommodates Splicing and/or Direct Termination
- Integrated slack-storage
- Rugged construction suitable for OSP installation.
- Inactive Patching Parking Lot for Future expansions.
- Easy to install and terminate.
- Bend radius protection
- Intuitive cable routing
- Easy fiber/connector access
- Rear access for cable routing

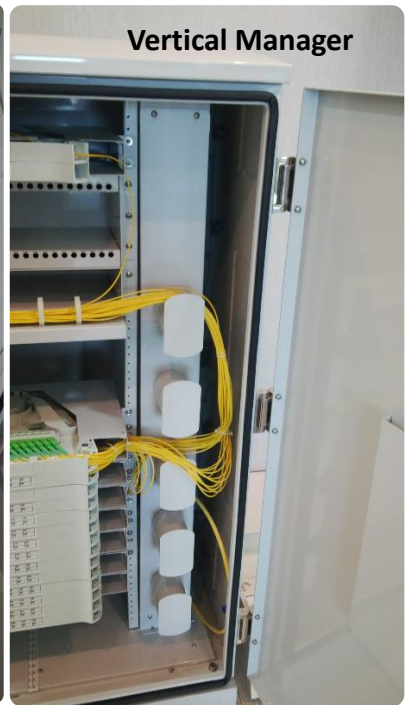




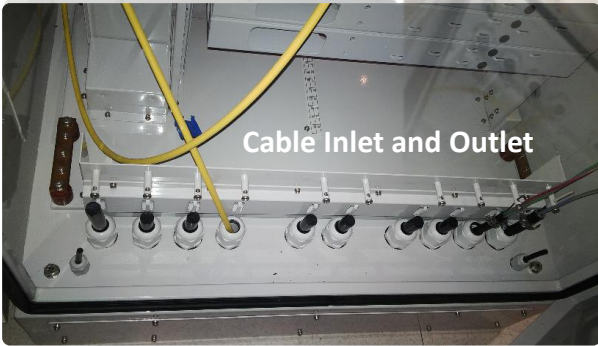
HD Patch Panel



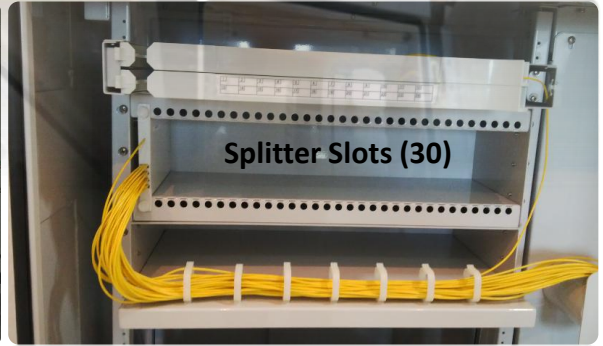
Rear of FDH



Vertical Manager



Cable Inlet and Outlet



Splitter Slots (30)

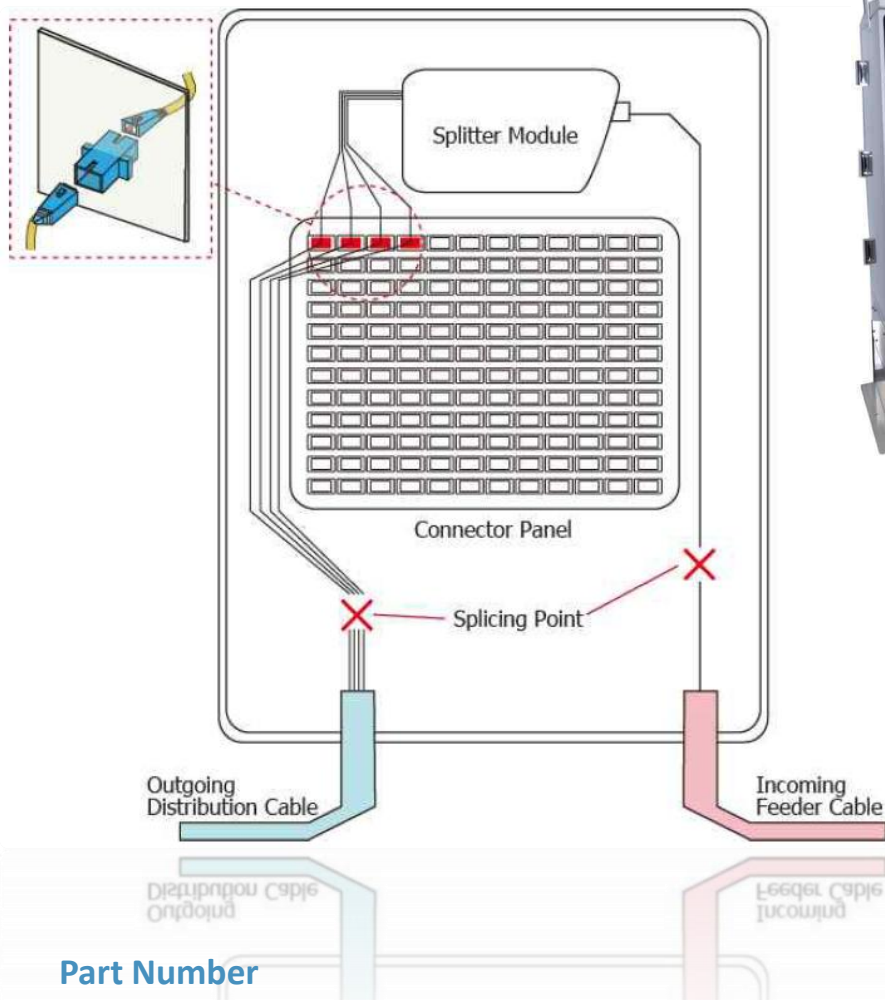


Splitter Module



**Dimension and Configuration**

Dimension (HxWxD) in mm	1530 x 800 x 600
Mounting Option	Floor
Cable Entry Capacity - Inlet	4
Cable Entry Capacity - Outlet	8
Cable Dia. (in mm)	20
Splitter Module Slot Capacity	Max. 30
Splitter Module Options	x:8, x:16, x:32 (where 'x' is 1 or 2)
No. of 48 Port HD Patch Panels (1U)	-40°C to +70°C
Maximum Splice Capacity	576C



**Part Number**

**D1541-FDH576**

**High Density Fiber Distribution Hub (FDH), Body only  
Capacity 576C**

## DME PROLINK Fiber Optic Outlet 2 Port, with 1 SC/APC Adapter, 1 Plastic Bush, No Pigtails



### Description

DME PROLINK's Fiber Optic Outlet is installed inside the customer's premises to provide fiber termination points and housing for optical adapters, FICs and Pigtails. The FOO is used as an interface/interconnection point between the customer's in-building fiber optic cabling system and the ONT (Optical Network Terminal equipment) patch cord.

DME PROLINK's FOO supports termination, splicing & storage functions for Customer Premises fiber optic cable systems. The FOO is simple in design yet offers sufficient work space and fiber management – the box is engineered with all fiber routing supporting the minimum bend radius philosophy to ensure signal integrity.



### Features & Benefits

- Compact size takes up less wall space for installation
- Inner slack storage area ensures minimum bend radius compliance
- Simple and easy installation
- Inner tray available to house splice sleeves
- Accepts standard SC and LC Adapters
- Comes in both Loaded and Unloaded options
- Mounting screws, Fischer, Cable Ties provided.
- Complies with IEC 61754-4
- 25 Years System Warranty

### Physical Characteristics of Fiber Optic Outlet

Size (L*W*H) (mm)	100* 95 * 14
Max. Cable Diameter (mm)	3 ~ 6
No. of Ports	2
No. of Splice Capacity / Slots	2 (Compatible for 40mm Sleeves)
Splice Method	Fusion Splice
Cable Entry	Bottom and Rear
Material	Plastic
Storage / Operating Temperature Range	-5°C to +40°C
Standard	IEC 601754-4

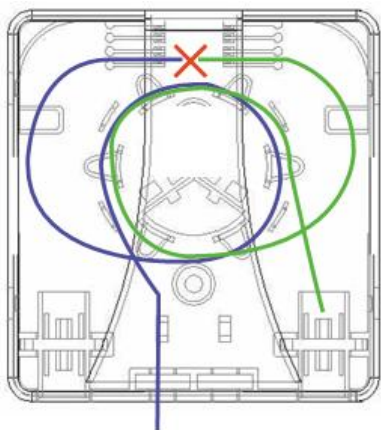


### Technical Characteristics of Adapter

Fiber Type	Single mode
Adapter Type	SC/APC
Insertion Loss (dB)	≤ 0.20
Repeatability (dB)	≤ 0.20
Interchangeability (dB)	≤ 0.20
Operating Temperature Range	-25°C to +70°C
Storage Temperature Range	-25°C to +70°C
Durability	> 500 times
Standard	IEC 601754-4

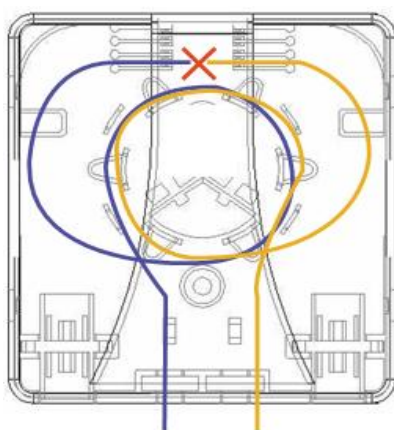
### Application:

The FOO provides multiple functions in the subscriber network. It enables the operator to select the application of the box as the installation environment.



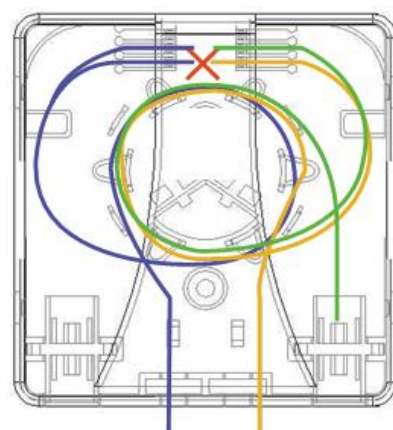
#### Fiber Optic Outlet

Incoming drop cable is spliced with the optical pigtail. And *splicing* point is protected in the Protection sleeve slot.



#### Transition Box

The incoming drop cable from the outdoor which is The black cable is spliced with outgoing white drop cable in the box



#### Multi-functional Box

The incoming black drop cable can be spliced with the optical pigtail and the outgoing white drop cable at once.

### Part Number

D1561-2F10SCA

Fiber Optic Outlet, 2 Port with 1 SC/APC Adapter, 1 Plastic Bush, No Pigtails



### Description

DME PROLINK's Fiber Optic Outlet is installed inside the customer's premises to provide fiber termination points and housing for optical adapters, FICs and Pigtails.

The FOO is used as an interface/interconnection point between the customer's in-building fiber optic cabling system and the ONT (Optical Network Terminal equipment) patch cord.

DME PROLINK's FOO supports termination, splicing & storage functions for Customer Premises fiber optic cable systems. The FOO is simple in design yet offers sufficient work space and fiber management – the box is engineered with all fiber routing supporting the minimum bend radius philosophy to ensure signal integrity.

### Features & Benefits

- Compact size takes up less wall space for installation
- Inner slack storage area ensures minimum bend radius compliance
- Simple and easy installation
- Inner tray available to house splice sleeves
- Accepts standard SC and LC Adapters
- Comes in both Loaded and Unloaded options
- Mounting screws, Fischer, Cable Ties provided.
- Complies with IEC 61754-4
- 25 Years System Warranty

### Physical Characteristics of Fiber Optic Outlet

Size (L*W*H) (mm)	86* 86 * 20
Max. Cable Diameter (mm) / No. of Ports	3 ~ 6 / 2 Ports
No. of Splice Capacity / Slots	2 (Compatible for 40mm Sleeves)
Splice Method	Fusion Splice
Cable Entry	Bottom and Rear
Material	Plastic
Storage / Operating Temperature Range	-5°C to +40°C
Standard	IEC 601754-4

### Part Number

**D1569-2F00 Fiber Optic Outlet, 2 Port Unloaded with No Adapters and No Pigtails**





**25**  
**YEARS**  
SYSTEM WARRANTY



### Features & Benefits

- Compact size takes up less wall space for installation
- Inner slack storage area ensures minimum bend radius compliance
- Simple and easy installation
- Inner tray available to house splice sleeves
- Accepts standard SC Simplex and LC Duplex Adapters
- Unloaded
- Mounting screws, Fischer, Cable Ties provided.
- 25 Years System Warranty

Dimension	100.5* 80.5 * 28.8 mm
Operation Temperature	-5°C to +50°C
No. of Ports	4
Applicable Fiber Mode	Single Mode & Multimode
Adapter	Simplex SC / Duplex LC
Insertion Loss for adapter	≤ 0.2dB (1310nm & 1550nm)
Cable Diameter for Inlet	6mm

### Part Number

D156x-4F00

Fiber Optic Outlet, 4-Port Unloaded, No Adapters,  
No Pigtails



### Features & Benefits

- Compact size takes up less wall space for installation
- Inner slack storage area ensures minimum bend radius compliance
- Simple and easy installation
- Inner tray available to house splice sleeves
- Accepts standard SC Simplex and LC Duplex Adapters
- Fully Loaded
- Mounting screws, Fischer, Cable Ties provided.
- 25 Years System Warranty

Dimension	100.5* 80.5 * 28.8 mm
Operation Temperature	-5°C to +50°C
No. of Ports	4
Applicable Fiber Mode	Single Mode & Multimode
Adapter	Simplex SC / Duplex LC
Insertion Loss for adapter	≤ 0.2dB (1310nm & 1550nm)
Cable Diameter for Inlet	6mm

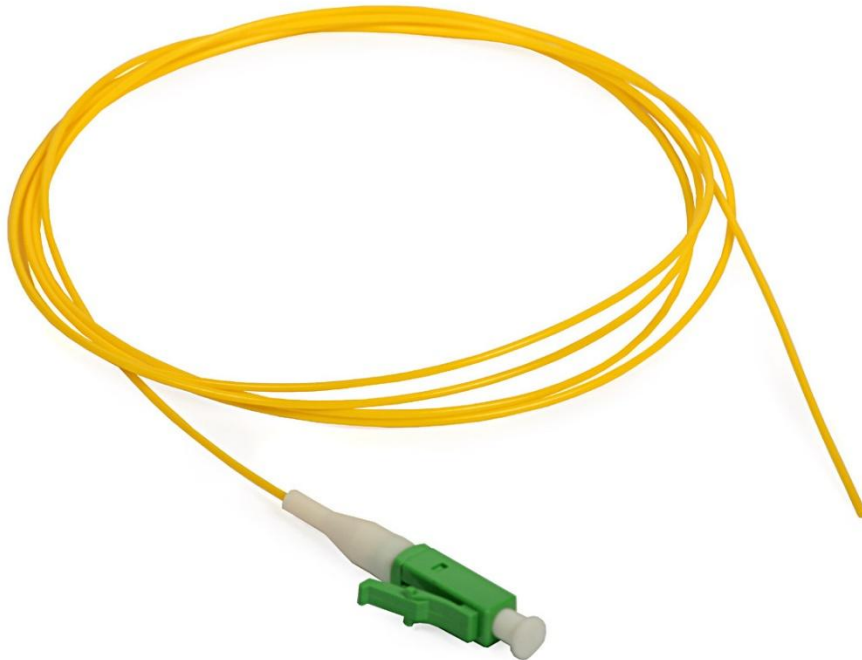
### Part Number

**D1569-4F43-2SCA2LCA**

**4 Port Fiber Terminal Box / Micro ODF (Rosette) with 2 LC/APC Pigtailed, 2 SC/APC Pigtailed, 2 SC/APC Simplex adapter and 1 LC/APC Duplex adapter. Pigtail OD 0.9mm, G.657A2, 1 meter; with 4 Nos. of 40mm Fiber Optic Protection Sleeves**



**25**  
**YEARS**  
SYSTEM WARRANTY



## Description

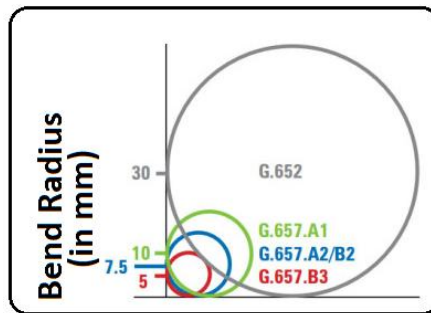
The Fiber used in *DME PROLINK*'s Fiber Optic Pigtail, is made of pure silica and germanium doped silica. A UV curable acrylate material is applied over the Fiber Cladding as primary protective coating. *DME PROLINK* quality personals ensures product reliability through rigorous qualification testing to assure cable performance and durability in adverse field environments. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001.

## Features & Benefits

- APC type connector back reflection does not degrade with repeated mating.
- The Pigtail comes with LC/APC connector. The end faces are still curved but are angled at an industry standard 8°. This maintains a tight connection, and it reduces back reflection to about -70 dB.
- Outer Sheath is Low Smoke Zero Halogen
- G.657A1 or G.657A2
- 25 Years System Warranty
- Length of Pigtail is 1m
- Diameter for Fiber cable of Pigtail is  $\Phi 0.9 (\pm 0.05\text{mm})$

The Fiber within Pigtails are designed, Manufactured and tested according to below standards:

- IEC 60793-1: Optical Fiber Part 1: Generic Specification
- IEC 60793-2: Optical Fiber Part 2: Product Specification
- IEC 60794-2: Optical Fiber Cables Part 2 Indoor cables- Sectional Specification
- ITU-T G652: Characteristics of a Single-mode optical fiber and cable
- ITU-T G.655: Characteristics of a non-zero dispersion-shifted single-mode optical fiber and cable
- ITU-T G.657: Characteristics of a bending-loss insensitive single-mode optical fiber



The connector within Pigtails are designed, Manufactured and tested according to below standards:

- IEC 61300-1: Basic Test and Measurement procedures – Visual Examination
- IEC 61754: Fiber Optic Connector Interfaces
- IEC 61300-3-6: Basic Test and Measurement procedures - Examinations and Measurements - Return loss
- IEC 61300-3-34: Basic Test and Measurement procedures - Examinations and Measurements - Attenuation of random mated connectors

### Technical Characteristics of Connectors

Fiber Type	Single mode OS2
Connector Type	LC
Connector Surface	APC (Angled Physical Contact)
Insertion Loss (dB)	≤ 0.3
Return Loss (dB)	≥ 65
Operating Temperature Range	-25°C to +70°C
Durability	> 500 times
Standard	IEC 601754-20

**Optical Fiber G.657A1 Specification**

Category	Description	Values	
		Before Cable	After Cable
<b>Optical Specifications</b>	Attenuation @1310 nm	≤0.35 dB/km	≤0.36dB/km
	Attenuation @1383 nm (After aging hydrogenation)	≤0.34dB/km	≤0.35dB/km
	Attenuation @1550 nm	≤0.21 dB/km	≤0.22dB/km
	Fiber irregularities point and whole length @1310 &1550nm	≤0.05dB	
	Attenuation inhomogeneity @1310 nm & 1550 nm	≤0.05dB	
	Zero Dispersion Slope	≤0.092 ps/nm <sup>2</sup> ·km	
	PMD Link value (M=20cables Q=0.01% )	0.1ps/√km	
	Cable Cutoff Wavelength (λ <sub>cc</sub> )	≤1260 nm	
	Mode Field Diameter @1310 nm	8.6 ± 0.4μm	
<b>Dimensional Specifications</b>	Cladding Diameter	125 ±1μm	
	Cladding non circularity	≤1.0%	
	Coating diameter	245 ± 7μm	
	Coating non circularity	≤ 6%	
	Cladding / coating concentricity error	≤12μm	
	Core/clad concentricity error	≤0.5μm	
	Fiber curl radius	≥4m	
<b>Mechanical Specifications</b>	Proof stress	≥1.05%	
	Fatigue Resistance Parameter (Nd)	≥22	
	Peak Coating Strip Force	1.0~8.9N	
<b>Environmental Specification</b>	Fiber temperature dependence (-60°C to +85°C)	≤0.05dB/km	
	Fiber temperature and humidity (+85 ± 2°C, 85% R.H. for 30 days)	≤0.05dB/km	
	Heat Aging Induced Attenuation(85 ± 2°C, for 30 days)	≤0.05dB/km	
	Water Immersion Induced (23 ± 2°C, for 30 days)	≤0.05dB/km	

**Optical Fiber G.657A2 Specification**

Category	Description	Values	
		Before Cable	After Cable
Optical Specifications	Attenuation @1310 nm	≤0.35 dB/km	≤0.36dB/km
	Attenuation @1383 nm (After aging hydrogenation)	≤0.34dB/km	≤0.35dB/km
	Attenuation @1550 nm	≤0.21 dB/km	≤0.22dB/km
	Attenuation @1625 nm	≤0.23 dB/km	≤0.25dB/km
	Fiber irregularities point and whole length @1310 &1550nm	≤0.05dB	
	Attenuation inhomogeneity @1310 nm & 1550 nm	≤0.05dB	
	Zero Dispersion Slope	≤0.092 ps/nm <sup>2</sup> ·km	
	PMD Link value (M=20cables Q=0.01% )	0.1ps/√km	
	Cable Cutoff Wavelength (λ <sub>cc</sub> )	≤1260 nm	
	Macro bending Loss (10 turns; Φ30 mm) @1550 nm	≤ 0.03 dB	
	(10 turns; Φ30 mm) @1625 nm	≤ 0.10 dB	
	(1 turns; Φ20 mm) @1550 nm	≤ 0.10 dB	
(1 turns; Φ20 mm) @1625 nm	≤ 0.20 dB		
(1 turns; Φ15 mm) @1550 nm	≤ 0.50 dB		
(1 turns; Φ15 mm) @1625 nm	≤ 1.00 dB		
Mode Field Diameter @1310 nm	8.6 ± 0.4μm		
Dimensional Specifications	Cladding Diameter	125 ±1μm	
	Cladding non circularity	≤1.0%	
	Coating diameter	245 ± 7μm	
	Coating non circularity	≤ 6%	
	Cladding / coating concentricity error	≤12μm	
	Core/clad concentricity error	≤0.5μm	
	Fiber curl radius	≥4m	
Mechanical Specifications	Proof stress	≥1.05%	
	Fatigue Resistance Parameter (Nd)	≥22	
	Peak Coating Strip Force	1.0~8.9N	
Environmental Specification	Fiber temperature dependence (-60°C to +85°C)	≤0.05dB/km	
	Fiber temperature and humidity (+85 ± 2°C, 85% R.H. for 30 days)	≤0.05dB/km	
	Heat Aging Induced Attenuation(85 ± 2°C,for 30 days)	≤0.05dB/km	
	Water Immersion Induced (23 ± 2°C, for 30 days)	≤0.05dB/km	

## Factory Tests

Tests	Criteria Data
Appearance	Connector surface is smooth, no burr, no scratch, color uniformity.
Insertion Loss	≤ 0.3dB
Return Loss	≥65dB
Mechanical Durability	Plug and pull out for 500 times, No scratch and meet optical performance
Temperature Cycling	-10°C~60°C5 cycle ; ΔIL≤0.2dB,ΔRL<5dB,

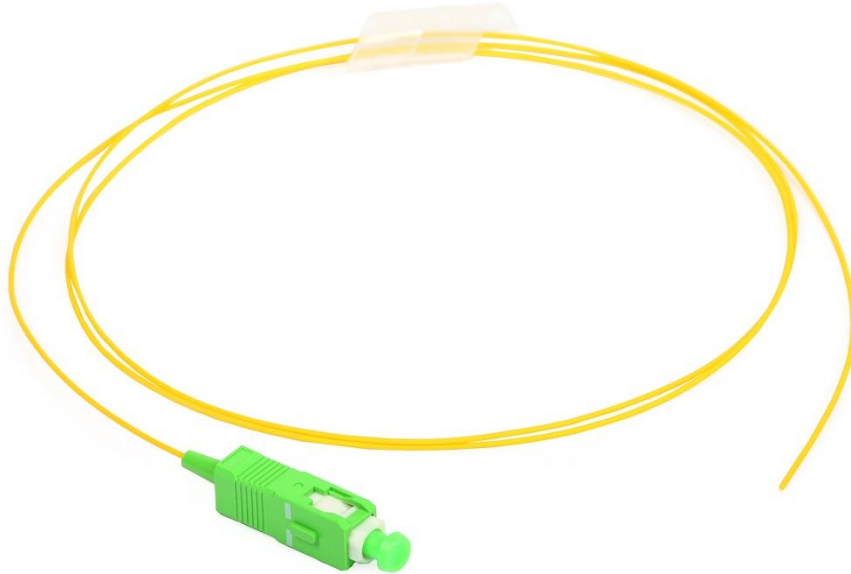
## Tests done with reference to below standards

- IEC 61754-20: Fiber Optic interconnecting devices and passive components – Fiber Optic Connector Interfaces – Part 20: Type LC connector family
- IEC 61300-3-1: Fiber Optic interconnecting devices and passive components – Basic Test and Measurement procedures – Visual Examination
- IEC 61300-3-6: Basic Test and Measurement procedures - Examinations and Measurements - Return loss
- IEC 61300-3-34: Basic Test and Measurement procedures - Examinations and Measurements - Attenuation of random mated connectors
- IEC 61300-2-22: Fiber Optic interconnecting devices and passive components – Basic Test and Measurement procedures – Examinations and Measurements – Change of Temperature.

## Part Number

D1619-LCA77A11	Fiber Optic Pigtail, LC/APC, Single-mode OS2, G.657A1, LSZH, 1m
D1619-LCA77A21	Fiber Optic Pigtail, LC/APC, Single-mode OS2, G.657A2, LSZH, 1m





## Description

The Fiber used in *DME PROLINK's* Fiber Optic Pigtail, is made of pure silica and germanium doped silica. A UV curable acrylate material is applied over the Fiber Cladding as primary protective coating. DME PROLINK quality personals ensures product reliability through rigorous qualification testing to assure cable performance and durability in adverse field environments. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001.

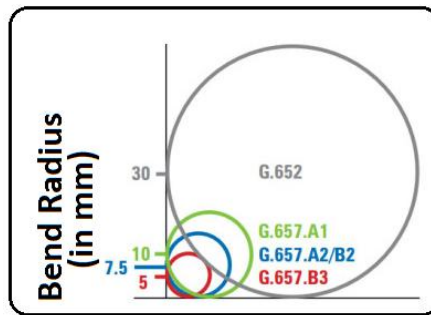
The Pigtail comes with SC/APC connector. The end faces are still curved but are angled at an industry standard 8°. This maintains a tight connection, and it reduces back reflection to about -70 dB.

## Features & Benefits

- APC type connector back reflection does not degrade with repeated mating.
- Outer Sheath is Low Smoke Zero Halogen
- G.657A1
- 25 Years System Warranty
- Length of Pigtail is 1m
- Diameter for Fiber cable of Pigtail is  $\Phi 0.9 (\pm 0.05\text{mm})$

The Fiber within Pigtails are designed, Manufactured and tested according to below standards:

- IEC 60793-1: Optical Fiber Part 1: Generic Specification
- IEC 60793-2: Optical Fiber Part 2: Product Specification
- IEC 60794-2: Optical Fiber Cables Part 2 Indoor cables- Sectional Specification
- ITU-T G.652: Characteristics of a Single-mode optical fiber and cable
- ITU-T G.655: Characteristics of a non-zero dispersion-shifted single-mode optical fiber and cable
- ITU-T G.657: Characteristics of a bending-loss insensitive single-mode optical fiber



The connector within Pigtails are designed, Manufactured and tested according to below standards:

- IEC 61300-1: Basic Test and Measurement procedures – Visual Examination
- IEC 61754: Fiber Optic Connector Interfaces
- IEC 61300-3-6: Basic Test and Measurement procedures - Examinations and Measurements - Return loss
- IEC 61300-3-34: Basic Test and Measurement procedures - Examinations and Measurements - Attenuation of random mated connectors

### Technical Characteristics of Connectors

Fiber Type	Single mode OS2
Connector Type	SC
Connector Surface	APC (Angled Physical Contact)
Insertion Loss (dB)	≤ 0.3
Return Loss (dB)	≥ 65
Operating Temperature Range	-25°C to +70°C
Durability	> 500 times
Standard	IEC 601754-20

**Optical Fiber G.657A1 Specification**

Category	Description	Values	
		Before Cable	After Cable
Optical Specifications	Attenuation @1310 nm	≤0.35 dB/km	≤0.36dB/km
	Attenuation @1383 nm (After aging hydrogenation)	≤0.34dB/km	≤0.35dB/km
	Attenuation @1550 nm	≤0.21 dB/km	≤0.22dB/km
	Attenuation @1625 nm	≤0.23 dB/km	≤0.25dB/km
	Fiber irregularities point and whole length @1310 &1550nm	≤0.05dB	
	Attenuation inhomogeneity @1310 nm & 1550 nm	≤0.05dB	
	Zero Dispersion Slope	≤0.092 ps/nm <sup>2</sup> ·km	
	PMD Link value (M=20cables Q=0.01% )	0.1ps/√km	
	Cable Cutoff Wavelength (λ <sub>cc</sub> )	≤1260 nm	
	Macro bending Loss (10 turns; Φ30 mm) @1550 nm	≤ 0.03 dB	
	(10 turns; Φ30 mm) @1625 nm	≤ 0.10 dB	
(1 turns; Φ20 mm) @1550 nm	≤ 0.10 dB		
(1 turns; Φ20 mm) @1625 nm	≤ 0.20 dB		
(1 turns; Φ15 mm) @1550 nm	≤ 0.50 dB		
(1 turns; Φ15 mm) @1625 nm	≤ 1.00 dB		
Mode Field Diameter @1310 nm	8.6 ± 0.4μm		
Dimensional Specifications	Cladding Diameter	125 ±1μm	
	Cladding non circularity	≤1.0%	
	Coating diameter	245 ± 7μm	
	Coating non circularity	≤ 6%	
	Cladding / coating concentricity error	≤12μm	
	Core/clad concentricity error	≤0.5μm	
	Fiber curl radius	≥4m	
Mechanical Specifications	Proof stress	≥1.05%	
	Fatigue Resistance Parameter (Nd)	≥22	
	Peak Coating Strip Force	1.0~8.9N	
Environmental Specification	Fiber temperature dependence (-60°C to +85°C)	≤0.05dB/km	
	Fiber temperature and humidity (+85 ± 2°C, 85% R.H. for 30 days)	≤0.05dB/km	
	Heat Aging Induced Attenuation(85 ± 2°C,for 30 days)	≤0.05dB/km	
	Water Immersion Induced (23 ± 2°C, for 30 days)	≤0.05dB/km	

## Factory Tests

Tests	Criteria Data
Appearance	Connector surface is smooth, no burr, no scratch, color uniformity.
Insertion Loss	≤ 0.3dB
Return Loss	≥60dB
Mechanical Durability	Plug and pull out for 500 times, No scratch and meet optical performance
Temperature Cycling	-10°C~60°C5 cycle ; $\Delta IL \leq 0.2dB, \Delta RL < 5dB,$

## Tests done with reference to below standards

- IEC 61754-04: Fiber Optic interconnecting devices and passive components – Fiber Optic Connector Interfaces – Part 4: Type SC connector family
- IEC 61300-3-1: Fiber Optic interconnecting devices and passive components – Basic Test and Measurement procedures – Visual Examination
- IEC 61300-3-6: Basic Test and Measurement procedures - Examinations and Measurements - Return loss
- IEC 61300-3-34: Basic Test and Measurement procedures - Examinations and Measurements - Attenuation of random mated connectors
- IEC 61300-2-22: Fiber Optic interconnecting devices and passive components – Basic Test and Measurement procedures – Examinations and Measurements – Change of Temperature.

## Part Number

**D161x-SCA77A11****Fiber Optic Pigtail, SC/APC, Single-mode OS2,  
G.657A1, LSZH, 1m**



## Description

DME PROLINK provides a Fiber Optic coupling adapter family to support interconnection. DME PROLINK adapters are available in a wide range of hybrid adapter styles to fit almost any application or panel. DME PROLINK quality personals ensures product reliability through rigorous qualification testing to assure cable performance and durability in adverse field environments. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001.

## Features & Benefits

- Excellent Changeability and Directivity
- High quality Ceramic sleeves for high precision alignment
- Accurate mounting dimensions
- Complies with IEC 61754-20
- 25 Years System Warranty

## Technical Characteristics of Adapter

Fiber Type	Single mode
Adapter Type	LC
Insertion Loss (dB)	≤ 0.20
Repeatability (dB)	≤ 0.20
Interchangeability (dB)	≤ 0.20
Operating Temperature Range	-25°C to +70°C
Storage Temperature Range	-25°C to +70°C
Durability	> 500 times
Standard	IEC 601754-20

## Part Number

**D162x-LCASMD**

**Fiber Optic Coupling Adapter, LC/APC, Single mode, Duplex**



## Description

DME PROLINK provides a Fiber Optic coupling adapter family to support interconnection. DME PROLINK adapters are available in a wide range of hybrid adapter styles to fit almost any application or panel. DME PROLINK quality personals ensures product reliability through rigorous qualification testing to assure cable performance and durability in adverse field environments. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001.

## Features & Benefits

- Excellent Changeability and Directivity
- High quality Ceramic sleeves for high precision alignment
- Accurate mounting dimensions
- Complies with IEC 61754-4
- 25 Years System Warranty

## Technical Characteristics of Adapter

Fiber Type	Single mode
Adapter Type	SC
Insertion Loss (dB)	≤ 0.20
Repeatability (dB)	≤ 0.20
Interchangeability (dB)	≤ 0.20
Operating Temperature Range	-25°C to +70°C
Storage Temperature Range	-25°C to +70°C
Durability	> 500 times
Standard	IEC 601754-4

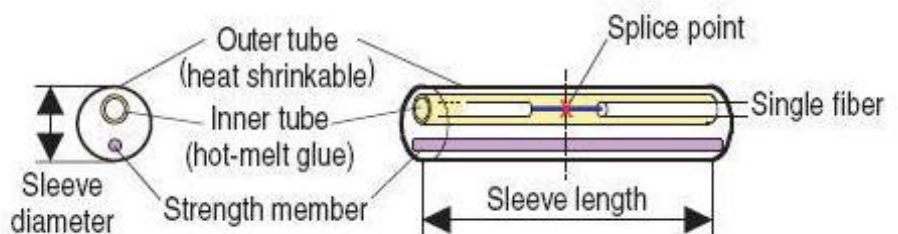
## Part Number

**D162x-SCASMS****Fiber Optic Coupling Adapter, SC/APC, Single mode, Simplex**



### Physical Characteristics of Splice Protection Sleeve

Length	Strength Member	Φ1.0 x 40mm/60mm
	Sleeve	40mm/60mm
Material	Heat Shrink Sleeve	Polyolefin
	Adhesive Tube	Polyolefin
	Strength Member	Stainless Steel, Silver
Applicable Fiber	Single Fiber, 0.25mm, 0.9mm coating dia.	
Color	Transparent	



### Part Number

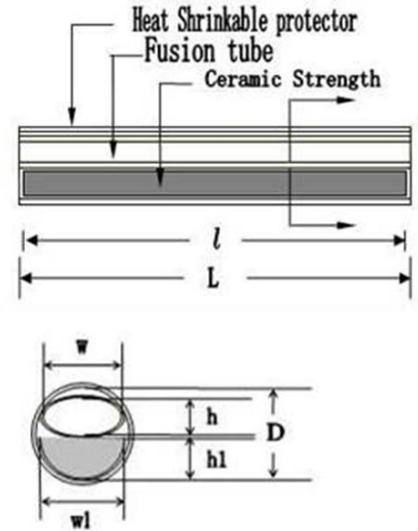
D164x-40	Fiber Optic Splice Protection Sleeve - 40mm
D164x-60	Fiber Optic Splice Protection Sleeve - 60mm





**Key Specifications/Special Features:**

- Provide safe protection to optical fiber splicing
- Easily used and avoid any damage during installation
- Clear sleeve makes it easy to detect splice before shrinkage
- Can accommodate Ribbon Fiber 4-8 Fibers
- Made of Inner and Outer ethylene (EVA) melt able adhesive tube.
- Operating temperature: -45 to +100°C
- Shrinking temperature range: 90 to 110°C



**Physical Characteristics of Splice Protection Sleeve**

Length of Strength Member (l)	40 ± 0.8mm	
Total Length of Ribbon Fiber Protection Ribbon Sleeve (L)	40mm	
Diameter or Width of Strength Member (w1)	4.0 ± 0.1mm	
Width of Inner Tube (W)	4.0 ± 0.1mm	
Height of Inner Tube (h)	2.8 ± 0.1mm	
Height of Strength Member (h1)	2.0 ± 0.1mm	
Total Diameter of Ribbon Fiber Protection Sleeve (D)	2.7 ± 0.05mm	
Material	Heat Shrink Sleeve	ethylene (EVA)
	Adhesive Tube	ethylene (EVA)
	Strength Member	Ceramic
Applicable Fiber	Ribbon Fiber 4 and 8 Fibers	
Color	Transparent	

**Part Number**

**D164x-R40 Fiber Optic Splice Protection Sleeve for Ribbon Fiber - 40mm**



### Features & Benefits

- Short termination time – no epoxy, no baking.
- Available in SC/APC, SC/UPC, LC/UPC etc.
- Available for “flat” as well as conventional tight-buffered cable.
- Operating Temperature Range: -30°C to +75°C
- Storage Temperature Range: -40°C to +80°C
- Re-usable (Supports multiple terminations)
- 25 Years System Warranty

### Description

DME PROLINK field installable connector is a cost-effective, pre-polished connector, designed for ease of installation and re-use if so required. It requires no field polishing or epoxy, so no heat-curing devices nor special tooling are needed to facilitate the termination of the fiber.

DME PROLINK quality personals ensures product reliability through rigorous qualification testing to assure cable performance and durability in adverse field environments. Excellent quality control is achieved through intense in-house quality check and stringent audit acceptance by ISO 9001.

### Technical Characteristics of FIC

Performance	Conditions	Requirements		Reference
Insertion Loss	Source Wavelength	SC/APC; SC/UPC	IL ≤ 0.5 dB	IEC61300-3-4
	1310nm ± 10nm			
	1490nm ± 10nm			
	1550nm ± 10nm			
Return Loss	Source Wavelength	SC/APC	RL ≥ 60 dB	IEC61300-3-6
	1310nm ± 10nm			
	1490nm ± 10nm	SC/UPC	RL ≥ 50 dB	
	1550nm ± 10nm			
	1625nm ± 10nm			

### Part Number

D1651-SCAS-F

Fiber Optic Field-Installable Connector, SC/APC, Single-mode, Flat Cable



## Description

DME PROLINK's Fiber Distribution Hub (FDH), uses a Mini Plug-'n-Play Splitter Module which is common to all of our FDH cabinets and features a common output length. This module allows for true plug and play functionality.

## Features & Benefits

- Features bend-optimized fiber and ruggedized extreme temperature cabling rated for material handling in cold temperatures with superior loss performance at 1490 and 1550 wavelengths
- Splitter Modules are easy to insert and remove without affecting the adjacent splitters
- Reversible dust cap makes test and turn-up easy
- Operating Temperature Range: -50°C to +60°C
- Standardized splitter modules for all FDH cabinet Types and sizes
- Splitter Configurations: 1:2, 1:4, 1:8, 1:16 & 1:32

## Optical Characteristics of Splitter

Parameters (2:32 Splitter)	Value
Operating Wavelength (nm)	1260 – 1650
Maximum Insertion Loss (dB)	≤16.9
Uniformity Maximum (dB)	1.3
Polarization Dependent Loss - PDL (dB)	0.3
Return Loss (dB)	≥ 55
Directivity (dB)	≥ 55
Storage Temperature Range	- 40 to 85 °C
Operating Temperature Range	- 40 to 85 °C
Connector	SC/APC

### Physical Configuration of Splitter Module

Parameter	Value
Splitter Type	1:2, 1:4, 1:8, 1:16, 1:32
Description	Splitter Module Case / PLC Type
Dimensions	H x W x D (mm)
	80 x 12 x 150mm
Input	SC/APC Pigtail 2.5m (2mm OD)
Output	Tight Buffered Tube (2mm)
Output Cord Length (m)	2.5m
Fiber Type	Single Mode
Connector Adapter Type	SC/APC
Case Material /Color	Aluminum / Grey

### Part Number

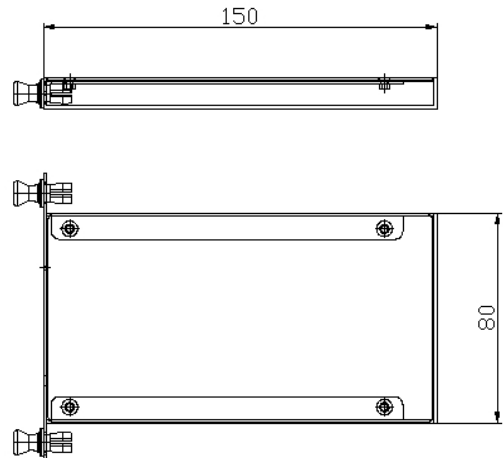
**D 1 6 7 1 - i o f - l**

Number of Inputs	i
1	1
2	2

l	Output Length (m)
	Default is 2.5m

f	Output Form
SCA	SC/APC

o	Number of Outputs
2	2
4	4
8	8
16	16
32	32



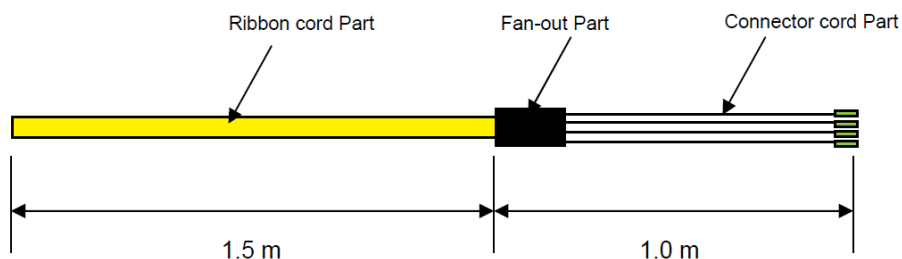


### Description

DME PROLINK's Fiber Optic Fan out assemblies for Ribbon fiber offer a neat, easy-to-deploy option for Single mode fiber in an FTTH environment. These assemblies are available in a stubbed configuration, i.e. one end of the cable is pre-terminated while the other end is spliced..

### Features & Benefits

- Easy circuit identification through color coding in accordance with DIN/IEC 304 or TIA 598B
- Pre-configured plug and play solution
- Minimum Bending Radius: 30mm
- Rapid, cost saving installation
- Assemblies with LC, SC or FC connectors
- Available as 4F, 8F and 12F
- Fiber Type is G.652D
- Tensile Strength : 10 Kgf
- 25 Years System Warranty



### Ribbon Fiber

Parameter	4 Fiber	8 Fiber
Type	Encapsulated Fiber Optic Ribbon	
Coating Material	UV Cured Acrylate	
Overall Width (mm)	1.1	2.1
Overall thickness (mm)	0.4	0.4

### Ribbon Cord Part

Parameter	Specification
Material	PVC
Length	1.5m
Diameter (in mm)	3.0mm (Rectangular Type)
Color	Yellow

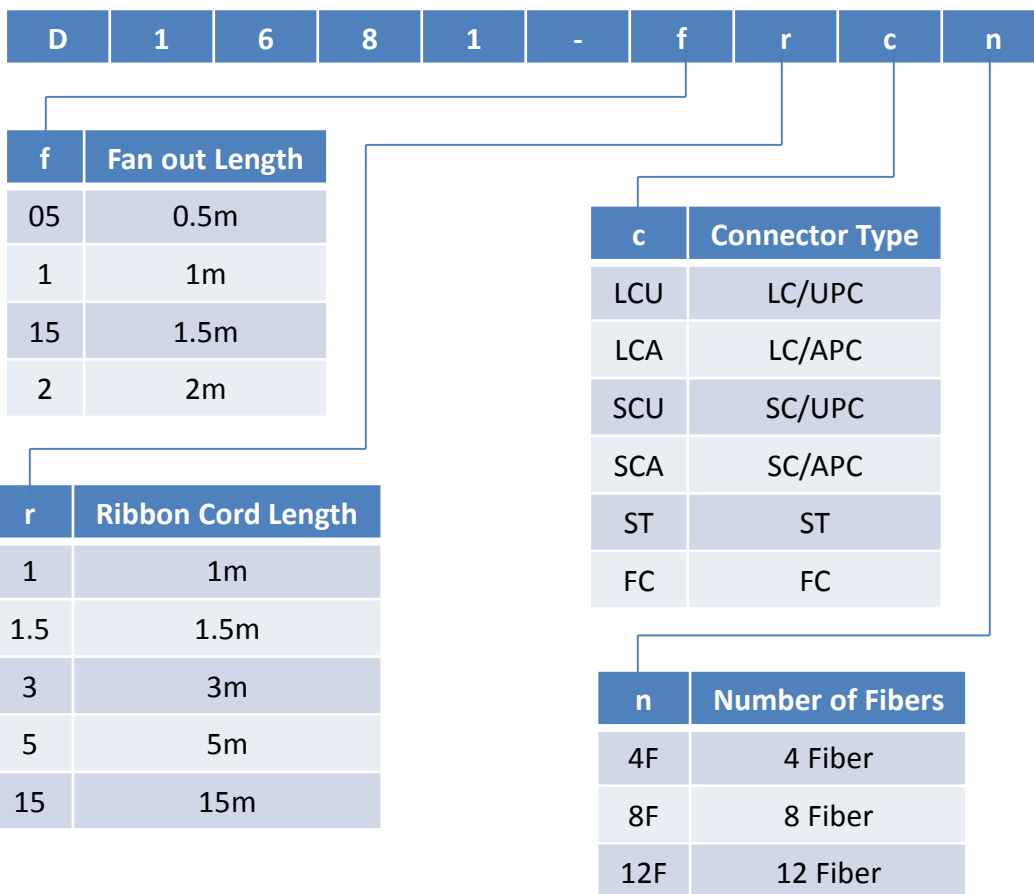
## Fan out Part

Parameter	Specification
Material	PVC

## Connector Cord Part

Parameter	Specification
Material	PVC
Length	1.0m (including Fan-out and connector)
Diameter (in mm)	0.9mm
Connector Type	FC or LC or SC (PC or APC)
Color	Transparent

## Part Number







## Description

DME PROLINK's Fiber Optic Patch Drawers are 19" Rack-mountable enclosures for the storing the over length Patch cords in an indoor environment. These Patch drawer are stackable allowing users to add units as the fiber count requirements increases.

## Features & Benefits

- 19" Rack-mountable; 1RU
- Easy to install.
- The body made of cold-rolled steel. The steel plate thickness is 1.5mm, molded by numerical controlling. Surface treated with static plastic spray.
- Internal cable management
- Sliding tray for easy access to fibers
- Removable Fiber Management Plate on Front of the drawer.
- Complies with IEC 60068
- 25 Years System Warranty

Parameter		Value
Drawer Type		19" Rack Mountable
Dimensions	H x W x D (mm)	1RU x 435 x 230mm
Color		Grey NCS2502-B

## Part Number

D 1 8 1 - P C D R A W E R





## Description

DME PROLINK's has wide range of Wall Mount cabinets which are available in any number of configurations to suit any environment or application.

## Features & Benefits

- Static loading capability of up to 60 kg.
- Removable Side panels and Doors for Easy access.
- Glass or Perforated Front and Rear door options.
- Top or bottom cable entry
- Fan Tray with 1 / 2 Fans
- Standard 6-Way Power Distribution Unit (PDU) comes with Cabinets. (PDUs can be customized)
- Key Lock arrangement for added security
- Height (H): 6U, 9U, 12U, 15U, 16U, 18U, 22U
- Width (W): 600mm
- Depth (D): 500mm, 515mm, 550mm 600mm
- Optional casters and feet available for floor mounting
- 25 Years System Warranty



## Construction

SPCC Quality cold rolled steel

## Standards Compliance

- ❖ ANSI/EIA RS-310-D, IEC297-2, DIN41491; Part1, DIN41494; Part7, GB/T3047.2-92 Standard.
- ❖ Compatible with 19" international Standard and Metric Standard & ETSI.



**Removable Side Panels with optional side panel lock**



**Cabinets Fans for Ventilation**



**Cabinet Shelf**



**Adjustable Mounting Rails**

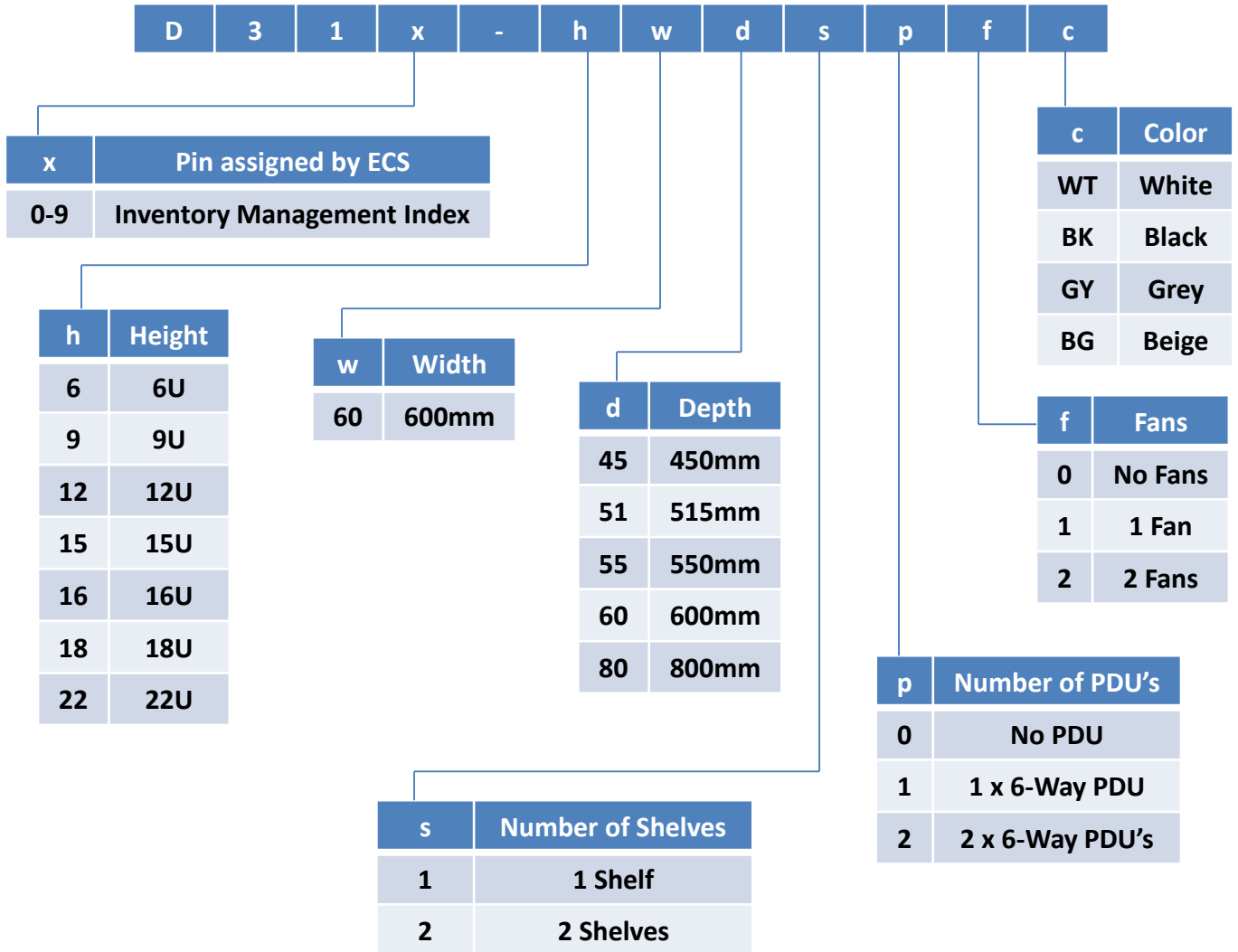


**Switched 6-way PDU**



**Cable Entry Knockout**





**Part Number (Example)**

D315-066051112BK	Cabinet, Wall Mount 6RU, 600 Wide, 515 Deep, 1 Shelf, 1 PDU, 2 Fans, Black (RAL9004)
D315-096045012BK	Cabinet, Wall Mount 9RU, 600 Wide, 450 Deep, no Shelf, 1PDU, 2 Fans, Black
D315-126051112BK	Cabinet, Wall Mount 12RU, 600 Wide, 515 Deep, 1 Shelf, 1 PDU, 2 Fans, Black (RAL9004)
D315-156050112BK	Cabinet, Wall Mount 15RU, 600 Wide, 500 Deep, 1 Shelf, 1 PDU, 2 Fans, Black (RAL9004)
D315-186060112BK	Cabinet, Wall Mount 18RU, 600 Wide, 600 Deep, 1 Shelf, 1 PDU, 2 Fans, Black (RAL9004)



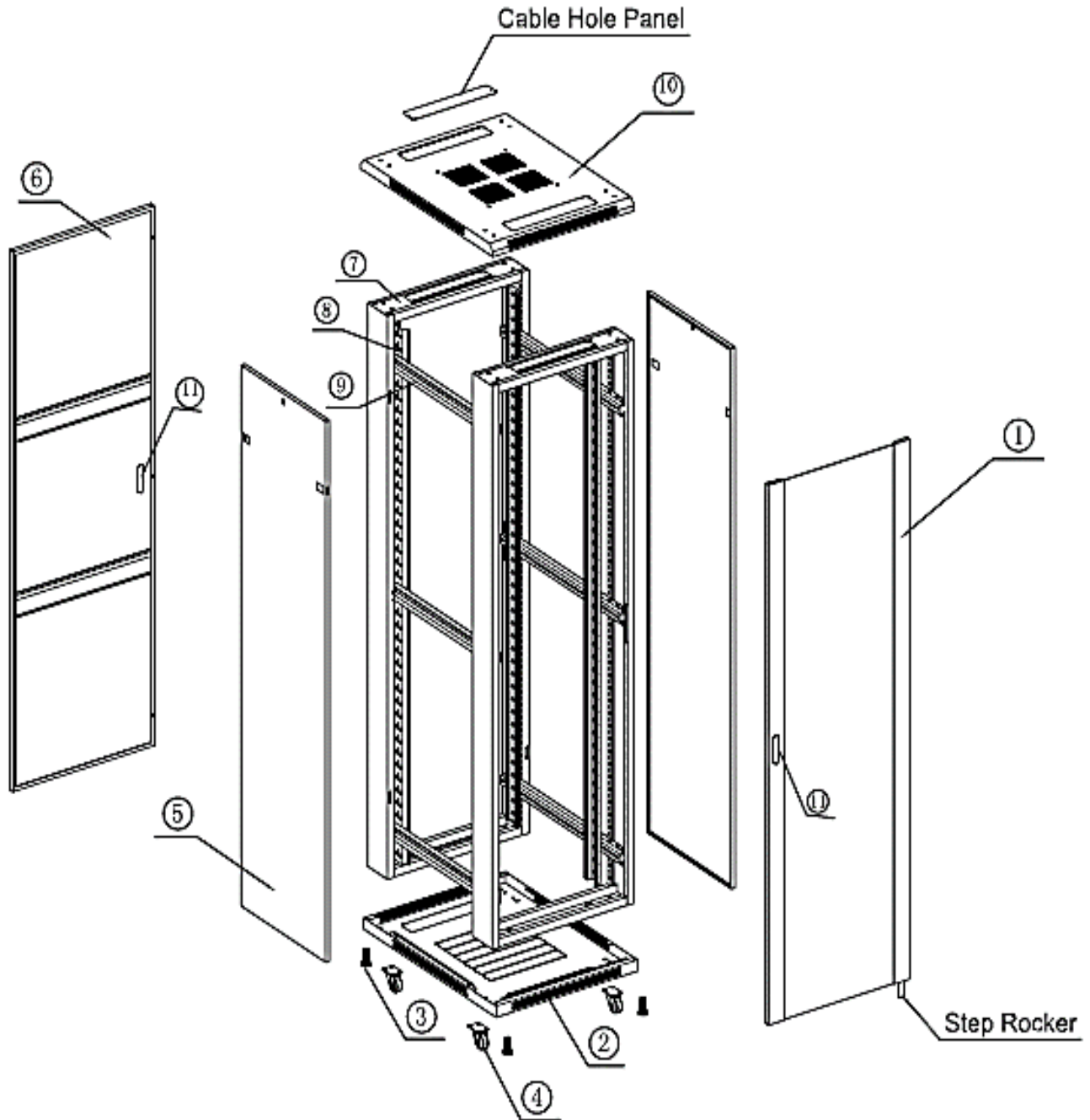
### Description

DME PROLINK's has wide range of Floor Mount cabinets which are available in any number of configurations to suit any environment or application.

### Features & Benefits

- Static loading capability of up to 1000 kg.
- Removable Side panels and Doors.
- Front Glass Door ; Rear Solid Metal Door
- Top or bottom cable entry
- Comes with Shelves
- Fan Tray with 4 Fans / 2 Fans
- Standard 6-Way Power Distribution Unit (PDU) comes with Cabinets. (PDUs can be customized)
- Key Lock arrangement for added security
- Castors wheels / Leveling Feet
- Height (H): 15U – 48U
- Width (W): 600mm, 800mm, 1000mm
- Depth (D): 600mm, 800mm, 1000mm
- 25 Years System Warranty





- |                     |                        |                          |
|---------------------|------------------------|--------------------------|
| <b>① Front Door</b> | <b>② Base</b>          | <b>③ Adjustable Feet</b> |
| <b>④ Castors</b>    | <b>⑤ Side Door</b>     | <b>⑥ Rear Door</b>       |
| <b>⑦ Frame</b>      | <b>⑧ Mounting Rail</b> | <b>⑨ Mounting angle</b>  |
| <b>⑩ Top Cover</b>  | <b>⑪ Lock</b>          |                          |

No.	Specification	Qty.	Unit	Material	Surface Finish	Remark
1	Top Cover	1	PCS	SPCC Cold rolled steel 1.0 or 1.2	Powder coated	600mm depth for 1.0mm, above is 1.2mm
2	Bottom panel	1	PCS	SPCC Cold rolled steel 1.0 or 1.2	Powder coated	600mm depth for 1.0mm, above is 1.2mm
3	Mounting Profile	4	PCS	SPCC Cold rolled steel 1.5 or 1.8	Powder coated	
4	Mounting angle	6	PCS	SPCC Cold rolled steel 1.5	Powder coated	4pcs of lower 32U
5	Toughened glass or mesh front door	1	PCS	SPCC 1.5/Toughened glass 5.0	Powder coated	High Density vented door/ sheet steel door/ double section high density vented door optional
6	Frame	2	PCS	SPCC Cold rolled steel 1.2	Powder coated	/
7	Fan unit	1	PCS	SPCC Cold rolled steel 1.0	Powder coated	/
8	Fan	2	PCS	120*120*38mm	/	4pcs for over 600 width and 600 depth
9	Side panel	2	PCS	SPCC Cold rolled steel 1.0 or 1.2	Powder coated	600mm or 800mm depth for 1.0mm, above is 1.2mm
10	Rear door	1	PCS	SPCC Cold rolled steel 1.0 or 1.2	Powder coated	600mm or 800mm width for 1.0mm, above is 1.2mm
11	Spring lock	1	PCS	/	/	with 2 keys
12	Small round lock	1	PCS	/	Nickel coated	with 2 keys
13	M6 Screw and Square Nuts	20	SET	steel	Zinc coated	40sets for over 32U
14	Adjustable feet	4	PCS	steel	Zinc coated	/
15	Wheels	4	PCS	/	/	/



D 3 2 x - h w d s p f c

x	Pin assigned by ECS
0-9	Inventory Management Index

h	Height
15	15U
22	22U
27	27U
32	32U
37	37U
42	42U
45	45U
47	47U
48	48U

w	Width
60	600
80	800
100	1000

d	Depth
60	600
80	800
100	1000

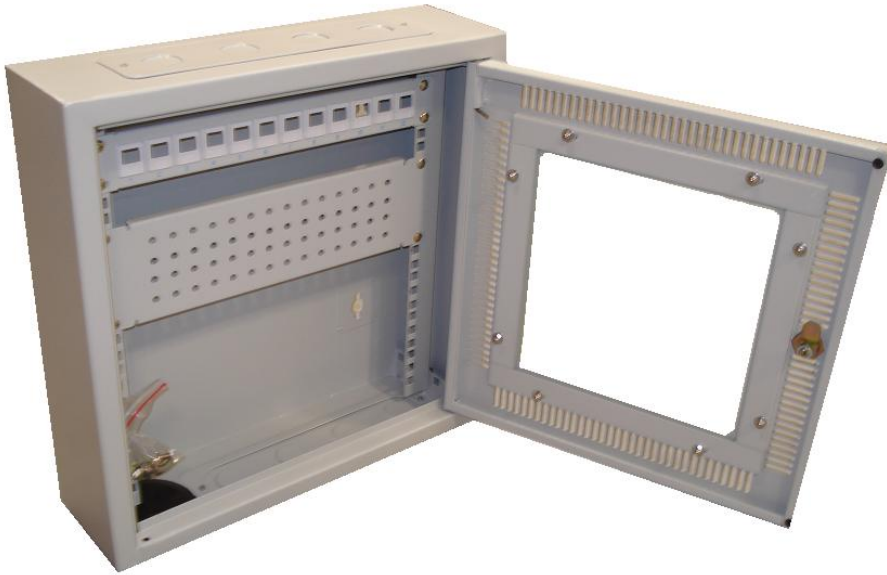
s	Number of Shelves
1	1 Shelf
2	2 Shelves
3	3 Shelves

c	Color
WT	White
BK	Black
GY	Grey
BG	Beige

f	Fans
0	No Fans
4	4 Fans

p	Number of PDU's
1	1 x 6-Way PDU
2	2 x 6-Way PDU's
S1	1x 12-Way PDU (13A) & 1x 12-Way PDU (16A)





## Description

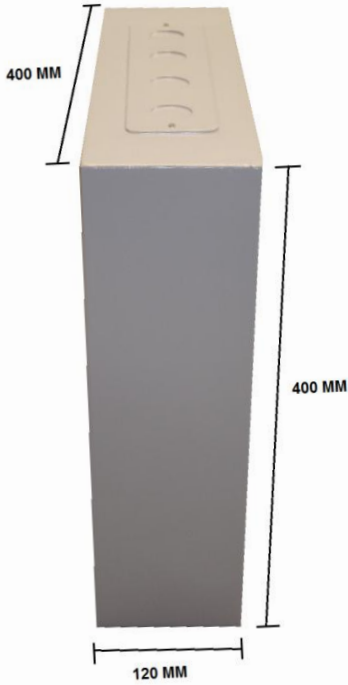
DME PROLINK's Optical Network Termination (ONT) Cabinet is designed and fabricated in accordance with global Service Provider requirements and conforms precisely to Du and Etisalat FTTx specifications. The robust and durable design makes it easy to install and maintain.

## Features & Benefits

- Dimensions: 8U (400mm) x 400mm x 120mm (HxWxD)
- 4 Entry points on a removable cable entry knockout plate on Top and Bottom.
- Front Tempered Glass Door with Steel Side Panels
- Adjustable 19" Mounting Profile
- Aesthetic design with Ventilation Holes
- Comes with Universal Standard Key & Lock
- Inner mounting Plate with Grid Holes
- 12-Port Built-in Empty Patch Panel
- 25 Years System Warranty



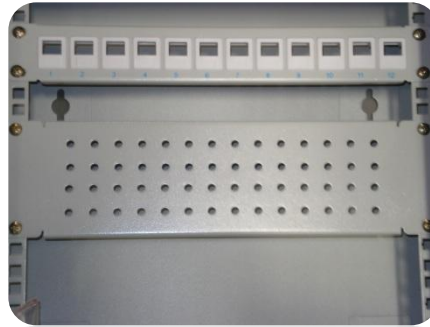
Side View



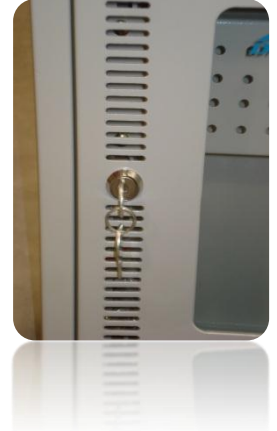
4 cable entry holes on a removable Cable entry Knockout plate on Top and Bottom



Mounting Plate and 12-port Empty patch panel



Lock



D 3 3 x - h w d l c

x	Pin assigned by ECS
0-9	Inventory Management Index

h	Height
08	8U

w	Width
40	400

d	Depth
12	120

c	Color
WT	Traffic White (RAL 9016)
GY	Light Grey (RAL 7035)
PW	Pure White (RAL 9010)
CR	Cream (RAL 9001)
PG	Pebble Grey (RAL 7032)
GW	Grey White (RAL 9002)

l	Lock
Y	With Lock
N	Without Lock

**Part Number**

D335-084012YGY Cabinet, ONT, 8RU, 400 Wide, 120 Deep, with Lock, Grey



## Description

DME PROLINK's Optical Network Termination (ONT) Cabinet is designed and fabricated in accordance with global Service Provider requirements and conforms precisely to Du and Etisalat FTTx specifications. The robust and durable design makes it easy to install and maintain. This flush mount wall cabinet is available in a range of colors and dimensions to suit any number of user applications.

## Features & Benefits

- Dimensions: 12U with Frame
- 600mm x 425mm (H x W) at rear of the cabinet and Depth 120mm (D)
- 6 Entry points on a removable cable entry knockout plate at Bottom.
- Perforated Metal Door
- 12port Unloaded Patch Panel provided with the cabinet.
- Provision for fixing 24-port Copper Patch Panel
- Inner-mounting plate with Grid Mount on the backside of the cabinet.
- Knock out Plate for 2 Power Sockets
- Aesthetic design with Ventilation Holes
- Comes with Universal Standard Key & Lock
- 25 Years System Warranty



**Knockout for Power Outlet**



**Adjustable Hinges for fixing patch panel**



**6 cable entry holes on a removable Cable entry Knockout plate at Bottom**



**12-Port Unloaded Patch Panel with screws**



D 3 3 x - h w d l c

x	Pin assigned by ECS
0-9	Inventory Management Index

h	Height
12	12U

w	Width
42	425

d	Depth
12	120

l	Lock
Y	With Lock
N	Without Lock

c	Color
WT	Traffic White (RAL 9016)
GY	Light Grey (RAL 7035)
PW	Pure White (RAL 9010)
CR	Cream (RAL 9001)
PG	Pebble Grey (RAL 7032)
GW	Grey White (RAL 9002)

### Part Number (Example)

D335-124212YGY

Cabinet, Flush Mount ONT, 12RU, 425 Wide, 120 Deep, with Lock, with Frame, with 12-port Patch Panel and Inner mounting Back Plate, Grey (RAL7035)





### Description

DME PROLINK's Optical Network Termination (ONT) Cabinet is designed and fabricated in accordance with global Service Provider requirements and conforms precisely to Du and Etisalat FTTx specifications. The robust and durable design makes it easy to install and maintain. This flush mount wall cabinet is available in a range of colors and dimensions to suit any number of user applications.

### Features & Benefits

- Dimensions: 12U with Frame Dimension 636mm x 636mm (H x W)
- 600mm x 600mm (H x W) at rear of the cabinet and Depth 150mm (D)
- 5 Entry points on a removable cable entry knockout plate on Top and Bottom.
- Front Tempered Glass Door with Steel Side Panels
- Adjustable 19" Mounting Profile
- Aesthetic design with Ventilation Holes
- Comes with Universal Standard Key & Lock
- Inner mounting Plate with Grid Holes
- 25 Years System Warranty

### Lock



### 5U Inner Mounting Plate with Grid Holes



### 5 cable entry holes on a removable Cable entry Knockout plate on Top and Bottom



D 3 3 x - h w d l c

x	Pin assigned by ECS
0-9	Inventory Management Index

h	Height
12	12U

w	Width
60	600

d	Depth
15	150

l	Lock
Y	With Lock
N	Without Lock

c	Color
WT	Traffic White (RAL 9016)
GY	Light Grey (RAL 7035)
PW	Pure White (RAL 9010)
CR	Cream (RAL 9001)
PG	Pebble Grey (RAL 7032)
GW	Grey White (RAL 9002)
OW	Off White (S0502-Y)

### Part Number (Example)

D335-126015YGY	Cabinet, Flush Mount ONT, 12RU, 600 Wide, 150 Deep, with Lock, with Frame, Grey (RAL7035)
D335-126015YPW	Cabinet, Flush Mount ONT, 12RU, 600 Wide, 150 Deep, with Lock, Pure White (RAL9010)
D335-126015YGW	Cabinet, Flush Mount ONT, 12RU, 600 Wide, 150 Deep, with Lock, with Frame, Grey White (RAL9002)
D335-126015YOW	Cabinet, Flush Mount ONT, 12RU, 600 Wide, 150 Deep, with Lock, with Frame, Off White (NCS Color Code : S0502-Y)





## Description

DME PROLINK's Optical Network Termination (ONT) Cabinet is designed and fabricated in accordance with global Service Provider requirements and conforms precisely to Du and Etisalat FTTx specifications. The robust and durable design makes it easy to install and maintain. This flush mount wall cabinet is available in a range of colors and dimensions to suit any number of user applications.

## Features & Benefits

- Dimensions: 12U 600mm x 600mm (H x W) at rear of the cabinet and Depth 150mm (D)
- 4 Entry points on Top and Bottom.
- Front Tempered Glass Door with Steel Side Panels
- Adjustable 19" Mounting Profile
- Aesthetic design with Ventilation Holes
- Comes with Universal Standard Key & Lock
- Inner mounting Plate with Grid Holes should be ordered separately
- 25 Years System Warranty

D 3 3 x - h w d l SM c

x	Pin assigned by ECS
0-9	Inventory Management Index

h	Height
12	12U

w	Width
60	600

d	Depth
15	150

l	Lock
Y	With Lock
N	Without Lock

c	Color
WT	Traffic White (RAL 9016)
GY	Light Grey (RAL 7035)
PW	Pure White (RAL 9010)
CR	Cream (RAL 9001)
PG	Pebble Grey (RAL 7032)
GW	Grey White (RAL 9002)

**Part Number (Example)**

D335-126015YSMGY	Cabinet, Surface Mount ONT, 12RU, 600 Wide, 150 Deep, with Lock, Grey (RAL7035)
D335-126015YSMPW	Cabinet, Surface Mount ONT, 12RU, 600 Wide, 150 Deep, with Lock, Pure White (RAL9010)
D335-126015YSMTW	Cabinet, Surface Mount ONT, 12RU, 600 Wide, 150 Deep, with Lock, Traffic White (RAL9016)



## Description

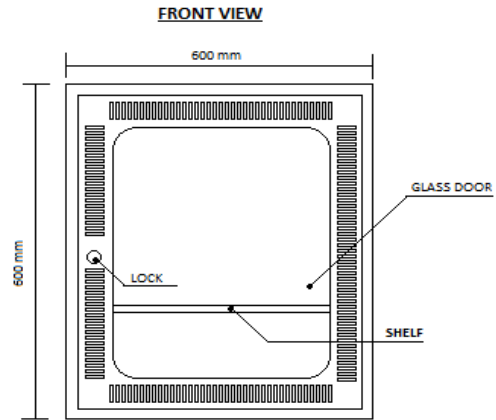
DME PROLINK's Optical Network Termination (ONT) Cabinet is designed and fabricated in accordance with global Service Provider requirements and conforms precisely to Du and Etisalat FTTx specifications. The robust and durable design makes it easy to install and maintain. This flush mount wall cabinet is available in a range of colors and dimensions to suit any number of user applications.

## Features & Benefits

- Dimensions: 12U Height; 600mm x 300mm (W x D)
- 5 Entry points on a removable cable entry knockout plate on Top and Bottom.
- Tempered Glass door with Steel side panels.
- 19" Mountable Shelf provided with the cabinet.
- Aesthetic design with Ventilation Holes
- Comes with Universal Standard Key & Lock
- 25 Years System Warranty



**DME PROLINK Wall Mount Cabinet**  
Front Glass Door | with 19" Mounted Shelf  
12U, 600mm (W) x 300mm (D)



**D 3 3 x - h w d l c**

x	Pin assigned by ECS
0-9	Inventory Management Index

h	Height
12	12U

w	Width
60	600

d	Depth
30	300

l	Lock
Y	With Lock
N	Without Lock

c	Color
WT	Traffic White (RAL 9016)
GY	Light Grey (RAL 7035)
PW	Pure White (RAL 9010)
CR	Cream (RAL 9001)
PG	Pebble Grey (RAL 7032)
GW	Grey White (RAL 9002)

**Part Number (Example)**

D335-126030YGY	Cabinet, Wall Mount ONT, 12RU, 600 Wide, 300 Deep, with Lock, with Shelf, Light Grey (RAL7035)
D335-126030YPW	Cabinet, Wall Mount ONT, 12RU, 600 Wide, 300 Deep, with Lock, with shelf, Pure White (RAL9010)
D335-126030YTW	Cabinet, Wall Mount ONT, 12RU, 600 Wide, 300 Deep, with Lock, with shelf, Traffic White (RAL9016)



## Description

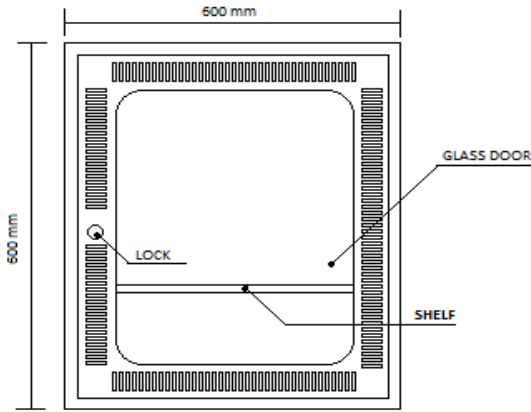
DME PROLINK's Optical Network Termination (ONT) Cabinet is designed and fabricated in accordance with global Service Provider requirements and conforms precisely to Common Du and Etisalat FTTx specifications. The robust and durable design makes it easy to install and maintain. This flush mount wall cabinet is available in a range of colors and dimensions to suit any number of user applications.

## Features & Benefits

- Dimensions: 12U Height; 600mm x 350mm (W x D)
- 5 Entry points on a removable cable entry knockout plate on Top and Bottom.
- Tempered Glass door with Steel side panels. (Perforated Door options available)
- 2 Nos. of 19" Mountable Shelves provided within the cabinet.
- Aesthetic design with Ventilation Holes
- Comes with Universal Standard Key & Lock
- 25 Years System Warranty



FRONT VIEW



D 3 3 x - h w d l c

x	Pin assigned by ECS
0-9	Inventory Management Index

h	Height
12	12U

w	Width
60	600

d	Depth
35	350

c	Color
WT	Traffic White (RAL 9016)
GY	Light Grey (RAL 7035)
PW	Pure White (RAL 9010)
CR	Cream (RAL 9001)
PG	Pebble Grey (RAL 7032)
GW	Grey White (RAL 9002)

l	Lock
Y	With Lock
N	Without Lock

**Part Number (Example)**

D335-126035YGY	Cabinet, Wall Mount ONT, 12RU, 600 Wide, 350 Deep, with Lock, with 2 shelves, Light Grey (RAL7035)
D335-126035YPW	Cabinet, Wall Mount ONT, 12RU, 600 Wide, 350 Deep, with Lock, with 2 shelves, Pure White (RAL9010)
D335-126035YTW	Cabinet, Wall Mount ONT, 12RU, 600 Wide, 350 Deep, with Lock, with 2 shelves, Traffic White (RAL9016)