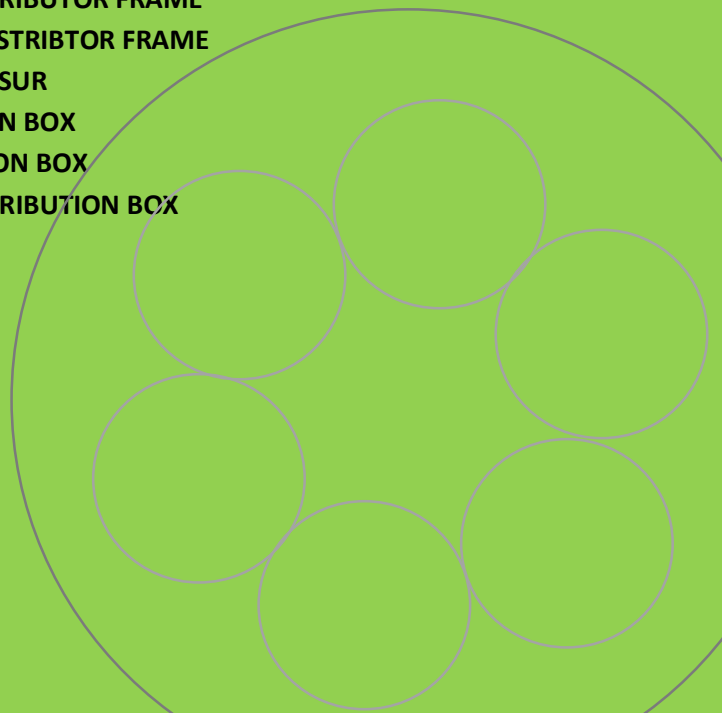


# FIBER OPTIC SYSTEM

**ESCAB<sup>®</sup>**

## FIBER OPTIC SYSTEM

- FIBER OPTIC CABLE – TIGHT BUFFER DISTRIBUTION
- FIBER OPTIC CABLE – LOOSE TUBE OUTDOOR
- FIBER OPTIC CABLE – OPGW
- FIBER OPTIC CABLE – LOOSE TUBE ARMoured STEEL TAPE
- FIBER – CONNECTOR
- FIBER – ADAPTOR
- FIBER – PATCH CORD
- FIBER – PIGTAIL
- SPLITTER DISTRIBUTOR BOX
- UNLOAD FIBER OPTIC DISTRIBUTOR FRAME
- FULL LOAD FIBER OPTIC DISTRIBUTOR FRAME
- FIBER OPTIC SPLICE ENCLOSURE
- MINI ACCESS TERMINATION BOX
- WALL MOUNTED DISTRIBUTION BOX
- INDOOR / OUT DOOR DISTRIBUTION BOX



# Optical Cables

ESCAB offers optical cable for a wide range of applications. This includes a full range of LSHF/LSZH tight-buffered and loose-tube cables.

## CABLE SELECTION

When selecting the correct cable for any installation, the first question will be fiber type. This is dependent upon the transmission distance and the protocol being adopted. With the choice of fiber type complete, there will be several key cable construction questions.

### FIBER COUNT

How many fibers are required? This should take into account future demand and allow an element of redundancy. The cost of installation and associated down time will generally outweigh the cost of additional fiber on day one. A high-fiber-count cable carrying the majority of a company's data generates a larger risk than several lower-fiber-count cables, should any cable damage occur. Diversity in routing should also be considered in answering this question.

### SHEATH OPTIONS

Universal LSHF/LSZH cables are designed for use both internally and externally. They have a halogen-free flame-retardant low-smoke (HFFR-LS) compound sheath that reduces the emission of toxic fumes and the spread of fire.

These cables are also required to be tested, certified, and marked in accordance with IEC standards.

Outdoor Cables are designed only for external use. They have a low-density polyethylene sheath that makes the cable lighter than the equivalent LSHF/LSZH version. This makes outdoor cables more suited for the longer pulled runs into which they are generally installed. Outdoor cables may enter buildings, but they typically must not pass more than three meters past the external fire barrier of the building, depending on local regulations.

### CABLE OPTIONS

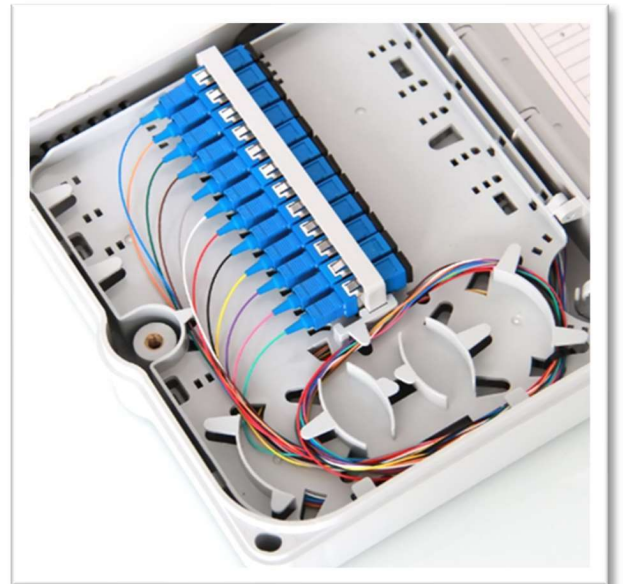
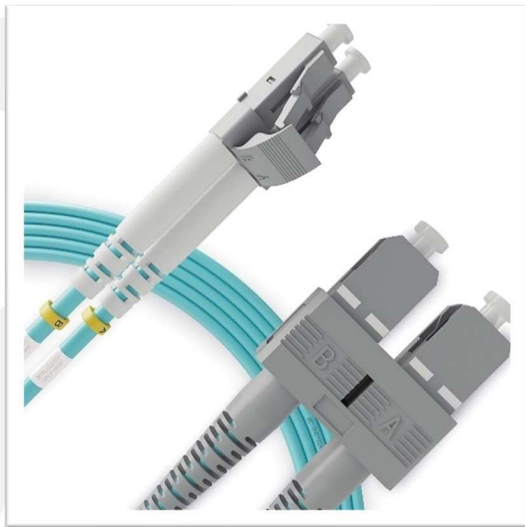
Tight Buffer Distribution Cables are based on a 900 µm tight-buffered element and are generally installed in the backbone of a building network and direct terminated at a consolidation point. Loose-Tube Cables are constructed with gel-filled or dry, central or stranded elements and provide higher fiber-count, compact alternatives to tight-buffered cables. ESCAB loose-tube cables are available in below standard variants:

1. LOOSE TUBE OUTDOOR - HDPE
2. OPGW
3. Direct Burial Armored

All above variants are available as either Unitube or multi-loose-tube cable. Unitube products are available with up to 24 fibers and multi-loose-tube products are available with up to 216 fibers as standard, although higher fiber-counts are available on request.



escab



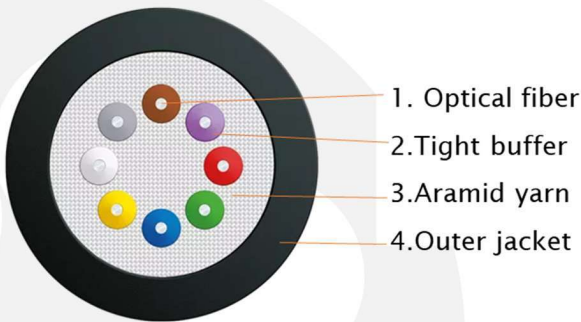
# TIGHT BUFFERED DISTRIBUTION

**PVC & LSZH**

**MULTI-MODE | SINGLE MODE**



The 900µm tight buffered fibers are distributed in the center of the cable. The aramid yarn as strength member surround the fibers, provides excellent tensile strength when it's in installation, the cable is completed with a LSZH/PVC jacket. As the classical premise backbone cabling fiber optic cable, the compact construction is ease for field installation. The construction uses Water-blocking yarns and Low Smoke, Zero Halogen (LSZH) sheathing material as standard, and PVC Flame is option only. UV Resistant Low Smoke and Fume Zero Halogen cable jacket materials as standard.



Standard	
Multi Mode / Single Mode	ISO/IEC 11801; EN 50173-1; TIA 598.C
Mechanical and Environmental Performance	IEC 60794-2-20; IEC 60794-1-21, IEC 60794-1-22;
Low smoke Halogen Free for LSZH sheath	IEC 61034-1/2 ; IEC 60754-2
Flame retardant rating for PVC sheath	IEC 60332-1-2
Color code	TIA-598-C

Application Protocols	
Network transmission protocol	ISO 11801, EN 50173, TIA 568B
High speed LAN protocol	10Base-FL ; 100BASE-FX ; 1000BASE-SX ; 1000BASE-LX ;
	10GBASE-LX4 ; 10GBASE-SX(R) ; 10GBASE-LX(W) ; 10GBASE-EX ; 10GBASE-LRM ; Fibre Channel (FC-PH) @1062Mbit/s ; FDDI

Structure & Environment Characteristics		
Tight buffer	Material	PVC   LSZH
Peripheral Strength Member	Material	Aramid Yarn
Sheath	Material	PVC   LSZH   PE(option)
	Color	Yellow   Orange   Black
Operation Temperature	IEC 60794-1-2 F1	-20°C ~ +60°C
Storage / Transport Temperature		-20°C ~ +60°C
Installation Temperature		-5°C ~ +50°C



TIGHT BUFFERED DISTRIBUTION SINGLE MODE & MULTI MODE

Mechanical Characteristics												
Fiber Count	Outer Diameter (mm)		TBF Diameter (mm)		Cable Weight (Kg/Km)	Tensile Load		Crush Load		Bend Radius		
						Short Term (N)	Long Term (N)	Short Term (N)	Long Term (N)	Static (mm)	Dynamic (mm)	
2	4.6	0.25	900	50	10	460	200	1000	300	20D	10D	
4	5.0	0.25	900	50	18	640	200	1000	300	20D	10D	
6	5.4	0.25	900	50	22.5	740	200	1000	300	20D	10D	
8	5.9	0.25	900	50	28	940	200	1000	300	20D	10D	
12	6.7	0.25	900	50	38	1200	200	1000	300	20D	10D	
24	8.3	0.25	900	50	63	1480	400	1000	300	20D	10D	

Indoor Tight Buffer Distribution Fiber Optic Cable						
LSZH Outer sheath						
Number of Fibers	9/125	50/125	62.5/125	50/125(OM3)	50/125(OM4)	
2	EG652-TB-02-LSF-A	EOM2-TB-02-LSF-A	EOM1-TB-02-LSF-A	EOM3-TB-02-LSF-A	EOM4-TB-02-LSF-A	
4	EG652-TB-04-LSF-A	EOM2-TB-04-LSF-A	EOM1-TB-04-LSF-A	EOM3-TB-04-LSF-A	EOM4-TB-04-LSF-A	
6	EG652-TB-06-LSF-A	EOM2-TB-06-LSF-A	EOM1-TB-06-LSF-A	EOM3-TB-06-LSF-A	EOM4-TB-06-LSF-A	
8	EG652-TB-08-LSF-A	EOM2-TB-08-LSF-A	EOM1-TB-08-LSF-A	EOM3-TB-08-LSF-A	EOM4-TB-08-LSF-A	
12	EG652-TB-12-LSF-A	EOM2-TB-12-LSF-A	EOM1-TB-12-LSF-A	EOM3-TB-12-LSF-A	EOM4-TB-12-LSF-A	
24	EG652-TB-24-LSF-A	EOM2-TB-24-LSF-A	EOM1-TB-24-LSF-A	EOM3-TB-24-LSF-A	EOM4-TB-24-LSF-A	

Indoor Tight Buffer Distribution Fiber Optic Cable						
PVC Outer sheath						
Number of Fibers	9/125	50/125	62.5/125	50/125(OM3)	50/125(OM4)	
2	EG652-TB-02-PVC-A	EOM2-TB-02-PVC-A	EOM1-TB-02-PVC-A	EOM3-TB-02-PVC-A	EOM4-TB-02-PVC-A	
4	EG652-TB-04-PVC-A	EOM2-TB-04-PVC-A	EOM1-TB-04-PVC-A	EOM3-TB-04-PVC-A	EOM4-TB-04-PVC-A	
6	EG652-TB-06-PVC-A	EOM2-TB-06-PVC-A	EOM1-TB-06-PVC-A	EOM3-TB-06-PVC-A	EOM4-TB-06-PVC-A	
8	EG652-TB-08-PVC-A	EOM2-TB-08-PVC-A	EOM1-TB-08-PVC-A	EOM3-TB-08-PVC-A	EOM4-TB-08-PVC-A	
12	EG652-TB-12-PVC-A	EOM2-TB-12-PVC-A	EOM1-TB-12-PVC-A	EOM3-TB-12-PVC-A	EOM4-TB-12-PVC-A	
24	EG652-TB-24-PVC-A	EOM2-TB-24-PVC-A	EOM1-TB-24-PVC-A	EOM3-TB-24-PVC-A	EOM4-TB-24-PVC-A	

Tight Buffer Code												
No.	1	2	3	4	5	6	7	8	9	10	11	12
<b>Color</b>	Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Purple	Pink	Aqua
<b>No.</b>	13	14	15	16	17	18	19	20	21	22	23	24
<b>Color</b>	Blue w/Black Tracer	Orange w/Black Trace	Green w/Black Trace	Brown w/Black Trace	Grey w/Black Trace	White w/Black Trace	Red w/Black Trace	Black w/Black Trace	Yellow w/Black Trace	Purple w/Black Trace	Pink w/Black Trace	Aqua w/Black Trace



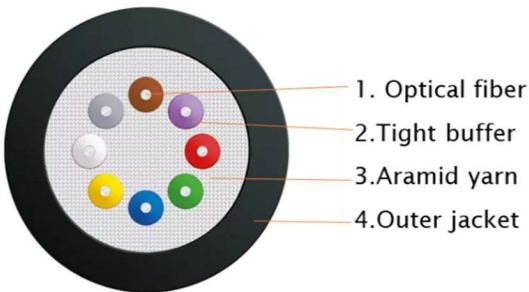
TIGHT BUFFERED DISTRIBUTION MULTI MODE

## MULTI-MODE

Standard	
Multi Mode	ISO/IEC 11801; EN 50173-1; TIA 598.C
Mechanical and Environmental Performance	IEC 60794-2-20; IEC 60794-1-21, IEC 60794-1-22;
Low smoke Halogen Free for LSZH sheath	IEC 61034-1/2 ; IEC 60754-2
Flame retardant rating for PVC sheath	IEC 60332-1-2
Color code	TIA-598-C

Application Protocols	
Network transmission protocol	ISO 11801, EN 50173, TIA 568B
High speed LAN protocol	10Base-FL ; 100BASE-FX ; 1000BASE-SX ; 1000BASE-LX ;
	10GBASE-LX4 ; 10GBASE-SX(R) ; 10GBASE-LX(W) ; 10GBASE-EX 10GBASE-LRM ; Fibre Channel (FC-PH) @1062Mbit/s ; FDDI

Optical Characteristics		OM1	OM2	OM3	OM4
Attenuation	@850 nm	≤ 3.0 dB/Km	≤ 3.0 dB/Km	≤ 2.8 dB/Km	≤ 2.8 dB/Km
	@1300 nm	≤ 0.8 dB/Km	≤ 0.8 dB/Km	≤ 0.7 dB/Km	≤ 0.7 dB/Km
Bandwidth	@850 nm	≥ 200 Mhz.Km	≥ 200 Mhz.Km	≥ 1500 Mhz.Km ≥ 2000 Mhz.Km	≥ 3500 Mhz.Km ≥ 4700 Mhz.Km
	@1300 nm	≥ 600 Mhz.Km	≥ 500 Mhz.Km	≥ 500 Mhz.Km	≥ 550 Mhz.Km
10 Gb/s Ethernet Link Distance(10GBASE-SR)	@850 nm	33M	82M	300M	300M
Zero Dispersion Wavelength		1320 1365nm	1295 1320nm	1295 1320nm	1295 1320nm
Group Index of Refraction (Typical)	@850 nm	1,496	1,482	1,482	1,482
	@1300 nm	1,491	1,477	1,477	1,477
Geometrical Characteristics					
Core Diameter		62.5 2.5um	50.0 2.5um	50.0 2.5um	50.0 2.5um
Cladding Diameter		124.8 1.0um	124.8 1.0um	124.8 1.0um	124.8 1.0um
Cladding Non-Circularity		≤ 1.0%	≤ 1.0%	≤ 1.0%	≤ 1.0%
Coating Diameter		245 7.0um	245 7.0um	245 7.0um	245 7.0um
Coating/Cladding Concentricity Error		≤ 12.0 um	≤ 12.0 um	≤ 12.0 um	≤ 12.0 um
Coating Non-Circularity		≤ 6.0%	≤ 6.0%	≤ 6.0%	≤ 6.0%
Core/Cladding Concentricity Error		≤ 1.5um	≤ 1.5um	≤ 1.0um	≤ 1.0um
Environmental Characteristics					
Attenuation at Temperature cycling (-60°C ~ + 85°C)		≤ 0.10dB/km	≤ 0.10dB/km	≤ 0.10dB/km	≤ 0.10dB/km
Attenuation at Temperature Humidity cycling (-10°C ~ + 85°C, 98% R.H)		≤ 0.10dB/km	≤ 0.10dB/km	≤ 0.10dB/km	≤ 0.10dB/km
Attenuation at Damp Heat Dependence (85°C, 98% R.H, 30days)		≤ 0.10dB/km	≤ 0.10dB/km	≤ 0.10dB/km	≤ 0.10dB/km
Attenuation at Water soak Dependence (23°C, 30days)		≤ 0.10dB/km	≤ 0.10dB/km	≤ 0.10dB/km	≤ 0.10dB/km
Mechanical Characteristics					
Proof Test (Off Line)		≥ 9.0 N (≥ 100kps)	≥ 9.0 N (≥ 100kps)	≥ 9.0 N (≥ 100kps)	≥ 9.0 N (≥ 100kps)
Macro bend Loss (100 Turn, 25nm Radius)	850 nm	≤ 0.05 dB	≤ 0.05 dB	≤ 0.05 dB	≤ 0.05 dB
	1300 nm	≤ 0.05 dB	≤ 0.05 dB	≤ 0.05 dB	≤ 0.05 dB
Coating Strip Force (Typical)		1.5N	1.5N	1.5N	1.5N
Dynamics Stress Corrosion Susceptibility Parameter (Nd, Typical)		≥ 27	≥ 27	≥ 27	≥ 27



TIGHT BUFFERED DISTRIBUTION SINGLE MODE

**SINGLE-MODE**

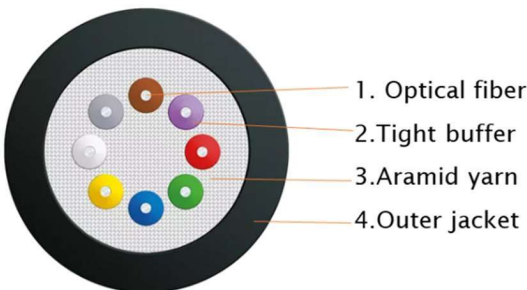
Standard	
Single Mode	ISO/IEC 11801(OS1a/OS2); EN 50173-1; TIA 598.C
Mechanical and Environmental Performance	IEC 60794-2-20; IEC 60794-1-21, IEC 60794-1-22;
Low smoke Halogen Free for LSZH sheath	IEC 61034-1/2; IEC 60754-2
Flame retardant rating for PVC sheath	IEC 60332-1-2
Color code	TIA-598-C

Application Protocols	
Network transmission protocol	ISO 11801, EN 50173, TIA 568B
High speed LAN protocol	10Base-FL ; 100BASE-FX ; 1000BASE-SX ; 1000BASE-LX ;
	10GBASE-LX4 ; 10GBASE-SX(R) ; 10GBASE-LX(W) ; 10GBASE-EX
	10GBASE-LRM ; Fibre Channel (FC-PH) @1062Mbit/s ; FDDI

Single Mode			
ITU-T Recommendation		G.652.D	
Mode field diameter	1310nm	um	9.2 +/- 0.4
	1550nm	um	10.4 +/- 0.8
Cladding diameter		um	125.0 +/- 1
Cladding non-circularity		%	≤ 1.0
Core/cladding concentricity error		um	≤ 0.5
Coating diameter		um	242 +/- 7
Coating/Cladding concentricity error		Um	≤ 12
Cable cut-off wavelength		Nm	≤ 1260
Attenuation Coefficient	1310 nm	dB/km	≤ 0.4
	1550 nm	dB/km	≤ 0.3
Proof stress level		kpsi	≥ 100

Environmental Characteristics	
Attenuation at Temperature cycling (-60°C ~ + 85°C)	≤ 0.10dB/km
Attenuation at Temperature Humidity cycling (-10°C ~ + 85°C, 98% R.H)	≤ 0.10dB/km
Attenuation at Damp Heat Dependence (85°C, 98% R.H, 30days)	≤ 0.10dB/km
Attenuation at Water soak Dependence (23°C, 30days)	≤ 0.10dB/km

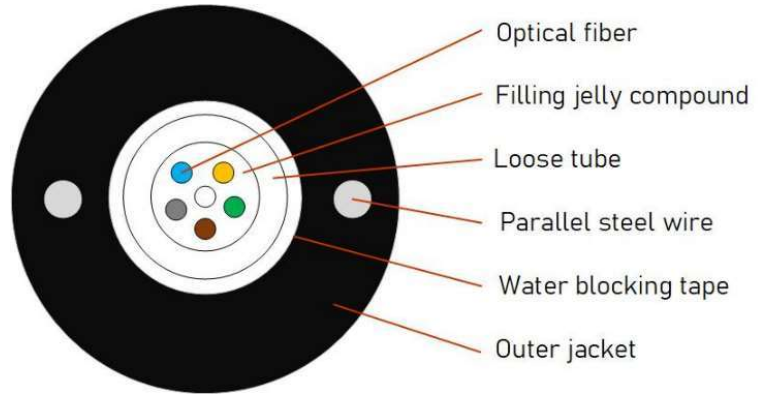
Mechanical Characteristics	
Proof Test (Off Line)	≥ 9.0 N (≥ 100kps)
Coating Strip Force (Typical)	1.5N
Fiber Curl	≥ 4 m
Dynamics Stress Corrosion Susceptibility Parameter (Nd, Typical)	≥ 27
Macro bend Loss (100 Turn, 50nm Radius)	0.05 dB @ 1310/1550 nm
Macro bend Loss (100 Turn, 60nm Radius)	0.05 dB @ 1625 nm
Macro bend Loss (1 Turn, 32nm Radius)	0.05 dB @ 1550 nm



# LOOSE TUBE FIBER OPTIC | SINGLE MODE

## OUTDOOR WATERPROOF

### 02 – 24 CORES



Outdoor Waterproof Fiber Optic Cable HDPE, an ESCAB fiber optic cable, is an outdoor use optical fiber cable suitable for duct and aerial applications.

The construction uses Water-blocking yarns and Low Smoke, Zero Halogen (LSZH) sheathing material as indoor standard. And both type of outer sheath HDPE and LSZH are ready for UV Resistant.

ESCAB provide the multimode and single mode to different applications, with stronger cables construction, to help keep longer life of cables.

**Features:**

1. Low dispersion and attenuation
2. Proper design, precise control for fiber excess length and distinct stranding process render the cable excellent mechanical and environmental properties
3. Outdoor jacket structure makes cable have nice properties of moisture resistance and crush resistance
4. With small cable diameter, light cable weight, easily to be laid.

**Application:**

These central loose tube optical fiber ribbon cables are suitable for installation in aerial or duct environment for communication between bureaus, metropolitan network, access network and is especially suitable for the situation where high-density fibers is expected.

**Cables standard:**

- Application cable standards: ISO/IEC 11801, IEC 60794 and BS EN 50173-1
- Test standards: IEC 60794-1-21 and IEC 60794-1-22
- Flame retardant: (LSZH, PVC outer sheath only) IEC 60332-1-2, IEC 60332-3-24
- Acid Gas Emission: (LSZH outer sheath only) IEC 60754-2;

**Cable performance:**

Item	Parameters	
Loose tube	Material	PBT
	Color	Natural color
Reinforced pieces	Material	Phosphating steel wire
Outer jacket	Material	□ HDPE   □ LSZH
	Color	Black
Min. bending radius	Static	10 times cable diameter
	Dynamic	20 times cable diameter
Tensile performance	Short term	1500N
Crush	Short term	500N/100mm



LOOSE TUBE SINGLE MODE OUTDOOR

Order Part Number

SINGLE MODE G652								
Fiber count	ESCAB Ref p/n		Structure	Fibers per tube	Loose tube diameter	Nominal Thickness of outer jacket	Cable diameter	Cable weight
	Polyethylene High-Density	Low Smoke Free Halogen						
2	EG652-02-HDPE-A	EG652-02-LSF-A	UNITUBE	2	2.4 0.1	2.3	7.5 0.5	53
4	EG652-04-HDPE-A	EG652-04-LSF-A	UNITUBE	4	2.4 0.1	2.3	7.5 0.5	53
6	EG652-06-HDPE-A	EG652-06-LSF-A	UNITUBE	6	2.4 0.1	2.3	7.5 0.5	53
8	EG652-08-HDPE-A	EG652-08-LSF-A	UNITUBE	8	2.4 0.1	2.3	7.5 0.5	53
12	EG652-12-HDPE-A	EG652-12-LSF-A	UNITUBE	12	2.4 0.1	2.3	7.5 0.5	53
24	EG652-24-HDPE-A	EG652-24-LSF-A	UNITUBE	24	3.2 0.1	2.3	8.4 0.5	63

Cable Properties:

SINGLE MODE G.652			
Item	Unit	Specification	
Fiber Type		G. 652D	
Mode field diameter	1310nm	μm	9.2 ± 0.4
	1550nm	μm	10.4 ± 0.8
Cladding diameter	μm	125.0 ± 1	
Cladding non-circularity	%	≤1.0	
Core/cladding concentricity error	μm	≤0.5	
Coating diameter	μm	242 ± 7	
Coating/cladding concentricity error	μm	≤12	
Cable cut-off wavelength	Nm	≤ 1260	
Attenuation Coefficient	1310nm	dB/km	≤0.4
	1550nm	dB/km	≤0.3
Macro-bend loss (1 turn, 10mm radius)	1550nm	dB/km	≤0.75
	1625nm	dB/km	≤1.5
Proof stress level	kpsi	≥100	
Note: Other parameters meet standard ITU-T G.652			

Working condition:

Item	Standard	Parameters
Operation temperature	IEC 60794-1-2 F1	-20°C~+60°C

Packing Standard:

Cable type	Drum				
	Height (mm)	Width (mm)	Inner diameter (mm)	Length (km)	Drum type
Core Fiber (2-24)	700	760	350	2	Plywood wood drum

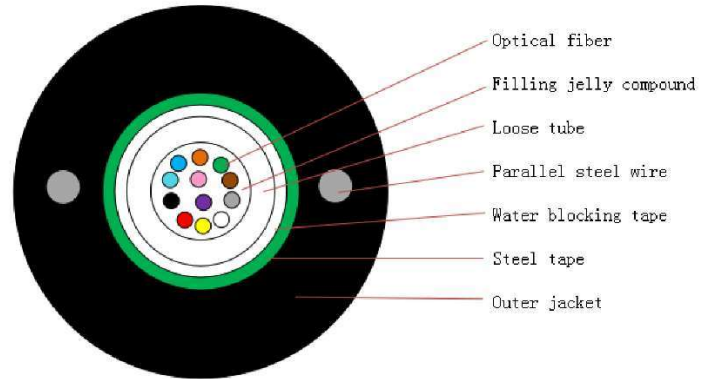
(\*) For requirements of fiber optic accessories, pls contact to [www.escabcommunications.com](http://www.escabcommunications.com)

# LOOSE TUBE FIBER OPTIC | SINGLE MODE

## OUTDOOR WATERPROOF & STA

### PE OUTER SHEATH

#### 04 - 24 Core



Outdoor Waterproof Fiber Optic Cable HDPE, an ESCAB fiber optic cable, is an outdoor use optical fiber cable suitable for duct and aerial applications. ESCAB provide the multimode and single mode to different applications, with stronger cables construction, to help keep longer life of cables.

**Features:**

Low dispersion and attenuation

Proper design, precise control for fiber excess length and distinct stranding process render the cable excellent mechanical and environmental properties

Outdoor jacket structure makes cable have nice properties of moisture resistance and crush resistance

With small cable diameter, light cable weight, easily to be laid.

**Application:**

These central loose tube optical fiber ribbon cables are suitable for installation in aerial or duct environment for communication between bureaus, metropolitan network, access network and is especially suitable for the situation where high-density fibers is expected.

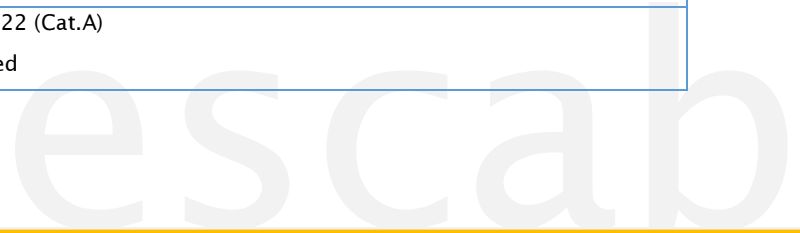
**Cables standard:**

- Application cable standards: ISO/IEC 11801, IEC 60794 and BS EN 50173-1
- Test standards: IEC 60794-1-21 and IEC 60794-1-22
- Flame retardant: (LSZH, PVC outer sheath only) IEC 60332-1-2, IEC 60332-3-24
- Acid Gas Emission: (LSZH outer sheath only) IEC 60754-2;
- UV resistant for PE and LSZH sheath type.

**Cable construction & performance:**

Item		Parameters
Loose tube	Material	PBT
	Color	Natural color
Armoured	Material	Plastic coated steel strip
Reinforced pieces	Material	Phosphating steel wire
Outer jacket	Material	MDPE
	Color	Black
Min. bending radius	Static	10 times cable diameter
	Dynamic	20 times cable diameter
Tensile performance	Short term	1500N
Crush	Short term	1000N/100mm

Mechanical & Environmental performance	
Item	Standard
Tensile Strength	<p>Test method: IEC 60794-1-2 Method E1 ; Mandrel diameter: 30D (D=cable dia)                      Length under tension: ≥ 50 m ; Applied Tensile load: 2700N ; Duration of loading: 10 min ;                      Acceptance criteria:                      Attenuation increment: &lt;0.1 dB for SMF                      Attenuation increment: &lt;0.2 dB for MMF</p>
Crush Resistance	<p>Test method: IEC 60794-1-2 Method E3 ; Applied load 1000N                      No of points: 1 point ; Plate size: 100mm x 100mm ; Duration of loading: 10min.                      Acceptance criteria:                      Attenuation increment:&lt;0.1 dB for SMF                      Attenuation increment &lt;02 dB for MME</p>
Impact Resistance	<p>Test method: IEC 60794-1-2 Method E4 ;Height of impact: 1000 mm ;Drop hammer mass:                      5 N ; No. of impact per point: 1 time @3 point                      Acceptance criteria:                      Attenuation increment: &lt;0.1 dB for SMF                      Attenuation increment: &lt;0.2 dB for MMF</p>
Cable Bend	<p>Test method: IEC 60794-1-2 Method E11A; Mandrel diameter: 20D (D=cable dia);                      No. of turns: 4 turns (wrapped &amp; unwrapped) ; No. of flexing cycles: 10 cycles                      Acceptance criteria:                      Attenuation increment: &lt;0.1 dB for SMF                      Attenuation increment: &lt;0.2 dB for MMF</p>
Torsion	<p>Test method: IEC 60794-1-2 Method E7 ; Cable twisted length: 2000 mm                      No. of twist cycles: 10 cycles Twist angle: +180 degree ; Twist rate: 12 sec per cycle                      Acceptance criteria:                      Attenuation increment: &lt;0.1 dB for SMF                      Attenuation increment: &lt;0.2 dB for MMF</p>
Water Penetration	<p>Test method: IEC 60794-1-2 Method F5 ; Length of specimen: 3 m                      Height of pressure head: 1 m ; Test time: 24 h                      Prior to test, steel wire armor and outer jacket shall be removed                      Acceptance criteria: No leakage through the open cable end</p>
Temperature Cycling	<p>Test method: IEC 60794-1-2 Method F1 ; Cable length: 2 1000mTest condition: 22 fibers                      shall be spliced ; Temperature cycling schedule: +23°C-5°C+70°C+23°C; Soak time at each                      temperature: 12h No. of cycles: 2.                      Acceptance criteria:                      Attenuation increment: &lt;0.1 dB/km for SMF                      Attenuation increment: &lt;0.2 dB/km for MMF</p>
Flame Test	<p>Test method: IEC 60332-3-22 (Cat.A)                      Acceptance criteria: Satisfied</p>



LOOSE TUBE SINGLE MODE OUTDOOR

Order Part Number

SINGLE MODE G652								
Fiber count	ESCAB Ref p/n	Structure	Fibers per tube	Loose tube diameter	Nominal Thickness of outer jacket	Cable diameter	Cable weight	
				(mm)	(mm)	(mm)	(kg/km)	
4	EG652-LT-04-STA-PE-B	UNITUBE	4	2.2 0.1	2.1	7.2 0.5	66	
6	EG652-LT-06-STA-PE-B	UNITUBE	6	2.2 0.1	2.1	7.2 0.5	69	
8	EG652-LT-08-STA-PE-B	UNITUBE	8	2.2 0.1	2.1	7.2 0.5	74	
12	EG652-LT-12-STA-PE-B	UNITUBE	12	2.8 0.1	2.1	7.2 0.5	78	
24	EG652-LT-24-STA-PE-B	UNITUBE	24	2.8 0.1	2.1	7.2 0.5	89	

Cable Properties:

SINGLE MODE G.652			
Item		Unit	Specification
Fiber Type			G. 652D
Mode field diameter	1310nm	μm	9.2 0.4
	1550nm	μm	10.4 0.8
Cladding diameter		μm	125.0 1
Cladding non-circularity		%	≤1.0
Core/cladding concentricity error		μm	≤0.5
Coating diameter		μm	242 7
Coating/cladding concentricity error		μm	≤12
Cable cut-off wavelength		Nm	≤ 1260
Attenuation Coefficient	1310nm	dB/km	≤0.36
	1550nm	dB/km	≤0.22
Macro-bend loss (1 turn, 10mm radius)	1550nm	dB/km	≤0.75
	1625nm	dB/km	≤1.5
Proof stress level		kpsi	≥100
Note: Other parameters meet standard ITU-T G.652			

Working condition:

Item	Standard	Parameters
Operation temperature	IEC 60794-1-2 F1	-20°C~+70°C

Packing Standard:

Cable type	Drum				
	Height (mm)	Width (mm)	Inner diameter (mm)	Length (km)	Drum type
Core Fiber 04	750	760	350	2	Plywood wood drum

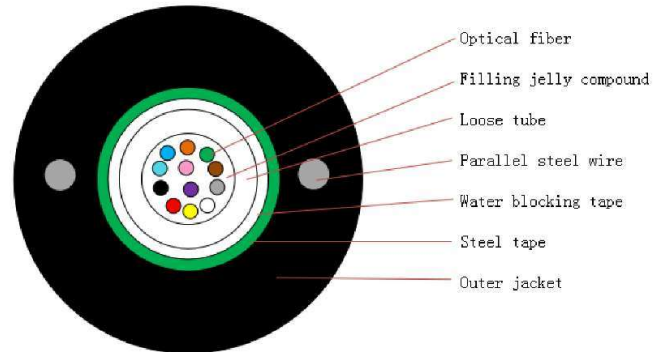
(\*) For requirements of fiber optic accessories, pls contact to [www.escabcommunications.com](http://www.escabcommunications.com)

# LOOSE TUBE FIBER OPTIC | MULTIMODE

## OUTDOOR WATERPROOF & STA

### PE OUTER SHEATH

#### 04 - 24 - 96 Core



Outdoor Waterproof Fiber Optic Cable HDPE, an ESCAB fiber optic cable, is an outdoor use optical fiber cable suitable for duct and aerial applications. ESCAB provide the multimode and single mode to different applications, with stronger cables construction, to help keep longer life of cables.

#### Features:

Low dispersion and attenuation

Proper design, precise control for fiber excess length and distinct stranding process render the cable excellent mechanical and environmental properties

Outdoor jacket structure makes cable have nice properties of moisture resistance and crush resistance

With small cable diameter, light cable weight, easily to be laid.

#### Application:

These central loose tube optical fiber ribbon cables are suitable for installation in aerial or duct environment for communication between bureaus, metropolitan network, access network and is especially suitable for the situation where high-density fibers is expected.

#### Cables standard:

- Application cable standards: ISO/IEC 11801, IEC 60794 and BS EN 50173-1
- Test standards: IEC 60794-1-21 and IEC 60794-1-22
- Flame retardant: (LSZH, PVC) IEC 60332-1-2, IEC 60332-3-24 ; not apply for PE
- Acid Gas Emission: (LSZH) IEC 60754-2 ; not apply for PE.

#### Cable performance:

Item	Parameters	
Loose tube	Material	PBT
	Color	Natural color
Amored	Material	Plastic coated steel strip
Reinforced pieces	Material	Phosphating steel wire
Outer jacket	Material	MDPE
	Color	Black
Min. bending radius	Static	10 times cable diameter
	Dynamic	20 times cable diameter
Tensile performance	Short term	1500N
Crush	Short term	1000N/100mm

LOOSE TUBE MULTI MODE OUTDOOR

Order Part Number

MULTI-MODE							
Fiber count	ESCAB Ref p/n	Structure	Fibers per tube	Loose tube diameter	Nominal Thickness of outer jacket	Cable diameter	Cable weight
				(mm)	(mm)	(mm)	(kg/km)
XX : 4 ~ 12	EOM3-LT-XX-STA-PE-B	UNITUBE	4 ~ 12	2.2 0.1	2.1	7.2 0.5	66 ~ 78
XX : 24 ~ 96	EOM3-LT-XX-STA-PE-B	UNITUBE	24 ~ 96	3.6 0.1	2.1	9.3 0.5	89 ~ 132

Cable Properties:

MULTI-MODE OM3			
Item		Unit	Specification
Fiber Type			OM3
Core diameter		μm	50 2.5
Cladding diameter		μm	125.0 1.0
Cladding non-circularity		%	≤ 1.0
Core/cladding concentricity error		μm	≤ 1.5
Coating diameter		μm	245 10
Coating/cladding concentricity error		μm	≤ 12
Attenuation Coefficient	850nm	dB/km	≤ 3.5
	1300nm	dB/km	≤ 1.5
OFL Bandwidth	850nm	dB/km	≥ 1500
	1300nm	dB/km	≥ 500
Proof stress level		kpsi	≥ 100
Note: Other parameters meet standard IEC 60793-2-10			

Working condition:

Item	Standard	Parameters
Operation temperature	IEC 60794-1-2 F1	-20°C~+70°C

Packing Standard:

Cable type	Drum				Drum type
	Height (mm)	Width (mm)	Inner diameter (mm)	Length (km)	
Core Fiber 04 - 12	750	760	350	2	Plywood wood drum
Core Fiber 24 - 96	750	760	350	2	Plywood wood drum

(\*) For requirements of fiber optic accessories, pls contact to [www.escabcommunications.com](http://www.escabcommunications.com)

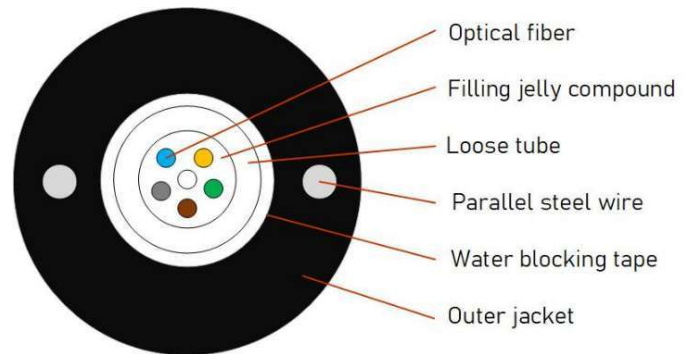


# LOOSE TUBE FIBER OPTIC | MULTI MODE

## OUTDOOR WATERPROOF

### PE OUTER SHEATH

### 02 – 24 CORE



Outdoor Waterproof Fiber Optic Cable HDPE, an ESCAB fiber optic cable, is an outdoor use optical fiber cable suitable for duct and aerial applications. ESCAB provide the multimode and single mode to different applications, with stronger cables construction, to help keep longer life of cables.

**Features:**

- Low dispersion and attenuation.
- Proper design, precise control for fiber excess length and distinct stranding process render the cable excellent mechanical and environmental properties.
- Outdoor jacket structure makes cable have nice properties of moisture resistance and crush resistance.
- With small cable diameter, light cable weight, easily to be laid.

**Application:**

These central loose tube optical fiber ribbon cables are suitable for installation in aerial or duct environment for communication between bureaus, metropolitan network, access network and is especially suitable for the situation where high-density fibers is expected.

**Cables standard:**

- Application cable standards: ISO/IEC 11801, IEC 60794 and BS EN 50173-1
- Test standards: IEC 60794-1-21 and IEC 60794-1-22
- Flame retardant: (LSZH, PVC) IEC 60332-1-2, IEC 60332-3-24 ; not apply for PE
- Acid Gas Emission: (LSZH) IEC 60754-2 ; not apply for PE.

**Cable performance:**

Item		Parameters
Loose tube	Material	PBT
	Color	Natural color
Reinforced pieces	Material	Phosphating steel wire
Outer jacket	Material	HDPE
	Color	Black
Min. bending radius	Static	10 times cable diameter
	Dynamic	20 times cable diameter
Tensile performance	Short term	1500N
Crush	Short term	500N/100mm

LOOSE TUBE MULTI MODE OUTDOOR USED

Order Part Number

MULTI-MODE OM3							
Fiber count	ESCAB Ref p/n	Structure	Fibers per tube	Loose tube diameter	Nominal Thickness of outer jacket	Cable diameter	Cable weight
				(mm)	(mm)	(mm)	(kg/km)
2	EOM3-02-HDPE-A	UNITUBE	2	2.4 0.1	2.3	7.5 0.5	53
4	EOM3-04-HDPE-A	UNITUBE	4	2.4 0.1	2.3	7.5 0.5	53
6	EOM3-06-HDPE-A	UNITUBE	6	2.4 0.1	2.3	7.5 0.5	53
8	EOM3-08-HDPE-A	UNITUBE	8	2.4 0.1	2.3	7.5 0.5	53
12	EOM3-12-HDPE-A	UNITUBE	12	2.4 0.1	2.3	7.5 0.5	53
24	EOM3-24-HDPE-A	UNITUBE	24	3.2 0.1	2.3	8.4 0.5	63

Cable Properties:

MULTI-MODE OM3			
Item		Unit	Specification
Fiber Type			OM3
Core diameter		μm	50 2.5
Cladding diameter		μm	125.0 1.0
Cladding non-circularity		%	≤ 1.0
Core/cladding concentricity error		μm	≤ 1.5
Coating diameter		μm	245 10
Coating/cladding concentricity error		μm	≤12
Attenuation Coefficient	850nm	dB/km	≤ 3.5
	1300nm	dB/km	≤ 1.5
OFL Bandwidth	850nm	dB/km	≥ 1500
	1300nm	dB/km	≥ 500
Proof stress level		kpsi	≥ 100
Note: Other parameters meet standard IEC 60793-2-10			

Working condition:

Item	Standard	Parameters
Operation temperature	IEC 60794-1-2 F1	-20°C~+70°C

Packing Standard:

Cable type	Drum				Drum type
	Height (mm)	Width (mm)	Inner diameter (mm)	Length (km)	
Core Fiber (2-24)	700	760	350	2	Plywood wood drum

(\*) For requirements of fiber optic accessories, pls contact to [www.escabcommunications.com](http://www.escabcommunications.com)



# OPGW OPTICAL CABLE

## PBT Loose Tube Optical Ground Wire



- Product ref No : ES-OPGW-XXB1-85
- Manufacture no. : OPGW-XXB1-85
- Fiber Cores : XX : 24 | 12 | 08 | 06 | 04
- Certification : RoHS, CE
- **Application:**

The Aluminum tube of OPGW cable is surrounded by single or double layers of aluminum clad steel wires (ACS) or mix ACS wires and aluminum alloy wires. Good anti-corrosion performance. Material and structure are uniform, good resistance to vibration fatigue.

□ **Description:**

The PBT Loose Tube Optical Ground Wire (OPGW) is surrounded by single or double layers of aluminum clad steel wires (ACS) or mix ACS wires and aluminum alloy wires. Good anti-corrosion performance. Material and structure are uniform, good resistance to vibration fatigue.

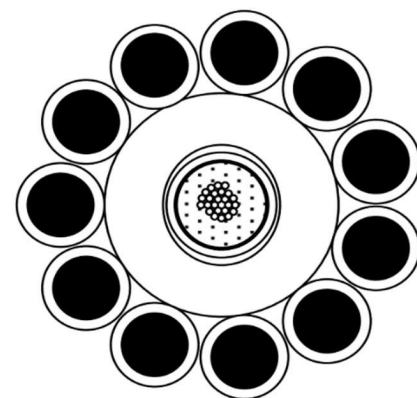
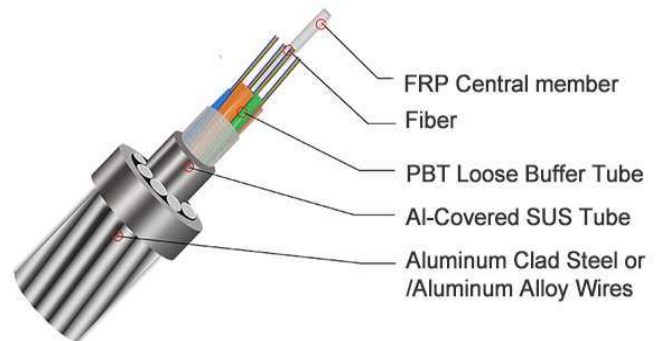
□ **Characteristic:**

1. Good anti-corrosion performance;
2. Material and structure are uniform, good resistance to vibration fatigue;
3. Short circuit current has small effect on the optical fiber transmission properties;
4. Good anti-lightning performance.

- **Standards:** according to IEEE standard 1138, IEC 60794-4.

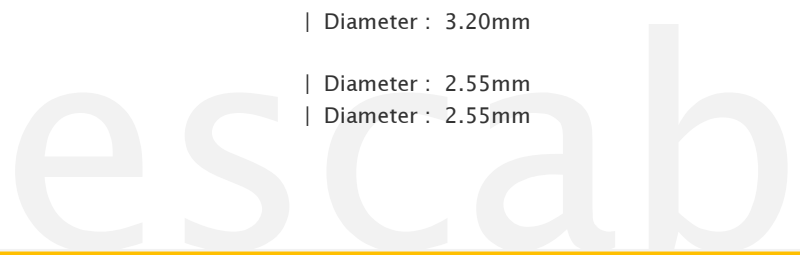
□ **Structure cable:**

- Center :
  - Aluminium Tube x 1
  - SUS-Tube x 1
- Layer :
  - 20% AS wire x 9
  - 30% AS wire x 2



| Diameter : 6.80mm  
| Diameter : 3.20mm

| Diameter : 2.55mm  
| Diameter : 2.55mm

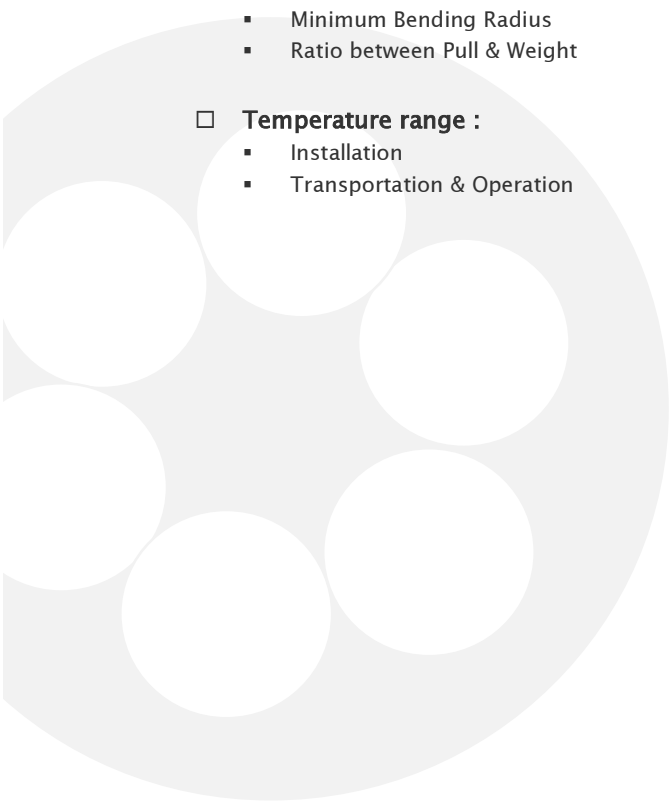


□ **Technical information:**

▪ Standing direction of outer layer is "Right-hand"	
▪ Fiber No. & Type:	24 cores G.652D
▪ Standard Outer diameter:	11.90mm
▪ Supporting cross section:	83.42 mm <sup>2</sup>
○ Section of AS wire	56.18 mm <sup>2</sup>
○ Section of Optical unit	27.24 mm <sup>2</sup>
▪ Approximate mass	460.0 Kg/km
▪ Ultimate Tensile Strength	70.6 KN
▪ Maximum Allowable Tension (40% UTS)	338.4 N/mm <sup>2</sup>
▪ Everyday Stress (20%UTS)	169.2 N/mm <sup>2</sup>
▪ Strain Margin Stress (70%UTS)	592.3 N/mm <sup>2</sup>
▪ Modulus of Elasticity	123.7 GPa
▪ Thermal Elongation Coefficient	14.6 x 10 <sup>-6</sup> /°C
▪ Calculated D.C. Resistance at 20°C	0.599 Ohm/Km
▪ Short-circuit Current (1 sec, 20 ~ 200°C)	7.7 kA.
▪ Short-circuit Current Capacity ( 20 ~ 200°C)	58.9 kA <sup>2</sup> -s
▪ Minimum Bending Radius	238 mm
▪ Ratio between Pull & Weight	15.65 Km

□ **Temperature range :**

▪ Installation	-10°C ~ +50°C
▪ Transportation & Operation	-40°C ~ +80°C

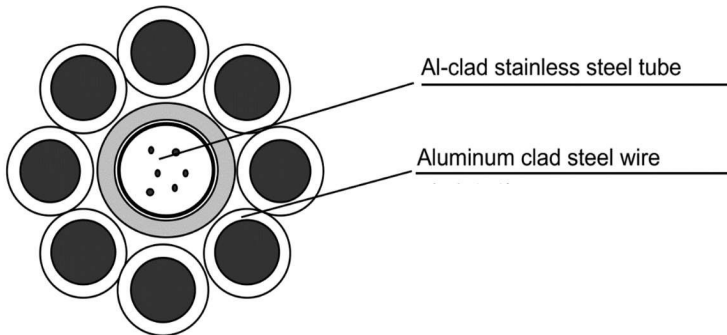


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## OPGW OPTICAL CABLE

### SINGLE-MODE G652.D

### – ALU TUBE



ESCAB Ref p/n.: ES-OPGW-24B1-90  
 Manufacture no.: OPGW-24B1-90  
 Fiber Cores : 24  
 Type : G.652D  
 Certification : RoHS, CE

**Application:**

The Aluminum tube of OPGW cable is surrounded by single or double layers of aluminum clad steel wires (ACS) or mix ACS wires and aluminum alloy wires. Good anti-corrosion performance. Material and structure are uniform, good resistance to vibration fatigue.



**Description:**

The PBT Loose Tube Optical Ground Wire (OPGW) is surrounded by single or double layers of aluminum clad steel wires (ACS) or mix ACS wires and aluminum alloy wires. Good anti-corrosion performance. Material and structure are uniform, good resistance to vibration fatigue.

**Characteristic:**

1. Good anti-corrosion performance;
2. Material and structure are uniform, good resistance to vibration fatigue;
3. Short circuit current has small effect on the optical fiber transmission properties;
4. Good anti-lightning performance.

**Standards:** according to IEEE standard 1138, IEEE, DL/T 832-2003, GB/T 7424.4-2003 standards



**OPGW OPTICAL CABLE**  
**SINGLE-MODE G652.D – ALU TUBE**



**Structure cable:**

- Center :
- Aluminium Tube x 1
- Layer :
- 27% AS wire x 8

|Diameter : 3.8/5.80mm

|Diameter : 3.45mm

**Technical information:**

- Standing direction of outer layer is “Right-hand”
- Fiber No. & Type:
- Standard Outer diameter:
- Supporting cross section:
  - Section of AS wire
  - Section of Optical unit
- Approximate mass
- Rate Tensile Strength (RST)
- Maximum Allowable Tension (40% RTS)
- Everyday Stress (20%RTS)
- Strain Margin Stress (70%RTS)
- Modulus of Elasticity
- Thermal Elongation Coefficient
- Calculated D.C. Resistance at 20°C
- Short-circuit Current (0.25 sec, 20 ~ 200°C)
- Short-circuit Current Capacity I<sup>2</sup>T( 20 ~ 200°C)
- Minimum Bending Radius
- Minimum Bending Operating
- Ratio between Pull & Weight

**24 cores G.652D**

12.70 mm  
 89.9 mm<sup>2</sup>  
 74.79 mm<sup>2</sup>  
 15.08 mm<sup>2</sup>  
 509.0 Kg/km  
 77.8 kN  
 346.3 N/mm<sup>2</sup>  
 155.8~ 216.4N/mm<sup>2</sup>  
 606.1 N/mm<sup>2</sup>  
 125.9 GPa  
 14.1 x 10<sup>-6</sup> /°C  
 0.592 Ohm/Km  
 14.7 kA.  
 54.3 kA<sup>2</sup>-s  
 317 mm  
 190 mm  
 15.65 Km

**Temperature range :**

- Installation
- Transportation & Operation

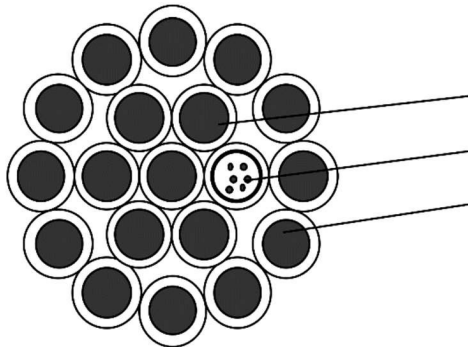
-10°C ~ +50°C  
 -40°C ~ +80°C



# OPGW OPTICAL CABLE

## SINGLE-MODE G652.D

### – SUS TUBE



AS wire  
OP unit  
AS wire



Trademark brand: ESCAB

ESCAB Ref p/n. : ES-OPGW-24B1-91  
 Manufacture no. : OPGW-24B1-91  
 Fiber Cores : 24  
 Type : G.652D  
 Certification : RoHS, CE

#### Application:

The Aluminum tube of OPGW cable is surrounded by single or double layers of aluminum clad steel wires (ACS) or mix ACS wires and aluminum alloy wires. Good anti-corrosion performance. Material and structure are uniform, good resistance to vibration fatigue.

#### Description:

The PBT Loose Tube Optical Ground Wire (OPGW) is surrounded by single or double layers of aluminum clad steel wires (ACS) or mix ACS wires and aluminum alloy wires. Good anti-corrosion performance. Material and structure are uniform, good resistance to vibration fatigue.

#### Characteristic:

1. Good anti-corrosion performance;
2. Material and structure are uniform, good resistance to vibration fatigue;
3. Short circuit current has small effect on the optical fiber transmission properties;
4. Good anti-lightning performance.

**Standards:** according to IEEE standard 1138, IEEE, DL/T 832-2003, GB/T 7424.4-2003 standards

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**OPGW OPTICAL CABLE  
SINGLE-MODE G652.D – SUS TUBE**



**Structure cable:**

- Center:  
20.3% AS wire x 1
- Layer 1:  
20.3% AS wire x 5 (AA wire)  
SUS Tube x 1 (Fibers(all tube) 24 cores)
- Layer 2:  
27% AS wire x 12 (AA wire)

- | Diameter : 2.60mm
- | Diameter : 2.55mm
- | Tube-Diameter : 2.40mm
- | Diameter : 2.55mm

**Technical information:**

- Standing direction of outer layer is “Right-hand”
- Fiber No. & Type:
- Standard Outer diameter:
- Supporting cross section:
  - Section of AS wire
  - Section of AA wire
- Approximate mass
- Rate Tensile Strength (RST)
- Maximum Allowable Tension (40% RTS)
- Everyday Stress (20%RTS)
- Strain Margin Stress (70%RTS)
- Modulus of Elasticity
- Thermal Elongation Coefficient
- Calculated D.C. Resistance at 20°C
- Short-circuit Current (0.25 sec, 20 ~ 200°C)
- Short-circuit Current Capacity I<sup>2</sup>T( 20 ~ 200°C)
- Minimum Bending Radius
- Minimum Bending Operating
- Ratio between Pull & Weight

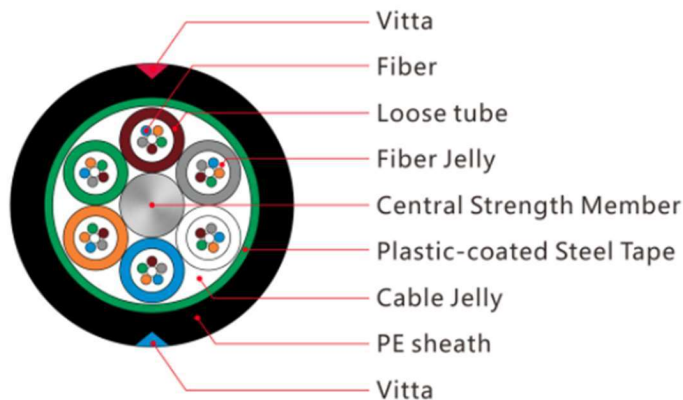
- 24 cores G.652D**
- 12.80 mm
- 92.1 mm<sup>2</sup>
- 92.13 mm<sup>2</sup>
- 0.00 mm<sup>2</sup>
- 585.0 Kg/km
- 102.1 kN
- 443.5 N/mm<sup>2</sup>
- 199.6~ 277.2N/mm<sup>2</sup>
- 776.1 N/mm<sup>2</sup>
- 147.4 kN/mm<sup>2</sup>
- 13.3 x 10<sup>-6</sup> /°C
- 0.769 Ohm/Km
- 14.7 kA.
- 54.2 kA<sup>2</sup>-s
- 256 mm
- 192 mm
- 17.8 Km

**Temperature range :**

- Installation -10°C ~ +50°C
- Transportation & Operation -40°C ~ +80°C



# FIBER OPTIC LOOSE TUBE WATER BLOCK AMOURED STEEL TAPE



## MULTI MODE LOOSE TUBE AMOURED STEEL TAPE WATER BLOCK

### Optical Fiber Type and Properties

Item	Unit	062	050	OM 3	OM 4	
Fiber Type		OM1	OM2	OM3	OM4	
Core diameter	μm	62.5 2.5	50 2.5	50 2.5	50 2.5	
Cladding diameter	μm	125.0 ± 1.0	125.0 ± 1.0	125.0 ± 1.0	125.0 ± 1.0	
Cladding non-circularity	%	≤1.0	≤1.0	≤1.0	≤1.0	
Core/cladding concentricity error	μm	≤1.5	≤1.5	≤1.5	≤1.5	
Coating diameter	μm	245 10	245 10	245 10	245 10	
Coating/cladding concentricity error	μm	≤12	≤12	≤12	≤12	
Bandwidth	850nm	MHz/km	≥ 160	≥ 500	≥ 1500	≥ 3500
	1300nm	MHz/km	≥ 500	≥ 500	≥ 500	≥ 500
Attenuation Coefficient	850nm	dB/km	≤3.5	≤3.5	≤3.5	≤3.5
	1300nm	dB/km	≤1.5	≤1.5	≤1.5	≤1.5
Proof stress level	kpsi	≥100	≥100	≥100	≥100	

### Cables standard:

- Application cable standards: ISO/IEC 11801, IEC 60794 and BS EN 50173-1
- Test standards: IEC 60794-1-21 and IEC 60794-1-22
- Flame retardant: (LSZH, PVC) IEC 60332-1-2, IEC 60332-3-24
- Acid Gas Emission: (LSZH) IEC 60754-2



SINGLE MODE LOOSE TUBE AMOURED STEEL TAPE WATER BLOCK

Optical Fiber Type and Properties

Item		Unit	008 OS1/OS2	108 OS1/OS2	208 OS1/OS2
Fiber Type			G. 652	G. 657A1	G. 657A2
Mode field diameter	1310nm	μm	9.2 0.4	8.6-9.5 ± 0.4	8.6-9.5 ± 0.4
	1550nm	μm	10.4 0.8		
Cladding diameter		μm	125.0 ± 1	125.0 ± 0.7	125.0 ± 0.7
Cladding non-circularity		%	≤1.0	≤1.0	≤1.0
Core/cladding concentricity error		μm	≤0.5	≤0.5	≤0.5
Coating diameter		μm	242 7	245 5	245 5
Coating/cladding concentricity error		μm	≤12	≤12	≤12
Cable cut-off wavelength		nm	≤ 1260	≤ 1260	≤ 1260
Attenuation Coefficient	1310nm	dB/km	≤0.36	≤0.36	≤0.36
	1550nm	dB/km	≤0.22	≤0.22	≤0.22
Macro-bend loss (1 turn, 10mm radius)	1550nm	dB/km	≥100	≤0.75	≤0.5
	1625nm	dB/km		≤1.5	≤1.0
Proof stress level		kpsi		≥100	≥100

Cables construction:

Fiber count	Structure	Fibers per tube	Loose tube diameter (mm)	CSM diameter/pad diameter (mm)	Thickness of outer jacket (mm)	Cable diameter (mm)	Cable weight (kg/km)
4	1+5	4	1.7 0.1	1.4/1.4	1.6 0.1	9.0 0.5	84
6	1+5	6	1.7 0.1	1.4/1.4	1.6 0.1	9.0 0.5	84
8	1+5	4	1.7 0.1	1.4/1.4	1.6 0.1	9.0 0.5	85
12	1+5	6	1.7 0.1	1.4/1.4	1.6 0.1	9.0 0.5	85
18	1+5	6	1.7 0.1	1.4/1.4	1.6 0.1	9.0 0.5	85
24	1+5	6	1.7 0.1	1.4/1.4	1.6 0.1	9.0 0.5	86
30	1+5	6	1.7 0.1	1.4/1.4	1.6 0.1	9.0 0.5	86
36	1+6	6	1.7 0.1	2.0/2.0	1.6 0.1	9.7 0.5	111
48	1+5	12	2.0 0.1	1.4/1.4	1.6 0.1	9.7 0.5	100
60	1+5	12	2.0 0.1	1.4/1.4	1.6 0.1	9.7 0.5	101
72	1+6	12	2.0 0.1	2.0/2.0	1.6 0.1	10.4 0.5	124
84	1+7	12	2.0 0.1	1.8/2.9	1.6 0.1	11.3 0.5	138
96	1+8	12	2.0 0.1	1.8/3.5	1.6 0.1	12.0 0.5	150





**Cables performance:**

Item		Parameters
Loose tube	Material	PBT
	Color	Full color spectrum
Filler	Material	PE
	Color	Black
CSM	Material	Phosphating steel wire
Armoured	Material	Plastic coated steel strip
Outer jacket	Material	□ MDPE   □ LSZH   □ PVCFR
	Color	Black
Min. bending radius	Static	10 times cable diameter
	Dynamic	20 times cable diameter
Repeating bending	Load : 150N; number of cycles:30 No obvious addition attenuation, no fiber break and no cable damage.	
Tensile performance	Short term	1500N
Crush	Short term	1000N/100mm
Torsion	Load : 150N; number of cycles: 10; twist angle: 180 No obvious addition attenuation, no fiber break and no cable damage.	
Impact	Impact energy : 450g1m; radius of hammer head: 12.5mm; number of impact: 5 No obvious addition attenuation, no fiber break and no cable damage.	

**Working condition:**

Item	Standard	Parameters
Operation temperature	IEC 60794-1-2 F1	-20°C~+70°C

**Packing Information:**

Cable type	Drum				Drum type
	Height (mm)	Width (mm)	Inner diameter (mm)	Length (km)	
From 04 to 30 cores	750	760	350	2	Plywood wood drum
From 36 to 60 cores	800	760	400	2	
From 72 cores	850	760	400	2	
From 84 cores	900	760	400	2	
From 96 cores	950	760	400	2	



LOOSE TUBE AMOURED STEEL TAPE WATER BLOCK

Order Information | MULTI-MODE

Fiber count	Fibers per tube	ESCAB Ref P/N			
		OM 1	OM 2	OM 3	OM 4
4	4	EOM1-LT-04-STA-XX-A	EOM2-LT-04-STA-XX-A	EOM3-LT-04-STA-XX-A	EOM4-LT-04-STA-XX-A
6	6	EOM1-LT-06-STA-XX-A	EOM2-LT-06-STA-XX-A	EOM3-LT-06-STA-XX-A	EOM4-LT-06-STA-XX-A
8	4	EOM1-LT-08-STA-XX-A	EOM2-LT-08-STA-XX-A	EOM3-LT-08-STA-XX-A	EOM4-LT-08-STA-XX-A
12	6	EOM1-LT-12-STA-XX-A	EOM2-LT-12-STA-XX-A	EOM3-LT-12-STA-XX-A	EOM4-LT-12-STA-XX-A
18	6	EOM1-LT-18-STA-XX-A	EOM2-LT-18-STA-XX-A	EOM3-LT-18-STA-XX-A	EOM4-LT-18-STA-XX-A
24	6	EOM1-LT-24-STA-XX-A	EOM2-LT-24-STA-XX-A	EOM3-LT-24-STA-XX-A	EOM4-LT-24-STA-XX-A
30	6	EOM1-LT-30-STA-XX-A	EOM2-LT-30-STA-XX-A	EOM2-LT-30-STA-XX-A	EOM4-LT-30-STA-XX-A
36	6	EOM1-LT-36-STA-XX-A	EOM2-LT-36-STA-XX-A	EOM2-LT-36-STA-XX-A	EOM4-LT-36-STA-XX-A
48	12	EOM1-LT-48-STA-XX-A	EOM2-LT-48-STA-XX-A	EOM2-LT-48-STA-XX-A	EOM4-LT-48-STA-XX-A
60	12	EOM1-LT-60-STA-XX-A	EOM2-LT-60-STA-XX-A	EOM2-LT-60-STA-XX-A	EOM4-LT-60-STA-XX-A
72	12	EOM1-LT-72-STA-XX-A	EOM2-LT-72-STA-XX-A	EOM2-LT-72-STA-XX-A	EOM4-LT-72-STA-XX-A
84	12	EOM1-LT-84-STA-XX-A	EOM2-LT-84-STA-XX-A	EOM2-LT-84-STA-XX-A	EOM4-LT-84-STA-XX-A
96	12	EOM1-LT-96-STA-XX-A	EOM2-LT-96-STA-XX-A	EOM2-LT-96-STA-XX-A	EOM4-LT-96-STA-XX-A

(\*) For more cores used, ESCAB we can customize follow to customer needs. But it need to follow the MOQ

To identify outer sheath by "XX": PE - MDPE ; LZ - LSZH ; YY - PVCFR

Order Information | SINGLE-MODE

Fiber count	Fibers per tube	ESCAB Ref P/N		
		OS1/OS2 008 - G. 652.D	OS1/OS2 108 - G. 657A1	OS1/OS2 208 - G. 657A2
4	4	E652-LT-04-STA-XX-A	E108-LT-04-STA-XX-A	E208-LT-04-STA-XX-A
6	6	E652-LT-06-STA-XX-A	E108-LT-06-STA-XX-A	E208-LT-06-STA-XX-A
8	4	E652-LT-08-STA-XX-A	E108-LT-08-STA-XX-A	E208-LT-08-STA-XX-A
12	6	E652-LT-12-STA-XX-A	E108-LT-12-STA-XX-A	E208-LT-12-STA-XX-A
18	6	E652-LT-18-STA-XX-A	E108-LT-18-STA-XX-A	E208-LT-18-STA-XX-A
24	6	E652-LT-24-STA-XX-A	E108-LT-24-STA-XX-A	E208-LT-24-STA-XX-A
30	6	E652-LT-30-STA-XX-A	E108-LT-30-STA-XX-A	E208-LT-30-STA-XX-A
36	6	E652-LT-36-STA-XX-A	E108-LT-36-STA-XX-A	E208-LT-36-STA-XX-A
48	12	E652-LT-48-STA-XX-A	E108-LT-48-STA-XX-A	E208-LT-48-STA-XX-A
60	12	E652-LT-60-STA-XX-A	E108-LT-60-STA-XX-A	E208-LT-60-STA-XX-A
72	12	E652-LT-72-STA-XX-A	E108-LT-72-STA-XX-A	E208-LT-72-STA-XX-A
84	12	E652-LT-84-STA-XX-A	E108-LT-84-STA-XX-A	E208-LT-84-STA-XX-A
96	12	E652-LT-96-STA-XX-A	E108-LT-96-STA-XX-A	E208-LT-96-STA-XX-A

(\*) For more cores used, ESCAB we can customize follow to customer needs. But it need to follow the MOQ

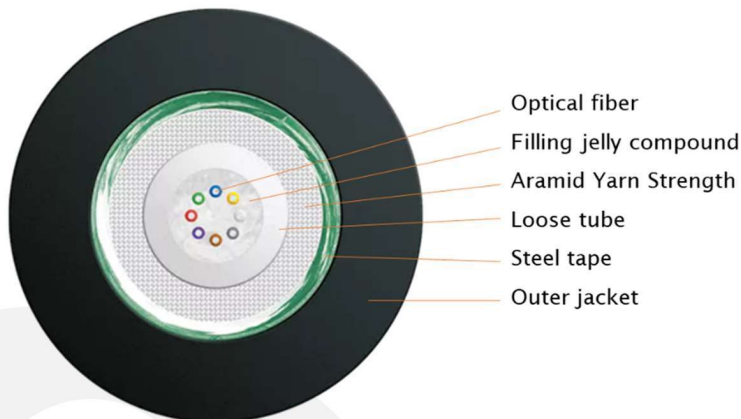
To identify outer sheath by "XX": PE - MDPE ; LZ - LSZH ; YY - PVCFR



## FIBER OPTIC LOOSE TUBE

2 to 24 CORE

STEEL TAPE ARMORED LSZH | PE | PVC



### Cables performance:

- 2-24 Fiber counts color-coded according to TIA-598-D.
- Customizable fiber selection including single-mode, multimode and hybrid versions to suit a variety of applications.
- Single gel-filled loose-tube to block the ingress of water.
- Glass yarn armoring in the form of high tensile yarns to offer strength.
- Corrugated steel-tape armor for superior mechanical crush and impact resistance and optimum rodent protection.
- Available in a range of sheath materials to suit a variety of installation environments.
- Steel-Tape Armored Unitube cables offer up to 24 fibers in a compact cable construction.
- The range has been designed to offer enhanced mechanical properties over the Duct-Grade Unitube product range.
- The Steel-Tape Armored Unitube is suitable for direct-burial applications and other campus backbone environments where the cable may be subject to mechanical crush and impact.

### Cables standard:

- Application cable standards: ISO/IEC 11801, IEC 60794 and BS EN 50173-1
- Test standards: IEC 60794-1-21 and IEC 60794-1-22
- Flame retardant: (LSZH, PVC) IEC 60332-1-2, IEC 60332-3-24
- Acid Gas Emission: (LSZH) IEC 60754-2 ;

escab

**Optical Fiber Type and Properties | MULTI-MODE**

Item		Unit	062	050	OM 3	OM 4
Fiber Type			OM1	OM2	OM3	OM4
Core diameter		μm	62.5 2.5	50 2.5	50 2.5	50 2.5
Cladding diameter		μm	125.0 ± 1.0	125.0 ± 1.0	125.0 ± 1.0	125.0 ± 1.0
Cladding non-circularity		%	≤1.0	≤1.0	≤1.0	≤1.0
Core/cladding concentricity error		μm	≤1.5	≤1.5	≤1.5	≤1.5
Coating diameter		μm	245 10	245 10	245 10	245 10
Coating/cladding concentricity error		μm	≤12	≤12	≤12	≤12
Bandwidth	850nm	MHz/km	≥ 160	≥ 500	≥ 1500	≥ 3500
	1300nm	MHz/km	≥ 500	≥ 500	≥ 500	≥ 500
Attenuation Coefficient	850nm	dB/km	≤3.5	≤3.5	≤3.5	≤3.5
	1300nm	dB/km	≤1.5	≤1.5	≤1.5	≤1.5
Proof stress level		kpsi	≥100	≥100	≥100	≥100

**Optical Fiber Type and Properties | SINGLE-MODE**

Item		Unit	008 OS1/OS2	108 OS1/OS2	208 OS1/OS2
Fiber Type			G. 652.D	G. 657A1	G. 657A2
Mode field diameter	1310nm	μm	9.2 0.4	8.6-9.5 ± 0.4	8.6-9.5 ± 0.4
	1550nm	μm	10.4 0.8		
Cladding diameter		μm	125.0 ± 1	125.0 ± 0.7	125.0 ± 0.7
Cladding non-circularity		%	≤1.0	≤1.0	≤1.0
Core/cladding concentricity error		μm	≤0.5	≤0.5	≤0.5
Coating diameter		μm	242 7	245 5	245 5
Coating/cladding concentricity error		μm	≤12	≤12	≤12
Cable cut-off wavelength		nm	≤ 1260	≤ 1260	≤ 1260
Attenuation Coefficient	1310nm	dB/km	≤0.36	≤0.36	≤0.36
	1550nm	dB/km	≤0.22	≤0.22	≤0.22
Macro-bend loss (1 turn, 10mm radius)	1550nm	dB/km	≥100	≤0.75	≤0.5
	1625nm	dB/km		≤1.5	≤1.0
Proof stress level		kpsi		≥100	≥100

**Cables construction:**

Fiber count	Fibers per tube	Loose tube diameter(mm)	CSM diameter/pad diameter(mm)	Thickness of outer jacket(mm)	Cable diameter(mm)	Cable weight(kg/km)
4	1	1.7 0.1	1.4/1.4	1.6 +/- 0.1	9.0 +/- 0.5	75
6	1	1.7 0.1	1.4/1.4	1.6 +/- 0.1	9.0 +/- 0.5	75
8	1	1.7 0.1	1.4/1.4	1.6 +/- 0.1	9.0 +/- 0.5	75
12	1	1.7 0.1	1.4/1.4	1.6 +/- 0.1	9.0 +/- 0.5	75
18	1	1.7 0.1	1.4/1.4	1.6 +/- 0.1	9.0 +/- 0.5	75
24	1	1.7 0.1	1.4/1.4	1.6 +/- 0.1	9.0 +/- 0.5	75

**Cables technical:**

Repeating bending	Load : 300N; Number of cycles:30; No obvious addition attenuation, no fiber break and no cable damage.	
Tensile performance	Short term	2000N
Crush	Short term	4000N
Torsion	Load : 150N; number of cycles: 10; twist angle:180 No obvious addition attenuation, no fiber break and no cable damage.	
Minimum pending radius	Statis: 10 times cable diameter   Dynamic: 20 times cables diameter	
Impact	Impact energy : 450g11m; radius of hammer head: 12.5mm; number of impact: 5 No obvious addition attenuation, no fiber break and no cable damage.	
Operation temperature	IEC 60794-1-2 F1	-20°C~+70°C

**Order Information**

**MULTI-MODE**

Outer sheath	“YY”	Low Smoke Halogen Free	Polyethylene	Polyvinyl Chloride
		<b>LZ</b>	<b>PE</b>	<b>PV</b>

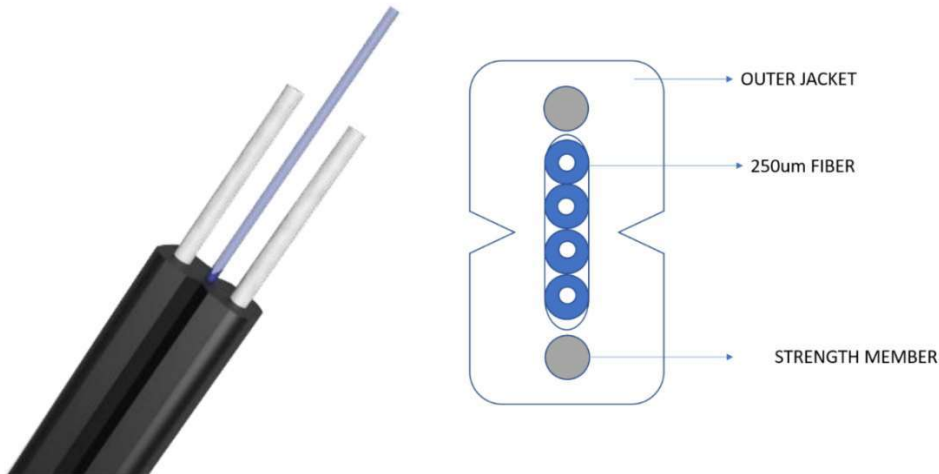
Fiber count	Loose tube	ESCAB Ref P/N			
		OM 1	OM 2	OM 3	OM 4
4	1	EOM1-LT-04-STA-YY	EOM2-LT-04-STA-YY	EOM3-LT-04-STA-YY	EOM4-LT-04-STA-YY
6	1	EOM1-LT-06-STA-YY	EOM2-LT-06-STA-YY	EOM3-LT-06-STA-YY	EOM4-LT-06-STA-YY
8	1	EOM1-LT-08-STA-YY	EOM2-LT-08-STA-YY	EOM3-LT-08-STA-YY	EOM4-LT-08-STA-YY
12	1	EOM1-LT-12-STA-YY	EOM2-LT-12-STA-YY	EOM3-LT-12-STA-YY	EOM4-LT-12-STA-YY
18	1	EOM1-LT-18-STA-YY	EOM2-LT-18-STA-YY	EOM3-LT-18-STA-YY	EOM4-LT-18-STA-YY
24	1	EOM1-LT-24-STA-YY	EOM2-LT-24-STA-YY	EOM3-LT-24-STA-YY	EOM4-LT-24-STA-YY

**SINGLE-MODE**

Fiber count	Loose Tube	ESCAB Ref P/N		
		OS1/OS2 008 - G. 652.D	OS1/OS2 108 - G. 657A1	OS1/OS2 208 - G. 657A2
4	4	E652-LT-04-STA-YY	E108-LT-04-STA-YY	E208-LT-04-STA-YY
6	6	E652-LT-06-STA-YY	E108-LT-06-STA-YY	E208-LT-06-STA-YY
8	4	E652-LT-08-STA-YY	E108-LT-08-STA-YY	E208-LT-08-STA-YY
12	6	E652-LT-12-STA-YY	E108-LT-12-STA-YY	E208-LT-12-STA-YY
18	6	E652-LT-18-STA-YY	E108-LT-18-STA-YY	E208-LT-18-STA-YY
24	6	E652-LT-24-STA-YY	E108-LT-24-STA-YY	E208-LT-24-STA-YY



## FTTH DROP CABLE LZHF



### Cables performance:

- ESCAB FTTH Drop Cable is commonly known as indoor hanging wiring cable. It is mostly single-core and double-core structure. It can also be made into a 4 or 8 cores structure with a cross-section of 8-shaped. The reinforcement is located at the center of the two circles. It can be made of metal or non-metal structure. The fiber is located in the geometric center of the 8-shaped shape. The fiber in the cable is made of G.657 small bending radius fiber, which can be laid at a bending radius of 20mm.
- Lighter and small diameter, flame retardant, separated easily and excellent softness.
- Two parallel metal reinforcements provide good compression resistance and protect the fiber;
- The cable has the advantages of simple structure, light weight and strong practicability;
- Unique groove design, easy to peel, easy to connect, simplify installation and maintenance;
- Low-smoke, halogen-free flame-retardant sheath for environmental protection;

### Applications:

- FTTH applications
- Horizontal cabling

### Cable Construction:

- Fiber core: 02 ~ 04 core - color spectrum
- Strength member: Phosphating steel wire - 0.45mm
- Outer Diameter: LSHF Black color 2.0 +/- 0.1mm\*3.0+/-0.1mm
- Min bending radius: Static - 15mm | Dynamic - 30mm
- Tensile performance: Short term 200N
- Crush: Short term 2200N/100mm
- Cable weight (kg/km): 9.8 max.
- Temperature operation: IEC 60794-1-2 F1 | -5°C ~ 50°C

### Cables standard:

- Application cable standards: ISO/IEC 11801, IEC 60794 and BS EN 50173-1
- Test standards: IEC 60794-1-21 and IEC 60794-1-22
- Flame retardant: (LSZH, PVC) IEC 60332-1-2, IEC 60332-3-24
- Acid Gas Emission: (LSZH) IEC 60754-2.

### Packing

- Polywood drum (250mm x 250mm x 110mm) : 1Km/drum

## FTTH DROP CABLE LZHF

### Cable Properties:

Item	Unit	Specification	
Fiber Type	1310 nm	Um	G.657
Mode field diameter		Um	8.6-9.5 ± 0.4
Cladding diameter		%	125.0 ± 0.7
Cladding non-circularity		Um	≤1.0
Core/Cladding concentricity error		Um	≤0.5
Coating diameter		Um	245 5
Coating/cladding concentricity error		Um	≤12
Cable cut-off wave length		Nm	≤ 1260
Attenuation coefficient	1310nm	dB/km	≤0.4
	1550nm	dB/km	≤0.3
Macro-bend loss (1 turn, 10mm radius)	1550nm	dB/km	≤0.75
	1625nm	dB/km	≤1.5
Proof stress level		kpsi	≥100

### Order Information | SINGLE-MODE

Fiber count	ESCAB Ref P/N		
	OS1/OS2 008 - G. 652.D	OS1/OS2 108 - G. 657A1	OS1/OS2 208 - G. 657A2
2	E652-DRC-02-LZ	E108-DCR-02-LZ	E208-DCR-02-LZ
4	E652-DRC-04-LZ	E108-DCR-04-LZ	E208-DCR-04-LZ
8	E652-DRC-08- LZ	E108-DCR-08-LZ	E208-DCR-08-LZ

### Order Information | MULTIMODE

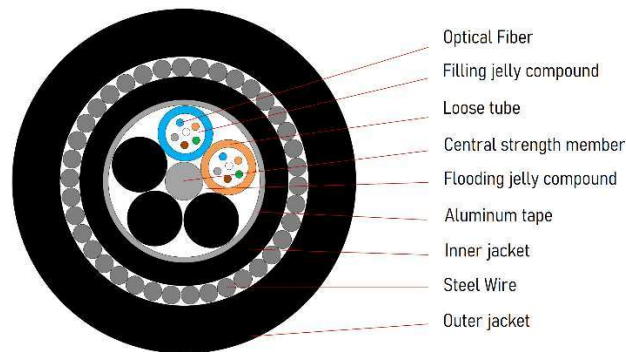
Fiber count	ESCAB Ref P/N			
	OM 1	OM 2	OM 3	OM 4
4	EOM1-DCR-04-LZ	EOM2-DCR-04-LZ	EOM3-DCR-04-LZ	EOM4-DCR-04-LZ
6	EOM1-DCR-06-LZ	EOM2-DCR-06-LZ	EOM3-DCR-06-LZ	EOM4-DCR-06-LZ
8	EOM1-DCR-08-LZ	EOM2-DCR-08-LZ	EOM3-DCR-08-LZ	EOM4-DCR-08-LZ



# FIBER OPTIC LOOSE TUBE

## 2 to 24 CORE

## STEEL WIRE ARMORED LSZH | PE | PVC



### Cables performance:

- 2-144 Fiber counts color-coded according to TIA-598-D.
- Customizable fiber selection including single-mode, multimode and hybrid versions to suit a variety of applications.
- The cable design in double steel armored tape which stronger mechanical performance on pulling tension also with excellent anti rodent protection.
- Double water block yarn and water swellable material tape around cable core providing good performance on water proof.
- It is armored with galvanized steel wire, and double jacketed.
- The fiber optic quantity is from 2 to 144 core, soft tissue, user friendly design.
- Cable construction can be single steel wire armored or double wire armored for different tensile load.
- This tough rugged cable is ideal for all external environments including direct burial, tunnels and heavy-duty ducts, where need water resistant, rodent resistant, flame retardant.
- Excellent mechanical and temperature performance guaranteed by the accurate excess fiber length.
- Critical protection to fibers.
- Excellent crush resistance and flexibility.
- The following measures are taken to ensure the water blocking performance of the cable
  - Single steel wire used as the central strength member
  - Special water blocking filling compound in the loose tube.
- PSP moisture barrier
  - Water blocking yarn and water swellable tape double water proof.

### Cables standard:

- Application cable standards: ISO/IEC 11801, IEC 60794 and BS EN 50173-1
- Test standards: IEC 60794-1-21 and IEC 60794-1-22
- Flame retardant: (LSZH, PVC) IEC 60332-1-2, IEC 60332-3-24
- Acid Gas Emission: (LSZH) IEC 60754-2 ;

escab



**LOOSE TUBE AMOURED STEEL WIRE**

SINGLE MODE G.652			
Item		Unit	Specification
Fiber Type			G. 652D
Mode field diameter	1310nm	μm	9.2 0.4
	1550nm	μm	10.4 0.8
Cladding diameter		μm	125.0 1
Cladding non-circularity		%	≤1.0
Core/cladding concentricity error		μm	≤0.5
Coating diameter		μm	242 7
Coating/cladding concentricity error		μm	≤12
Cable cut-off wavelength		Nm	≤ 1260
Attenuation Coefficient	1310nm	dB/km	≤0.36
	1550nm	dB/km	≤0.22
Macro-bend loss (1 turn, 10mm radius)	1550nm	dB/km	≤0.75
	1625nm	dB/km	≤1.5
Proof stress level		kpsi	≥100
Note: Other parameters meet standard ITU-T G.652			

MULTI-MODE OM3			
Item		Unit	Specification
Fiber Type			OM3
Core diameter		μm	50 2.5
Cladding diameter		μm	125.0 1.0
Cladding non-circularity		%	≤ 1.0
Core/cladding concentricity error		μm	≤ 1.5
Coating diameter		μm	245 10
Coating/cladding concentricity error		μm	≤12
Attenuation Coefficient	850nm	dB/km	≤ 3.5
	1300nm	dB/km	≤ 1.5
OFL Bandwidth	850nm	dB/km	≥ 1500
	1300nm	dB/km	≥ 500
Proof stress level		kpsi	≥ 100
Note: Other parameters meet standard IEC 60793-2-10			



**Cable performance:**

Item	Parameters	
Loose tube	Material	PBT
	Color	Full color spectrum
Filler	Material / Color	PE / Black
CSM	Material	Phosphating steel wire
Armored	Material	Plastic coated aluminium strip
Inner jacket	Material	MDPE or LSZH
	Color	Black
Steel wire armored	Material	Galvanized steel wire
Outer jacket	Material	MDPE or LSZH
Min. bending radius	Static	12.5 times cable diameter
	Dynamic	25 times cable diameter
Tensile performance	Short term	10.000N
Crush	Short term	5.000N/100mm
Impact	Impact energy : 1kgj 1m; radius of hammer head:12.5mm; number of impact: 5 No obvious addition attenuation, no fiber break and no cable damage.	

**Cable construction**

SINGLE-MODE							
Fiber count	Fibers per tube	Loose tube diameter	CSM diameter / Pad diameter	Nominal Thickness of inner jacket	Nominal Thickness of outer jacket	Cable diameter	Cable weight
		(mm)	(mm)	(mm)	(mm)	(mm)	(kg/km)
04	04	1.6 0.1	1.3/1.3	0.8	1.8	12.4 0.5	249
24	06	1.6 0.1	1.3/1.3	0.8	1.8	12.4 0.5	251

**Working condition:**

Item	Standard	Parameters
Operation temperature	IEC 60794-1-2 F1	-20°C~+70°C

**Packing Standard:**

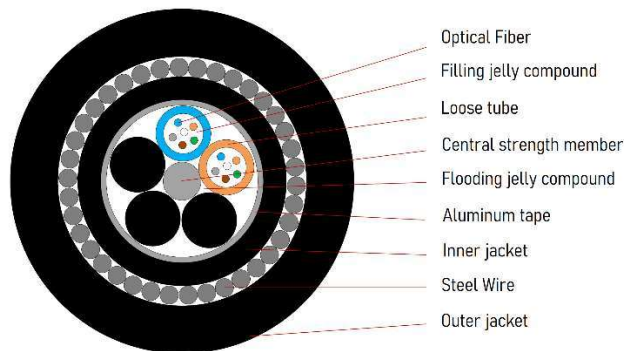
Cable type	Drum				
	Height (mm)	Width (mm)	Inner diameter (mm)	Length (km)	Drum type
Core Fiber 04	1000	760	400	2	Iron wood drum



# FIBER OPTIC LOOSE TUBE

**2 to 24 CORE**

**STEEL WIRE ARMORED LSZH | PE | PVC**



**Order ref: Order Information | SINGLE MODE**

SINGLE-MODE		
Fiber count	ESCAB Ref p/n	Cable weight
		(kg/km)
04	EG652-LT-04-SWA-DU-PE-B	249
06	EG652-LT-06-SWA-DU-PE-B	249
08	EG652-LT-08-SWA-DU-PE-B	249
12	EG652-LT-12-SWA-DU-PE-B	251
24	EG652-LT-24-SWA-DU-PE-B	251

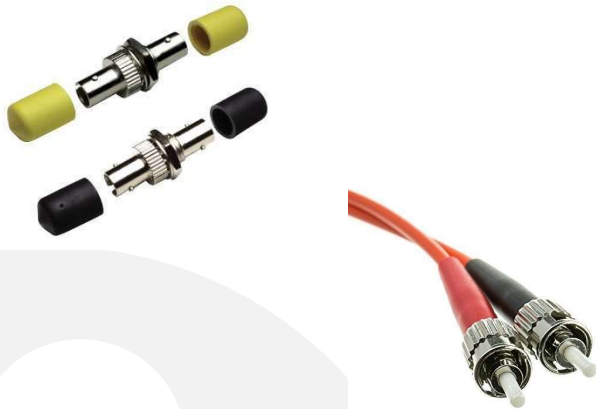
**Order Information | MULTI-MODE**

MULTI-MODE		
Fiber count	ESCAB Ref p/n	Cable weight
		(kg/km)
04	EOM3-LT-04-SWA-DU-PE-B	249
06	EOM3-LT-06-SWA-DU-PE-B	249
08	EOM3-LT-08-SWA-DU-PE-B	249
12	EOM3-LT-12-SWA-DU-PE-B	251
24	EOM3-LT-24-SWA-DU-PE-B	251



# CONNECTOR | ADAPTOR

## ST CONNECTOR & ADAPTOR



### FEATURES AND BENEFITS

#### CONNECTORS

- Metal body
- Optical connector for hot or cold Epoxy termination
- High-resistance ceramic ferule
- Black sleeve for 90um tight buffered fiber or fan out

#### ADAPTERS

- Adaptors to be leaded in "SPDF-I24FCT-DMB" Indoor 19inch rack drawers
- Ceramic guide for single mode
- Metal guide for Multimode

#### Order Information:

ESCAB Part numbers	Description	Fiber type	Packing
MMC-STS48	ST simplex connector	Multimode	Unit
SMC-STS48	ST simplex connector	Single mode	Unit
MMA-STS48	ST / ST simplex adaptor	Multimode	Unit

## SC CONNECTOR & ADAPTOR



### FEATURES AND BENEFITS

#### CONNECTORS

- Available in simplex and duplex versions
- Optical connector for hot or cold Epoxy termination
- High-resistance ceramic ferule
- Black sleeve for 90um tight buffered fiber or fan out

#### ADAPTERS

- Simplex or Duplex adapters
- Shutter flaps can be supplied independently
- Adapters to be loaded in SPDF-I24SCT-DMB 19inch rack drawer 24 cores

#### Order Information:

ESCAB Part numbers	Description	Fiber type	Packing
MMC-SCS48	SC simplex connector	Multimode	Unit
MMC-SCD48	SC duplex connector	Multimode	Unit
SMC-SCS48	SC simplex connector	Single mode	Unit
MMA-SCS48	SC / SC simplex adaptor	Multimode	Unit
MMA-SCD48	SC / SC duplex adaptor	Multimode	Unit
SMA-SCD48	SC / SC duplex adaptor	Single mode	Unit

SMA-SCS48	SC / SC simplex adaptor	Single mode	Unit
MMA-V SCD48	Shutter flaps for SC/SC duplex adaptor		Unit

## LC CONNECTOR & ADAPTOR

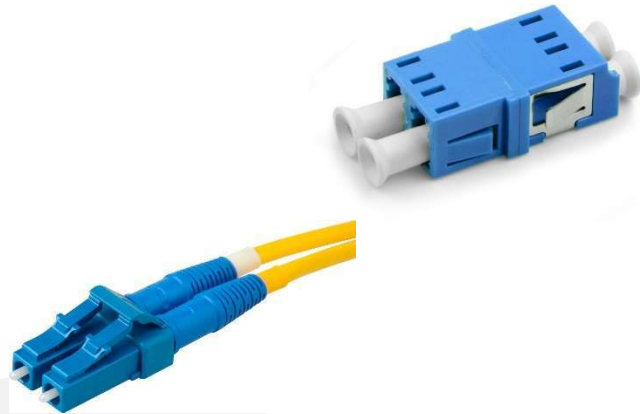
### FEATURES AND BENEFITS

#### CONNECTORS

- Optical connector for hot or cold Epoxy termination
- High-resistance ceramic ferule
- Small size enabling high-density patching

#### ADAPTORS

- Duplex adaptors
- Shutter flaps can be supplied separately
- Adaptors to be loaded in "SPDF-I48SCT-DMB" 19inch rack drawer 48 cores



### Order Information:

ESCAB Part numbers	Description	Fiber type	Packing
MMC-LCS48	LC simplex connector	Multimode	Unit
SMC-LCS48	LC duplex connector	Single mode	Unit
MMC-LCD48	LC / LC duplex adaptor	Multimode	Unit
SMA-LCD48	LC / LC duplex adaptor	Single mode	Unit
MMA-LCQ48	LC / LC Quad adaptor	Multimode	Unit
SMA-LCQ48	LC / LC Quad adaptor	Single mode	Unit
MMT-V LCD48	Shutter flaps for LC/LC duplex adaptor		Unit

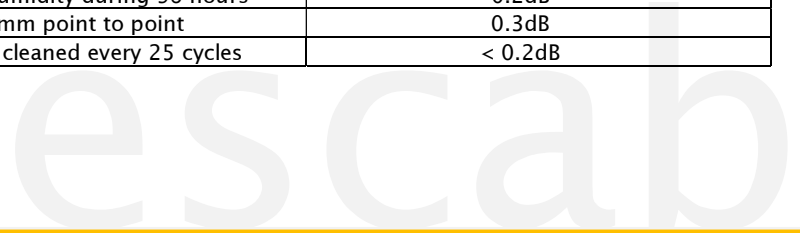
### Technical characteristics | Connector & Adaptor

#### Connector:

Parameter	Multi Mode	Single Mode
Ferule surface	PC Polished connector	
Ferule external diameter	ST and SC: 2.5mm 0.001mm LC : 1.25mm 0.001mm	
Fiber hole diameter	126 um 1 um	125 um 1 um
Concentricity	0.004mm	0.0001mm
Mechanical properties	TIA / EIA 604-x	
Attenuation (Typical / Maximum)	< 0.3 dB / 0.5 dB	< 0.1 dB / 0.2 dB
Return Loss (Typical / Maximum)	< -20 dB / < - 30 dB	< -20 dB / < -40 dB

#### Adaptor:

Parameter	Multi Mode	Single Mode
Temperature cycles	-40°C to +70°C - 40cycles	< -0.2dB
High Temperature	75°C during 96 hours	< 0.2dB
Warm humidity	60°C at 95% humidity during 96 hours	0.2dB
Vibration	10 55Hz, 1mm point to point	0.3dB
Insertion	1000 cycles cleaned every 25 cycles	< 0.2dB



# PATCH CORDS

## FIBER OPTIC



LC-ST Duplex



SC-SC Duplex



LC-SC Duplex

## FEATURES AND BENEFITS

- Exceed ISO TIA/EIA-568-B.2, ISO 11801:2002 specifications
- Performance to EN 50173-1 standards
- Individually tested
- Kevlar reinforced mini break-out cable
- Available with ST, SC and LC connectors (single mode and multimode)
- Available in various lengths



ST-ST Duplex



LC-LC Duplex

### Order Information:

ESCAB Part numbers	Description	Length	Type	Packing
ES-PCU-2ST2ST-OM1-xxx	Patch Cord Duplex 2x ST/UPC 2x ST/UPC OM1 .	2m   3m   5m	ST-ST .	1 pc/unit
ES-PCU-2ST2SC-OM1-xxx	Patch Cord Duplex 2x ST/UPC 2x SC/UPC OM1 .	2m   3m   5m	ST-SC .	1 pc/unit
ES-PCU-2ST2LC-OM1-xxx	Patch Cord Duplex 2x ST/UPC 2x LC/UPC OM1 .	2m   3m   5m	ST-LC .	1 pc/unit
ES-PCU-2SC2SC-OM1-xxx	Patch Cord Duplex 2x SC/UPC 2x SC/UPC OM1 .	2m   3m   5m	SC-SC .	1 pc/unit
ES-PCU-2SC2LC-OM1-xxx	Patch Cord Duplex 2x SC/UPC 2x LC/UPC OM1 .	2m   3m   5m	SC-LC .	1 pc/unit
ES-PCU-2LC2LC-OM1-xxx	Patch Cord Duplex 2x LC/UPC 2x LC/UPC OM1 .	2m   3m   5m	LC-LC .	1 pc/unit
ES-PCU-2ST2ST-OM2-xxx	Patch Cord Duplex 2x ST/UPC 2x ST/UPC OM2 .	2m   3m   5m	ST-ST .	1 pc/unit
ES-PCU-2ST2SC-OM2-xxx	Patch Cord Duplex 2x ST/UPC 2x SC/UPC OM2 .	2m   3m   5m	ST-SC .	1 pc/unit
ES-PCU-2ST2LC-OM2-xxx	Patch Cord Duplex 2x ST/UPC 2x LC/UPC OM2 .	2m   3m   5m	ST-LC .	1 pc/unit
ES-PCU-2SC2SC-OM2-xxx	Patch Cord Duplex 2x SC/UPC 2x SC/UPC OM2 .	2m   3m   5m	SC-SC .	1 pc/unit
ES-PCU-2SC2LC-OM2-xxx	Patch Cord Duplex 2x SC/UPC 2x LC/UPC OM2 .	2m   3m   5m	SC-LC .	1 pc/unit
ES-PCU-2LC2LC-OM2-xxx	Patch Cord Duplex 2x LC/UPC 2x LC/UPC OM2 .	2m   3m   5m	LC-LC .	1 pc/unit
ES-PCU-2ST2ST-OM3-xxx	Patch Cord Duplex 2x ST/UPC 2x ST/UPC OM3 .	2m   3m   5m	ST-ST .	1 pc/unit
ES-PCU-2ST2SC-OM3-xxx	Patch Cord Duplex 2x ST/UPC 2x SC/UPC OM3 .	2m   3m   5m	ST-SC .	1 pc/unit
ES-PCU-2ST2LC-OM3-xxx	Patch Cord Duplex 2x ST/UPC 2x LC/UPC OM3 .	2m   3m   5m	ST-LC .	1 pc/unit
ES-PCU-2SC2SC-OM3-xxx	Patch Cord Duplex 2x SC/UPC 2x SC/UPC OM3 .	2m   3m   5m	SC-SC .	1 pc/unit
ES-PCU-2SC2LC-OM3-xxx	Patch Cord Duplex 2x SC/UPC 2x LC/UPC OM3 .	2m   3m   5m	SC-LC .	1 pc/unit
ES-PCU-2LC2LC-OM3-xxx	Patch Cord Duplex 2x LC/UPC 2x LC/UPC OM3 .	2m   3m   5m	LC-LC .	1 pc/unit
ES-PCU-2ST2ST-OM4-xxx	Patch Cord Duplex 2x ST/UPC 2x ST/UPC OM4 .	2m   3m   5m	ST-ST .	1 pc/unit
ES-PCU-2ST2SC-OM4-xxx	Patch Cord Duplex 2x ST/UPC 2x SC/UPC OM4 .	2m   3m   5m	ST-SC .	1 pc/unit
ES-PCU-2ST2LC-OM4-xxx	Patch Cord Duplex 2x ST/UPC 2x LC/UPC OM4 .	2m   3m   5m	ST-LC .	1 pc/unit
ES-PCU-2SC2SC-OM4-xxx	Patch Cord Duplex 2x SC/UPC 2x SC/UPC OM4 .	2m   3m   5m	SC-SC .	1 pc/unit
ES-PCU-2SC2LC-OM4-xxx	Patch Cord Duplex 2x SC/UPC 2x LC/UPC OM4 .	2m   3m   5m	SC-LC .	1 pc/unit
ES-PCU-2LC2LC-OM4-xxx	Patch Cord Duplex 2x LC/UPC 2x LC/UPC OM4 .	2m   3m   5m	LC-LC .	1 pc/unit
ES-PCU-2ST2ST-G.652D-xxx	Patch Cord Duplex 2x ST/UPC 2x ST/UPC G.652D .	2m   3m   5m	ST-ST .	1 pc/unit
ES-PCU-2ST2SC-G.652D-xxx	Patch Cord Duplex 2x ST/UPC 2x SC/UPC G.652D .	2m   3m   5m	ST-SC .	1 pc/unit
ES-PCU-2ST2LC-G.652D-xxx	Patch Cord Duplex 2x ST/UPC 2x LC/UPC G.652D .	2m   3m   5m	ST-LC .	1 pc/unit
ES-PCU-2SC2SC-G.652D-xxx	Patch Cord Duplex 2x SC/UPC 2x SC/UPC G.652D .	2m   3m   5m	SC-SC .	1 pc/unit
ES-PCU-2SC2LC-G.652D-xxx	Patch Cord Duplex 2x SC/UPC 2x LC/UPC G.652D .	2m   3m   5m	SC-LC .	1 pc/unit
ES-PCU-2LC2LC-G.652D-xxx	Patch Cord Duplex 2x LC/UPC 2x LC/UPC G.652D .	2m   3m   5m	LC-LC .	1 pc/unit

\*Noted: “xxx” is mean of number for length requirements.

**Technical Characteristics:**

Parameter	Multi Mode	Single Mode		
	PC	PC	UPC	APC
Insertion loss (typical)	≤ 0.2 dB	≤ 0.3 dB	≤ 0.2 dB	≤ 0.25 dB
Return loss	≥ 30	≥ 45	≥ 50	≥ 60
Operating wavelength	850   1490   1310   1550			
Fiber Diameter	0.9mm / 2.0mm / 3.0mm			
Exchangeability	≤ 0.2 dB			
Vibration	≤ 0.2 dB			
Operation Temperature	-40°C to +75°C			
Storage Temperature	-45°C to +85°C			
Cable Type	Simplex or Duplex (zip cord) LSHF			
Cable Jacket Color	Aqua (OM3 OM4)	Orange (OM1 OM2)	Yellow (SM)	

\*Noted :

“UPC, APC” is option and customer requested with minimum order only.

“Armoured” is option and customer requested with minimum order only.

**Application:**

- Optical Fiber Communication Systems,
- Fiber optic data transmission,
- Optical Access Network,
- Testing instruments,
- Local area network(LAN)

# PIGTAILS

## FIBER OPTIC



Pigtail ST Single Mode



Pigtail SC Multi Mode



Pigtail SC Single Mode



Pigtail LC Singlemode



Pigtail LC Multi Mode



Pigtail ST Multi Mode

### FEATURES AND BENEFITS

- 1 meter tight buffered fiber links pre-terminated at one end
- To be spliced to fiber optic fiber
- Each Pigtail is individually tested

ESCAB Part numbers	Description	Fiber type	Connector type	Packing
EPT-STOM1-SLX-01	ST Multimode Pigtail	62.5 / 125 OM1	ST Simplex	Unit
EPT-STOM2-SLX-01	ST Multimode Pigtail	50 / 125 OM2	ST Simplex	Unit
EPT-SCOM1-SLX-01	SC Multimode Pigtail	62.5 / 125 OM1	SC Simplex	Unit
EPT-SCOM2-SLX-01	SC Multimode Pigtail	50 / 125 OM2	SC Simplex	Unit
EPT-SCOM3-SLX-01	SC Multimode Pigtail	50 / 125 OM3	SC Simplex	Unit
EPT-SCOM4-SLX-01	SC Multimode Pigtail	50 / 125 OM4	SC Simplex	Unit
EPT-SCSM-SLX-01	SC Single mode Pigtail	9 / 125 OS1/OS2	SC Simplex	Unit
EPT-LCOM2-SLX-01	LC Multimode Pigtail	50 / 125 OM2	LC Simplex	Unit
EPT-LCOM3-SLX-01	LC Multimode Pigtail	50 / 125 OM3	LC Simplex	Unit
EPT-LCOM4-SLX-01	LC Multimode Pigtail	50 / 125 OM4	LC Simplex	Unit
EPT-LCSM-SLX-01	LC Single mode Pigtail	9 / 125 OS1/OS2	LC Simplex	Unit



# SPLITTER DISTRIBUTOR BOX - INDOOR

## FTTH Terminal Box

### Indoor

The series are used in the end termination in residence to be fixed with pigtailed. Wall mounting is available. It can adapt variety of optical connections.

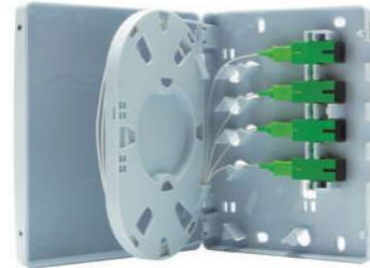
#### Features:

- With protective doors, dustproof.
- Suitable for many types of modules, used in cabling work area subsystem.
- Embedded type surface, easy for installation and removal.
- Available for fiber optic SC simplex or LC duplex and can be used in both surface mounted installation and concealed panel installation.
- All modules are solders mode.

### Outdoor

#### Features:

- Total enclosed structure be in nice shape
- Material: PC+ABS, wet-proof, water-proof, dust-proof, anti-aging, protection level up to IP65.
- With the function of fiber splicing fixation, storage, distribution for feeder cable and drop cables.
- Cable, pigtailed, patch cords are running through their own path without disturbing each other, SC/LC/adaptor, insert-type splitter module and steel tube splitter installation, easy maintenance.
- Wall-mounted, suitable for both indoor and outdoor used.



### Order Number:

Part Number	Description
ESDF-I2SCT-TPA	Terminal Box Indoor destop 02 core Simplex SC/Duplex LC Type Without adaptors, pigtailed and splitter plastic type A
ESDF-I4SCT-TPA	Terminal Box Indoor destop 04 core Simplex SC/Duplex LC Type Without adaptors, pigtailed and splitter plastic type A
ESDF-I4SCT-TPB	Terminal Box Indoor destop 4 ports Simple SC/Duplex LC type Without adaptos, pigtailed, splitter Plastic type B.

# SPLITTER DISTRIBUTOR BOX - OUTDOOR POLE MOUNT

## FTTH Terminal Box

### 16 CORES

The series splitter distribution box is suitable for insert-type splitter module and steel tube splitter; they are used as termination point for the feeder cable to connect with drop cable in FTTH communication network system.



#### Features:

- Total enclosed structure, be in nice shape
- Protects and manages cable effectively
- Secured with anti-theft locking mechanism
- High quality PC +ABS material
- Good properties of dust, and moisture proofing, IP65.
- Clamping for feeder cable and drop cable, fiber splicing, fixation, storage, distribution...etc all in one
- Suitable for SC and LC duplex adaptor and pigtail
- Suitable for both outdoor and indoor use

#### Application:

- Telecommunication subscriber loop
- Fiber to the home(FTTH)
- LAN/WAN

#### Product information:

- Mounting style: Wall-mounting / Pole mounting
- Work temperature: -40°C to +80°C
- Relative Humidity: ≤ 85% (+30°)
- Atmospheric Pressure: 70Kpa~106Kpa

#### Order Number:

Part Number	Description
ESDF-O16SCS-PPPC	Splitter Distribution Box Outdoor pole mounted 16 cores Simplex SC/Duplex LC type available for plugin splitter installation without hoop, adaptors, pigtails and splitter Plastic type C

# SPLITTER DISTRIBUTOR BOX – OUTDOOR WALL MOUNT

FTTH Terminal Box

32 CORES

**Features:**

- Available for 1\*4, 1\*8 and the max capacity can reach 1\*64 or 2\*32.
- Material: PC+ABS, wet-proof, water-proof, dust-proof, anti-aging, protection level up to IP65.
- With the function of fiber splicing fixation, storage, distribution for feeder cable and drop cables.
- Clamping for feeder cable and drop cable, fiber fixation, storage, distribution, etc.
- Cable, pigtailed, patch cords are running through their own path without disturbing each other, SC/LC/adaptor, insert-type splitter module and steel tube splitter installation, easy maintenance.
- Distribution panel can be flipped up; feeder cable can be placed in a cup-joint way, easy for maintenance and installation.



**Application:**

- Telecommunication subscriber loop
- Fiber to the home (FTTH)
- LAN/WAN

**Product information:**

- Mounting style: Wall-mounting / Pole mounting
- Work temperature: -40°C to +80°C
- Relative Humidity: ≤ 85% (+30°)
- Atmospheric Pressure: 70Kpa~106Kpa

**Order Number:**

Part Number	Description
ESDF-O32SCS-PPPA	Splitter Distribution Box Outdoor pole mounted 32 cores Simplex SC/Duplex LC type available for plugin splitter installation without hoop, adaptors, pigtailed and splitter Plastic type A

# SPLITTER DISTRIBUTOR BOX – INDOOR WALL MOUNT

## FTTH Terminal Box

## SPLITTER DISTRIBUTION BOX

### Features:

- Splitter Distribution Box is available for small capacity communication system, wall mounting. Two parts of box frame-Part 1 for fiber splicing and branching though installing common splicing tray, real capacity could be adjusted as practical situation through adding splicing tray with reversible gap. Part 2 is for connecting patch cord in the use of ABS cassette splitter.
- Whole range protected design for fiber lay to ensure the bending radius = 40mm.
- Available for SC, FC, LS, ST adaptors.
- 12, 24, 48 port are available.



## 24 TO 72 CORE FIBER OPTIC TERMINAL BOXES

Fiber optic terminal boxes are used for the connection and termination of fibers and protect spliced fiber.

### Description:

Fiber optic terminal boxes are used for the connection and termination of fibers and protect spliced fiber.

### Application:

- FTTH access networks
- Telecommunication networks
- CATV networks
- Local Area Networks

### Product information:

- Model: Splitter Distribution Box Single Door type.
- Material: Cold-rolled steel
- Mounting style: Wall-mounting / Pole mounting
- Environment: Indoor / Outdoor
- Adaptor Output type: FC, SC, ST, 2LC
- Work temperature: -40°C to +80°C
- Relative Humidity: ≤ 85% (+30°)
- Atmospheric Pressure: 70Kpa~106Kpa



escab

## FTTH Terminal Box

### SPLITTER DISTRIBUTION BOX | 24 TO 72 CORE FIBER OPTIC TERMINAL BOXES

Order Number:

Part Number	Description	Size (mm)
ESDF-I24SCS-WAMA	Splitter Distribution Box Indoor wall mounted 24 cores Simplex SC/Duplex LC type available for ABS cassette splitter installation without adaptors , pigtailed and splitter Metal Single door type A	370x320x90
ESDF-I36SCS-WAMA	Splitter Distribution Box Indoor wall mounted 36 cores Simplex SC/Duplex LC type available for ABS cassette splitter installation without adaptors , pigtailed and splitter Metal Single door type A	420x350x110
ESDF-I48SCS-WAMA	Splitter Distribution Box Indoor wall mounted 48 cores Simplex SC/Duplex LC type available for ABS cassette splitter installation without adaptors , pigtailed and splitter Metal Single door type A	420x320x138
ESDF-I72SCS-WAMA	Splitter Distribution Box Indoor wall mounted 72 cores Simplex SC/Duplex LC type available for ABS cassette splitter installation without adaptors , pigtailed and splitter Metal Single door type A	460x340x214
ESDF-O24SCS-WAMB	Splitter Distribution Box Outdoor wall mounted 24 cores Simplex SC/Duplex LC type available for ABS cassette splitter installation without adaptors , pigtailed and splitter Metal Single door type B	455x405x80
ESDF-O36SCS-WAMB	Splitter Distribution Box Outdoor wall mounted 36 cores Simplex SC/Duplex LC type available for ABS cassette splitter installation without adaptors , pigtailed and splitter Metal Single door type B	455x405x110
ESDF-O48SCS-WAMB	Splitter Distribution Box Outdoor wall mounted 48 cores Simplex SC/Duplex LC type available for ABS cassette splitter installation without adaptors , pigtailed and splitter Metal Single door type B	455x405x120
ESDF-O72SCS-WAMB	Splitter Distribution Box Outdoor wall mounted 72 cores Simplex SC/Duplex LC type available for ABS cassette splitter installation without adaptors , pigtailed and splitter Metal Single door type B	455x405x150



## EMPTY CONTAINER FIBER OPTIC DISTRIBUTION FRAME

Fiber Optic Distribution Frames are widely applied in Local Central Office. These are used for fiber optic cable fixation, protection, termination, patching etc. Fiber Optic Distribution Frames are widely applied in Local Central Office. These are used for fiber optic cable fixation, protection, termination, patching etc.



### Application

- FTTH access networks
- Telecommunication networks
- CATV networks
- Local Area Networks

### Features

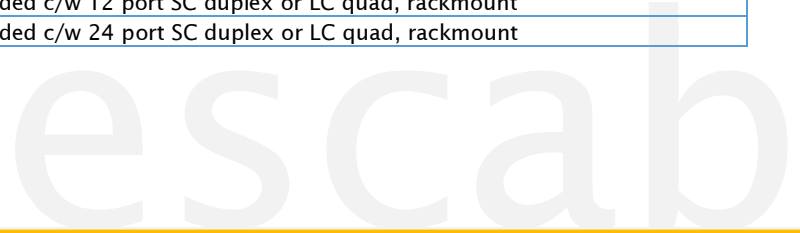
- Standard size, light weight and reasonable structure
- Splice tray inside changeable
- Can be used in 19" standard distribution frame
- Suitable for ribbon and single fiber
- Various panel plate to fit different adapter interface
- Front mark on the plate is easy for identification and operation
- 24C, 36C, 48C, 72C, 96C optional, with or without fiber optic pigtails and adapters

### Specification

We support fiber capacity	12/24/48/72/96/144 cores
Fiber Port	FC, SC, ST and LC
Dimension (mm)	430(W)x205(D)x1U(H) 430(W)x237(D)x1U(H)
Working temperature	-10°C ~ +40°C
Storage temperature	-25°C ~ +55°C
Relative humidity	≤ 85% (+30°C)
Atmospheric pressure	70Kpa~106Kpa
Nominal operating wavelength	850nm, 1310nm, 1550nm
Insertion loss	≤ 0.5dB
Return loss	PC ≥ 40dB, UPC ≥ 50dB, APC ≥ 60dB
Electrical strength	≥3KV(DC)/1 min without breakdown
Insulation resistance	≥1000MΩ/500V (DC)
Application range	Small and medium-sized wiring system for fiber to the cell, fiber to the building, remote module office and wireless base station

### Ref Order Number:

P/N	ODF type
ESFPSC24RM	ODF unloaded c/w 24 port SC simplex or LC duplex, rackmount
ESFPSC48RM	ODF unloaded c/w 48 port SC simplex or LC duplex, rackmount
ESFPDC12RM	ODF unloaded c/w 12 port SC duplex or LC quad, rackmount
ESFPDC24RM	ODF unloaded c/w 24 port SC duplex or LC quad, rackmount



## OPTIC DISTRIBUTION FRAME FULL LOAD 12 24 48 72 96

Fiber Optic Management Units are used for fiber optic splicing, distribution and storage. This series of units are suitable for 19" standard frame, and widely used in LAN and fiber optic access networks.

### Application

- FTTH access networks
- Telecommunication networks
- CATV networks
- Local Area Networks

### Features

- Integrated splicing and distribution trays
- Suitable for square FC, SC and duplex LC (SC type) adapters
- Easy and convenient operation

### Specification

Parameters	Specification
Max. No. of Cores	12 24 48 72 96
Frame Material	Cold-rolled steel
Adapter Type	FC square, SC, DLC (SC type)
Insulation Resistance (MΩ)	1000 @500V (DC)
Withstanding Voltage (V(D.C)/1min)	≥3000, no breakdown, no flashover
Dimensions (mm)	430(W)x205(D)x1U(H) 430(W)x237(D)x1U(H)
Weight (kg)	3.0 (max)



Pigtail SC Multi Mode



Pigtail SC Single Mode



Pigtail LC Singlemode



Pigtail LC Multi Mode

Order Number: Part Number order will refer table.

Part numbers	ODF Type
ESFPSC24RM	Escab ODF unloaded c/w 24 port SC simplex or LC duplex, rackmount
ESFPSC48RM	Escab ODF unloaded c/w 48 port SC simplex or LC duplex, rackmount
ESFPDC12RM	Escab ODF unloaded c/w 12 port SC duplex or LC quad, rackmount
ESFPDC24RM	Escab ODF unloaded c/w 24 port SC duplex or LC quad, rackmount

Part numbers	Description	Fiber type	Connector type	Packing
EPT-STOM1-SLX-01	ST Multimode Pigtail	62.5 / 125 OM1	ST Simplex	Unit
EPT-STOM2-SLX-01	ST Multimode Pigtail	50 / 125 OM2	ST Simplex	Unit
EPT-SCOM1-SLX-01	SC Multimode Pigtail	62.5 / 125 OM1	SC Simplex	Unit
EPT-SCOM2-SLX-01	SC Multimode Pigtail	50 / 125 OM2	SC Simplex	Unit
EPT-SCOM3-SLX-01	SC Multimode Pigtail	50 / 125 OM3	SC Simplex	Unit
EPT-SCOM4-SLX-01	SC Multimode Pigtail	50 / 125 OM4	SC Simplex	Unit
EPT-SCSM-SLX-01	SC Single mode Pigtail	9 / 125 OS1/OS2	SC Simplex	Unit
EPT-LCOM2-SLX-01	LC Multimode Pigtail	50 / 125 OM2	LC Simplex	Unit
EPT-LCOM3-SLX-01	LC Multimode Pigtail	50 / 125 OM3	LC Simplex	Unit
EPT-LCOM4-SLX-01	LC Multimode Pigtail	50 / 125 OM4	LC Simplex	Unit
EPT-LCSM-SLX-01	LC Single mode Pigtail	9 / 125 OS1/OS2	LC Simplex	Unit

## FIBER OPTIC SPLICE CLOSURE

Fiber optic splice closure is used for outdoor cable distribution, splicing, storage and splicing point protection.

Fiber optic splice closure is used for outdoor cable distribution, splicing, storage and splicing point protection. This type of closure can be used in aerial mounting, wall mounting, direct buried and pipeline laying installations.

### Application:

- FTTH access networks
- Telecommunication networks
- CATV networks
- Local Area Networks

### Features:

- Advanced internal design with enough space for fiber splicing and storage
- Long lasting body with high-strength PC plastic material
- Protection rating IP68
- Usable for multiple number of times
- Lower and upper cases with sliding locking



### Specification-Dome

Parameters	Specification
Material	PC
Protection Rating	IP68
Number of In-out Ports	4
Cable Diameter (mm)	3 holes: 8~16 fiber optic cables
	1 oval shape hole: 1 fiber optic cable 8~25 or 2 fiber optic cables 8~21
No. of Fibers/Tray	12
Max. Capacity of Fibers	96
Dimensions (mm)	190(D)x435(H)

### Order Number:

Part Number	Description	Size	Packing
ES-FC-PV-24H-4/4C	Fiber Closure Vertical type support Splitter 24 cores max, 24 cores splice tray 4 IN 4 OUT. Hot meal sealing without Splitter, support 1:32/1:16 (2PCS) Type C	φ230*440mm	1 pc/unit
ES-FC-PV-48H-4/4C	Fiber Closure Vertical type support Splitter 48 cores max, 24 cores splice tray 4 IN 4 OUT. Hot meal sealing without Splitter, support 1:32/1:16 (2PCS) Type C	φ230*440mm	1 pc/unit
ES-FC-PV-72H-4/4C	Fiber Closure Vertical type support Splitter 72 cores max, 24 cores splice tray 4 IN 4 OUT. Hot meal sealing without Splitter, support 1:32/1:16 (2PCS) Type C	φ230*440mm	1 pc/unit
ES-FC-PV-96H-4/4C	Fiber Closure Vertical type support Splitter 96 cores max, 24 cores splice tray 4 IN 4 OUT. Hot meal sealing without Splitter, support 1:32/1:16 (2PCS) Type C	φ230*440mm	1 pc/unit



## FIBER OPTIC SOCKET PANEL WALL OUTLET MINI FIBER ACCESS TERMINATION BOX SINGLE FIBER

This mini Fiber Optic Socket Panel fiber optic termination box is used for splicing and termination between indoor fiber optic cable and pigtails with SC or LC duplex type.

- Free Fiber Optic Socket Panel
- Premium Grade Flame Resistant Material
- Suitable to SC / LC Duplex Fiber Adapters & Pigtails
- Reasonable Bending Radius for Fiber Protection
- Product as a solution of Escab

### Basic Information

This mini Fiber Optic Socket Panel fiber optic termination box is used for splicing and termination between indoor fiber optic cable and pigtails with SC or LC duplex type. The termination box is used for wall mounted or desktop applications. Made of the plastic material, is easy to install in home or office. Outlets are designed to fit SC fiber optic cable patch cord adapter, used in work location subsystem.

### Specification

a desk mounted or wall mounted termination box for end user, indoor use, capable to handle fiber fusion, fiber cables and pigtails.

Features :

- Support termination, splicing and storage for fiber optic cable systems
- Compatible with G.657
- Compact structure and perfect fiber management
- Engineered fiber routing protect bend radius through the unit to ensure signal integrity



Part Number	Description
ESDF-02SCT-TPA	Terminal Box Indoor desktop 2 cores Simplex SC/Duplex LC type without adaptors , pigtails and splitter Plastic type A. 86
ESDF-04SCT-TPA	Terminal Box Indoor desktop 4 cores Simplex SC/Duplex LC type without adaptors , pigtails and splitter Plastic type A. 100mmx85mmx29mm

## 02 PORT OUTDOOR/INDOOR SC WALL MOUNTED TERMINATION FTTH OPTICAL FIBER DISTRIBUTION BOX ENCLOSURE

This 2 port Outdoor Wall Mounted Optical Fiber Distribution Box FTTH Termination Box is used for splicing and termination between indoor SC LC FC fiber optic cable and pigtails. used for wall mounted to connect indoor cable with drop cables.

- Free Fiber Wall Outlet Faceplate Sample
- High Grade PC/ABS Flame Resistant Material
- Suitable to SC LC Fiber Adapters & Pigtails
- Reasonable Bending Radius for Fiber Protection
- Compact design for wall mounted
- Screw type lock for closing



### Basic Information

This 2 port Outdoor Wall Mounted Optical Fiber Distribution Box FTTH Termination Box is used for splicing and termination between indoor SC LC FC fiber optic cable and pigtails. used for wall mounted to connect indoor cable with drop cables.

### Specification

Suitable Adapters	SC LC	Indoor Outdoor	Indoor Cable
Material	With fire-proof ABS plastic	Location	Wall Mount Usually
Weight	200g/each	Location of Use	FTTH FTTB
Available Cable	3.1mm*2.0mm rubber fiber cable	Lock Compatible	Button
Outlet	2 Ports	Number of Terminal Drops	1 or 2 Cables
Installation way	Wall Mount	Number of Trays	No
Dimensions	180mm*120mm*30mm	Product Type	Wall Mount Termination Box
Applications	Wall Mount Distribution Use	Solution for	Wall Mount Cabling
Compatible Riser Cable Types	Yes	Splice Capacity	1 fibers
Connector Capacity	1 pcs SC or 2 pcs LC	Splitter Capability	Yes
Connector Type	SC LC	Trademark	A solution of ESCAB
Drop Cable Connection	Yes	Packing	1 pcs/box
Includes Splitters	No		

### Order Number:

Part Number	Description
ESDF-I2SCT-TPA	2 port Outdoor Wall Mounted Optical Fiber Distribution Box FTTH Termination Box is used for splicing and termination between indoor SC LC FC fiber optic cable and pigtails