

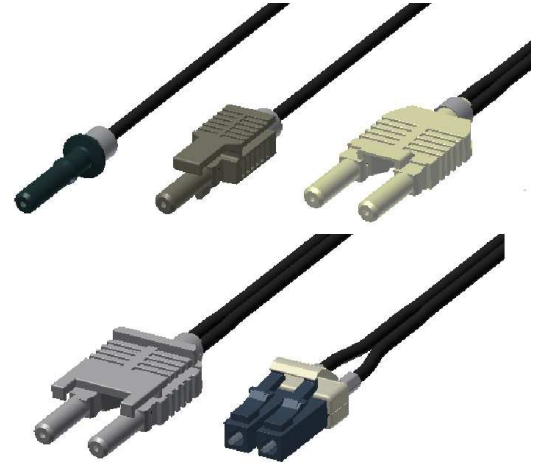
Plastic Optical Fiber (POF)

Cables, Patch Cords and Plugs

DATA SHEET



Plastic Optical Fiber (POF) Cables, Patch Cords and Plugs



FEATURES

- Cost-effective, rugged optical links
- Compatible with IEC 60793-2-40 Class A4a standard
- Cable flameproof to UL grade VW-1
- Cable available in reels for on-site installation, or for making complex harnesses
- Cable suitable for use with Firecomms POF transceivers, including RedLink®, LC and OptoLock®.
- LC plugs available for easy cable termination
- Patch cords in a variety of convenient standard lengths
- Compatible with Versatile Link connectors and fiber optic transmitter and receivers

APPLICATIONS

- Control links within high voltage electrical control equipment
- Data communication where extreme immunity to EMI is required
- Links between equipment that requires electrical isolation to be maintained
- Rugged links in hostile environments

DESCRIPTION

Firecomms offers a range of high quality POF cables, LC plugs, and pre-assembled patch cords in both LC and RedLink® styles, suitable for use with the company's range of transceivers and other industry-standard products.

POF cable is delivered on reels for convenience when installing runs of cable into equipment or buildings, making harness assemblies, or making custom length patch cords in small quantities. Both single cable and twin (figure of eight) cable are available.

Firecomms LC plugs may be assembled easily onto twin cable to prepare it for use with Firecomms LC transceivers.

Firecomms patch cords are available in a convenient range of lengths for use with RedLink or Versatile Link transmitters and receivers, and LC transceivers.

SPECIFICATIONS

Table 1
BARE CABLE SPECIFICATIONS

Parameter	Symbol	Min	Typical	Max	Unit
Storage Temperature	T_{stg}	-40		+85	°C
Operating Temperature	T_{op}	-40		+85	°C
Minimum Bend Radius	R_{min}	25			mm
Repeat Bending Endurance ^[1]		10,000			
Numerical Aperture	NA		0.5		
Attenuation at 650 nm	α			0.19	dB/m
Tensile Stress Simplex/Duplex		70/140			N
UL Flame Resistant Rating		VW-1			
Fiber Diameter, including Cladding	D_c	0.94	1	1.06	mm
Cable Diameter – Simplex	D_j	2.13	2.2	2.27	mm
Twin Cable – Minor Axis	D_j	2.13	2.2	2.27	mm
Twin Cable – Major Axis	D_m	4.3	4.4	4.5	mm
Jacket Material	Flame Resistant PE or PVC				
Jacket Color	Black or Grey				

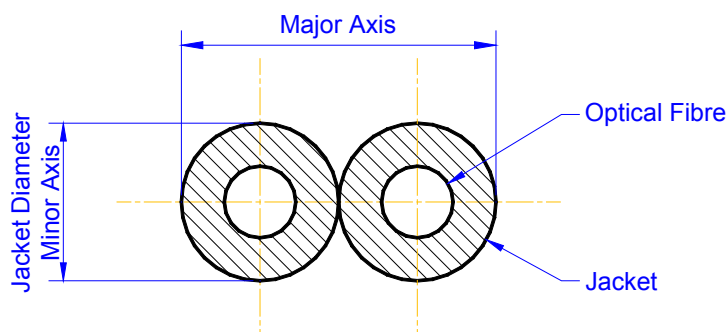


FIGURE 1
Duplex POF cross section.

Note:

1. Repeat bending loss increment ≤ 1 dB (90° bend in direction of minor axis, 25 mm radius, deadweight 500 g).

SPECIFICATIONS (continued)

Table 2 LC PLUGS SPECIFICATIONS					
Parameter	Symbol	Min	Typical	Max	Unit
Storage Temperature	T_{stg}	-40		+85	°C
Operating Temperature	T_{op}	-40		+85	°C
Installation Temperature	T_I	0		+70	°C
Retention Force, Connector to Transceiver	F_R	100			N
Insertion Force, Connector to Transceiver	F_I		9	12	N
Durability, Mating Cycles		500			
Standards Compliance	IEC 61754-20 Edition 2				
Fixing Method	Crimp				

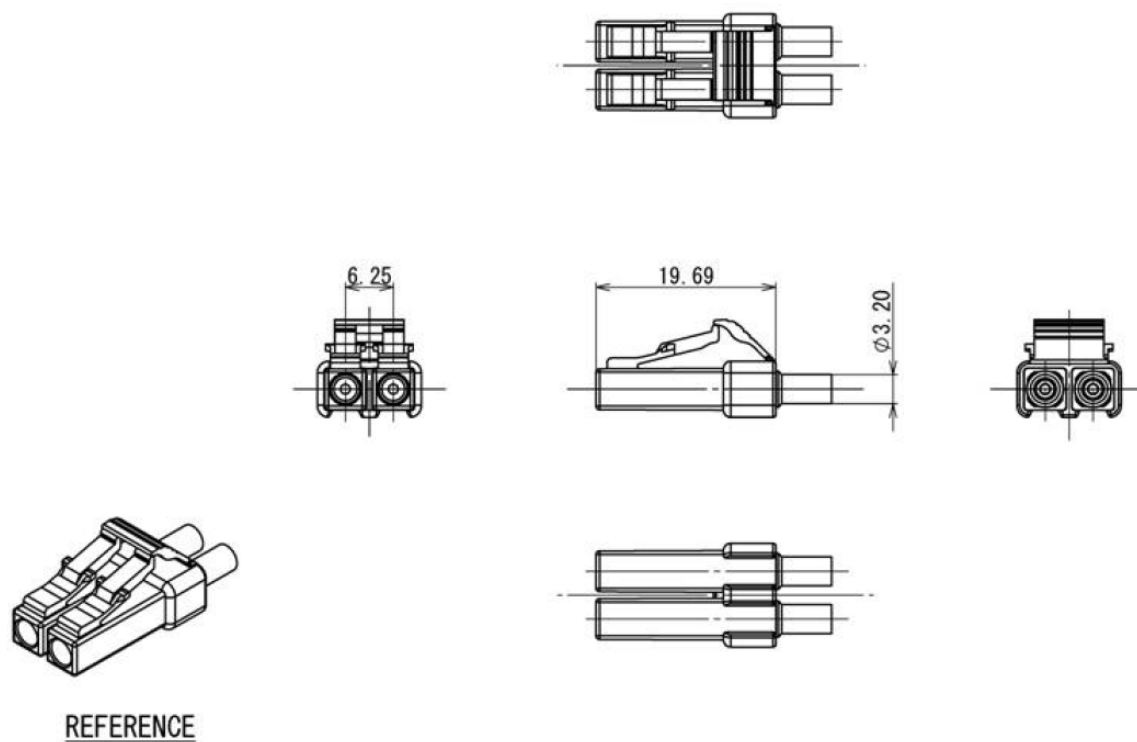


FIGURE 2
LC POF plug.

SPECIFICATIONS (continued)

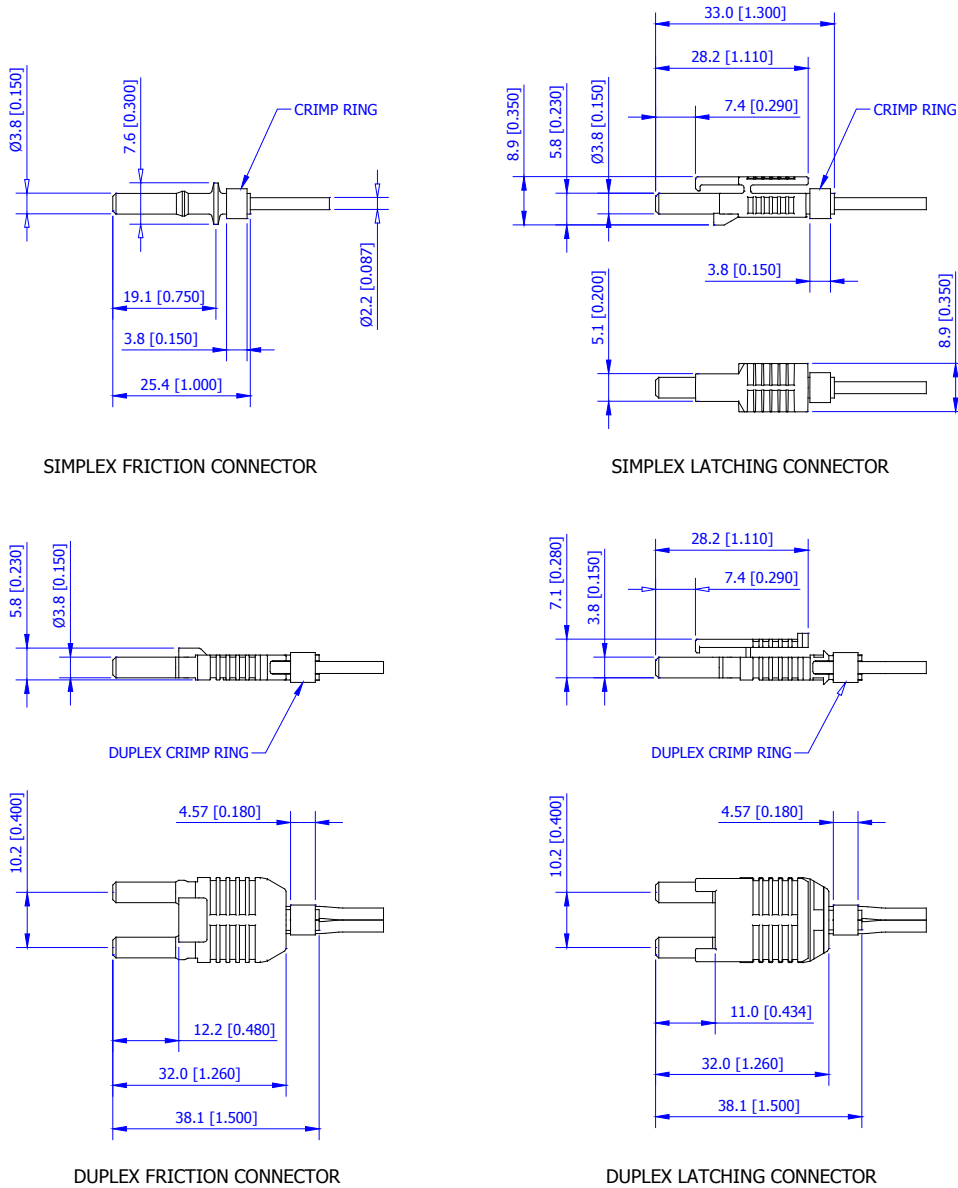


FIGURE 3
RedLink plug.

SPECIFICATIONS (continued)

Table 3 PATCH CORD SPECIFICATIONS					
Parameter	Symbol	Min	Typical	Max	Unit
Storage Temperature	T_{stg}	-40		+85	°C
Operating Temperature	T_{op}	-40		+85	°C
Installation Temperature	T_I	0		+70	°C
Tensile Force, LC Connector to Cable	F_T	16			N
Tensile Force, Simplex RedLink Connector to Cable	F_T	8.5			N
Tensile Force, Duplex RedLink Connector to Cable	F_T	14			N

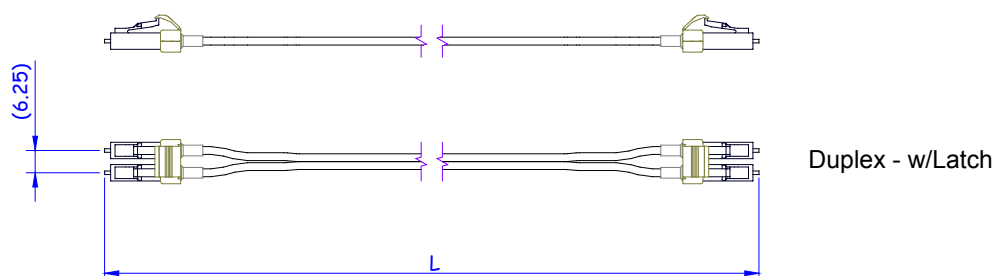


FIGURE 4
LC POF patch cords.

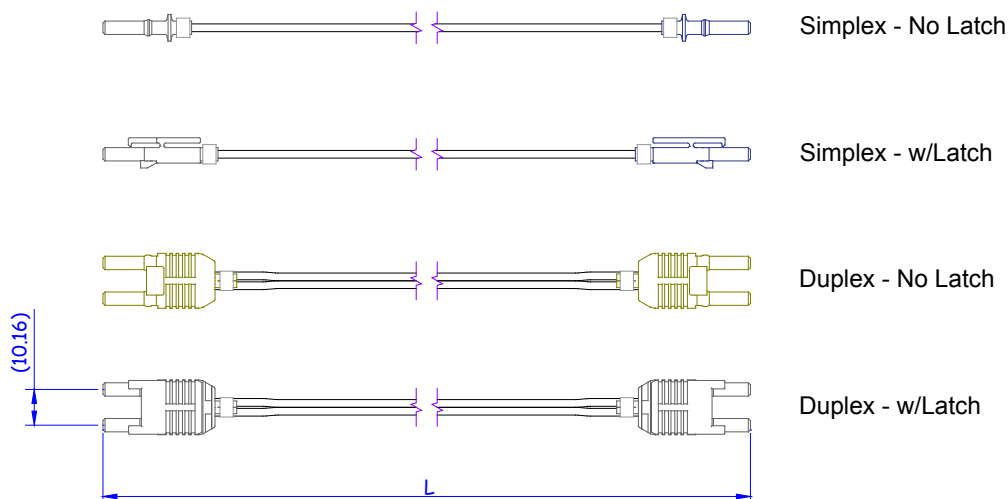


FIGURE 5
RedLink patch cords.

Note:

Simplex RedLink patch cords have a blue plug at one end and a grey plug at the other end.

ORDERING INFORMATION

**Table 4
ORDERING INFORMATION**

Part Number	Name	Description	Versatile Link Cross Reference
FC-100-0SB	100m Reel Simplex POF Cable	Reel 0.5NA SI-POF simplex	N/A
FC-500-0SB	500m Reel Simplex POF Cable	Reel 0.5NA SI-POF simplex	N/A
FC-100-0DB	100m Reel Duplex POF Cable	Reel 0.5NA SI-POF duplex	N/A
FC-500-0DB	500m Reel Duplex POF Cable	Reel 0.5NA SI-POF duplex	N/A
FP-00C-LD0	LC Plug for POF	LC plug for POF	N/A
FG-00C-LZ0	LC Dust Cap	White dust cap to fit LC plug	N/A
FP-00C-VS0	RedLink Simplex Friction Plug, Grey	Grey simplex plug with crimp ring, no latch	HFBR-4501Z
FP-00C-US0	RedLink Simplex Friction Plug, Blue	Blue simplex plug with crimp ring, no latch	HFBR-4511Z
FP-00C-YS0	RedLink Simplex Latching Plug, Grey	Grey latching simplex plug with crimp ring	HFBR-4503Z
FP-00C-XS0	RedLink Simplex Latching Plug, Blue	Blue latching simplex plug with crimp ring	HFBR-4513Z
FP-00C-RD0	RedLink Duplex Friction Plug	Duplex plug with crimp ring, no latch	HFBR-4506Z
FP-00C-SD0	RedLink Duplex Latching Plug	Duplex latching plug with crimp ring	HFBR-4516Z
FD-xxx-LDB	LC Duplex Patch Cord	XXX m LC duplex patch cable 0.5NA SI-POF	N/A
FD-xxx-BSB	RedLink Simplex Patch Cord, Friction Plugs	XXX m RedLink simplex patch cable with friction plug 0.5NA SI-POF	N/A
FD-xxx-CSB	RedLink Simplex Patch Cord, Latching Plugs	XXX m RedLink simplex patch cable with latch plug 0.5NA SI-POF	N/A
FD-xxx-RDB	RedLink Duplex Patch Cord, Friction Plugs	XXX m RedLink duplex patch cable with duplex friction plug 0.5NA SI-POF	N/A
FD-xxx-SDB	RedLink Duplex Patch Cord, Latching Plugs	XXX m RedLink duplex patch cable with duplex latch plug 0.5NA SI-POF	N/A

The sequence-xxx in each part number should be replaced by one of the following standard lengths:

Table 5 PART NUMBER LENGTH CODE	
Code	Length
30C	30 cm patch cord
01M	1 m patch cord
02M	2 m patch cord
05M	5 m patch cord
100	100 m reel
500	500 m reel