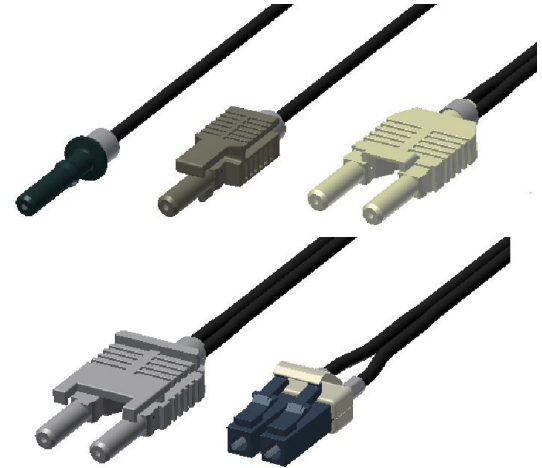


Plastic Optical Fiber (POF)

Cable Assemblies, Patch Cords and Plugs

DATA SHEET



Plastic Optical Fiber (POF) Cable Assemblies, 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 BEC and Avago POF transceivers, including RedLink™, Versalink, LC and OptoLock®.
- LC plugs available for easy cable termination
- Patch cords in a variety of convenient standard and custom lengths

APPLICATIONS

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

Description:

BEC offers a range of high quality Plastic Optical Fiber(POF) cables, [POF patch cords](#), POF Cable Assemblies, LC plugs, and pre-assembled patch cords in RedLink™, Versalink, LC and OptoLock® 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 odd length patch cords in small quantities. Both single cable and twin (figure of eight) cable are available.

BEC POF patch cords are available in a convenient range of lengths for use with RedLink™ or compatible transceivers, and for use with LC transceivers.

SPECIFICATIONS

Table 1
POF 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 (Duplex cable has white identifying bar on one strand)			

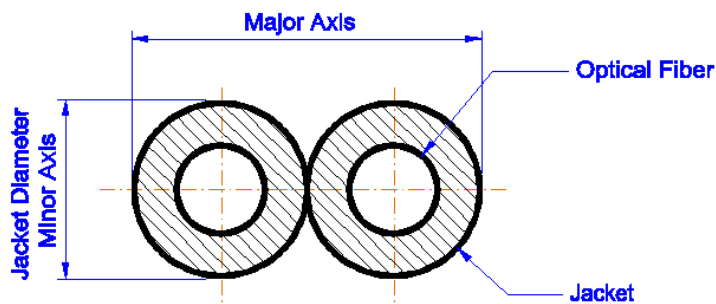


FIGURE 1
Duplex POF cross section

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						
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	
Tensile Force, Connector to Cable	F_T	70			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					

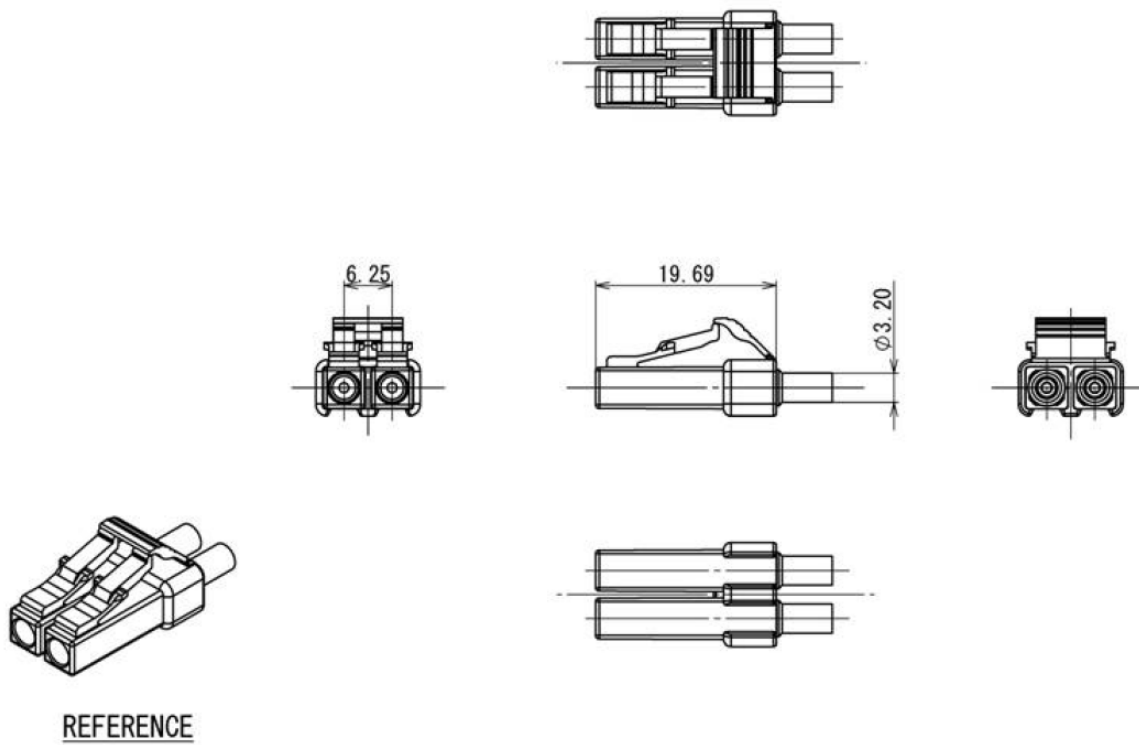
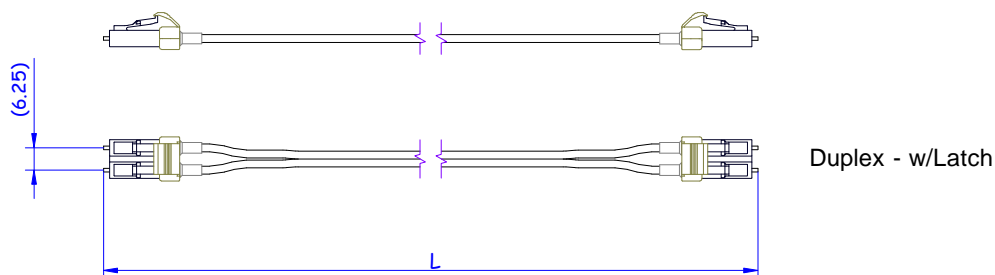


FIGURE 2
LC POF plug



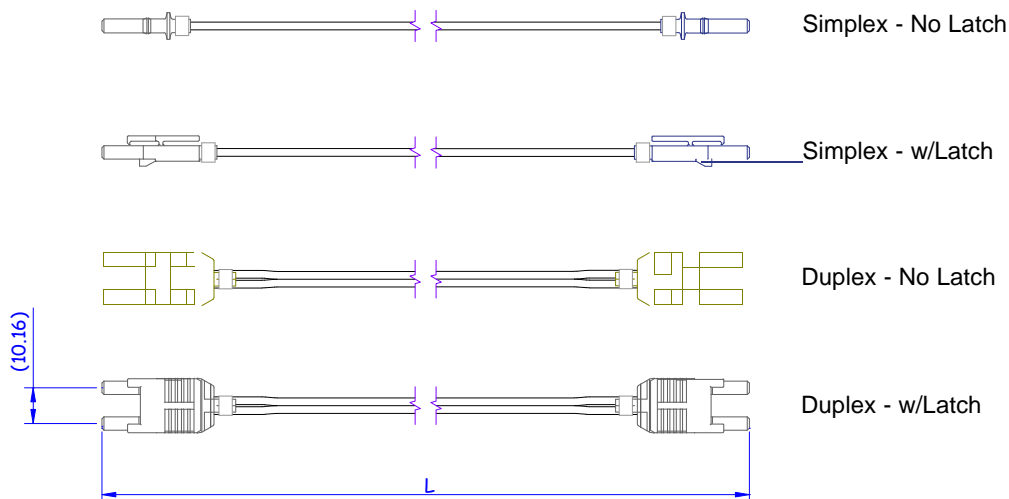
SPECIFICATIONS (continued)

Table 3 PATCH CORDS						
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	



Duplex - w/Latch

FIGURE 3
LC POF patch cords



Simplex - No Latch

Simplex - w/Latch

Duplex - No Latch

Duplex - w/Latch

FIGURE 4
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
CC2-1000	Reel Simplex POF Cable(Black Jacket)	Reel 0.5NA SI-POF simplex
CCW2-1000	Reel Simplex POF Cable(Black Jacket with white identifying bar)	Reel 0.5NA SI-POF simplex
CCVZ2-1000	UL Rated Flame Retardant Reel Simplex POF Cable(Black Jacket)	Reel 0.5NA SI-POF simplex
DC2-1000W	Reel Duplex POF Cable(White Jacket)	Reel 0.5NA SI-POF duplex
DC2-1000	Reel Duplex POF Cable(Black Jacket)	Reel 0.5NA SI-POF duplex
DCW2-1000	Reel Duplex POF Cable(Black Jacket with white identifying bar)	Reel 0.5NA SI-POF duplex
DCVZ2-1000	UL Rated Flame Retardant Reel Duplex POF Cable(Black Jacket)	Reel 0.5NA SI-POF duplex
BP-xxx-LC	LC Duplex Patch Cord	XXX m LC duplex patch cable 0.5NA SI-POF
BP-xxx-RL	RedLink Simplex Patch Cord, Friction Plugs	XXX m RedLink simplex patch cable with friction plug
BP-xxx-VL	VersaLink Simplex Patch Cord, Latching Plugs	XXX m RedLink simplex patch cable with latch plug

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
-500-	500 m reel
-01K-	1000 m reel

