

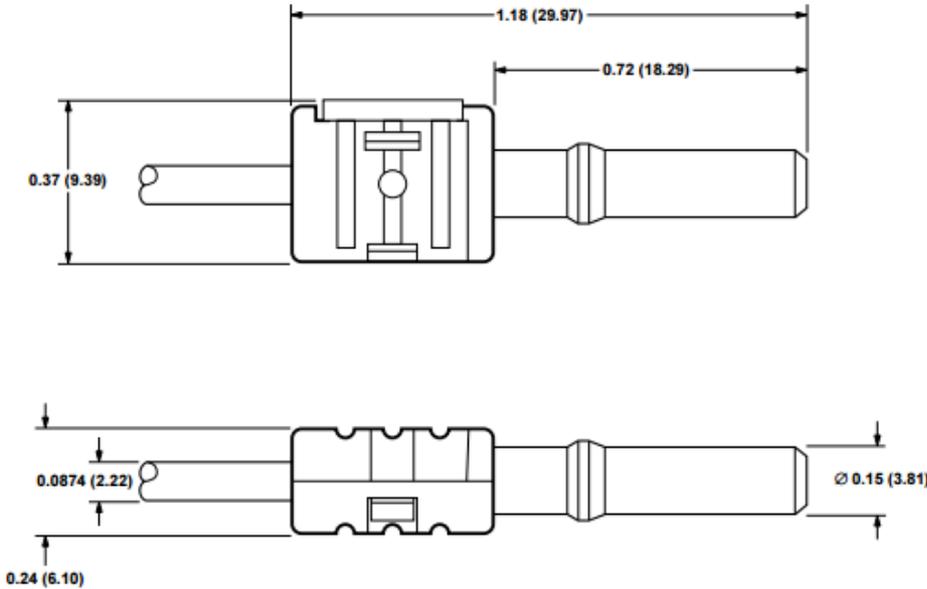
Datasheet

RS Fibre Optic Connector

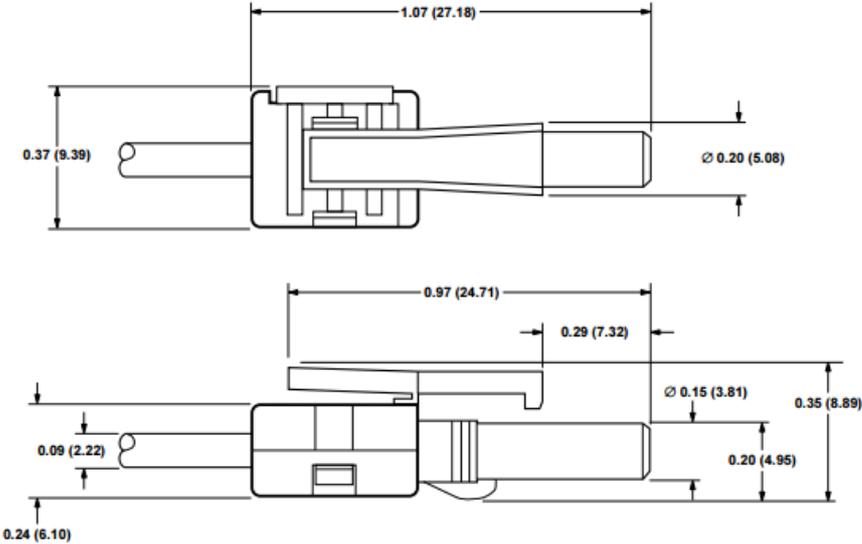
RS Stock number [255-8292](#)

Dimensions: mm

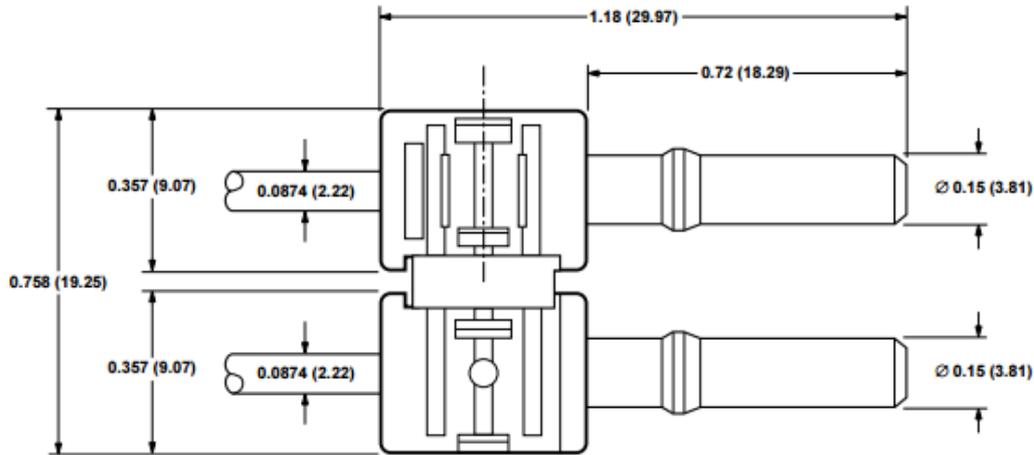
(Nonlatching):



(Latching):



Duplex Configuration



Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit	Note
Storage Temperature	T _S	-40	85	°C	1
Operating Temperature	T _O	-40	85	°C	1
Installation Temperature	T _I	0	70	°C	1

Connector Mechanical Characteristics

Parameter	Part Number	Symbol	Min.	Typ.	Units	Temp. (°C)
Retention Force to HFBR-0501 Series	HFBR-4531	F _{R-C}	3	8	N	+25
	HFBR-4532		47	80		
Retention Force to HFBR-0508 Series	HFBR-4531		8	12		
Tensile Force, Connector to Cable	HFBR-4531	F _T	40	50		-40 to +85
	HFBR-4532					

Note:

1. Storage and operating temperatures refer to the ranges over which the connectors can be used when not subjected to mechanical stress. Installation temperature refers to the ranges over which connectors may be installed onto the fiber and over which connectors can be connected and disconnected from the transmitter and receiver modules.

Features

- Requires no crimp ring or crimping tool
- Durable ULTEM plastic material
- Low cost
- Excellent retention force
- Symmetry in No latching connector gives Simplex/Duplex functionality with the same part

Applications

- These connectors can be used for any application in which plastic optical fibre is used including:
- Industrial control and voltage isolation
 - Automotive networks
 - Proprietary system interconnects
 - Gaming equipment
 - Telecommunications



Description

This series of connectors are an enhanced version on previous series, low cost connectors for plastic optical fiber, which are compatible with Agilent's versatile link series transmitters and receivers.

The innovative design uses a simple, snap – together concept which eliminates the need for crimping. This connector not only saves the user labor and tool cost, but reduces the yield loss due to installation error.

This series of connectors are available in two styles: Latching and Non Latching. For a duplex connector, two non latching simplex connectors can be snapped together. The connectors are made of a rugged, flame retardant plastic which is good for industrial and other harsh environments. This series of connectors are for use with Plastic Optical Fiber only!

Termination Guide

Step by step plastic cable connector instructions

The following step by step guide describes how to terminate plastic fiber optic cable. It is ideal for both field and factory installations. Connectors can be easily installed on cable ends with standard tools such as wire strippers and cutters.

Finishing the cable is accomplished with the Agilent polishing kit, consisting of polishing fixture, 600 grid abrasive paper and 3um pink lapping film. The connector can be used immediately after polishing.

Step 1: Stripping the Fiber

The zip cord structure of the duplex cable permits easy separation of the channels. The channels should be separated a minimum of 100mm to maximum of 150mm back from the ends to permit connecting, polishing and cable flexibility.

After cutting the cable to the desired length, strip off approximately 7mm of the outer jacket with 16 gauge wire strippers. When using the duplex connector arrangement, the separated duplex cable should be stripped to roughly equal lengths on each cable end.

For the non latching version, the same connector is used for simplex and duplex arrangement. No crimping is necessary. The top half of the connector will snap into the ferrule half to secure the fiber.



Step2: putting on the connector

Place the connector on each end of the fiber and slide the connector down until the fiber jacket stops. The fiber should protrude no less than 1.5mm from the end of the connector.

To install simplex connectors, flip the top half of the connector over and snap it into the ferrule half (with your fingers). When the top half latches inside the body of the ferrule half, proper connector – to – cable attachment is achieved.

For duplex connector installation place one connector on the top of the other, so that the top half of each connector is over the ferrule half of the opposite connector.

Manually press connectors together in the center of the arrangement, then latch by pressing on the sides of each connector. As with the simplex version, connectors are secured when top halves latch into the ferrule halves.

Step 3: Trimming and polishing

Any fiber in excess of 1.5mm protruding from the connector end should be cut off with wire cutters or scissors.

Insert the connector fully into the polishing fixture with the trimmed fiber protruding from the bottom of the fixture. This plastic polishing fixture can be used to polish two simplex connectors simultaneously or one duplex connector.

Press the polishing tool down on the 500 grit abrasive paper. Polish the fiber using a figure 8 pattern until the connector is flush with the bottom of the fixture. Wipe the connector and fixture with a clean cloth of tissue.

Step: 4 Finishing

Place the flush connector and polishing fixture on the dull side of the 2um ink lapping film and continue to polish the fiber in the same figure 8 pattern for around 25 strokes. The fiber end should be flat, smooth and clean.