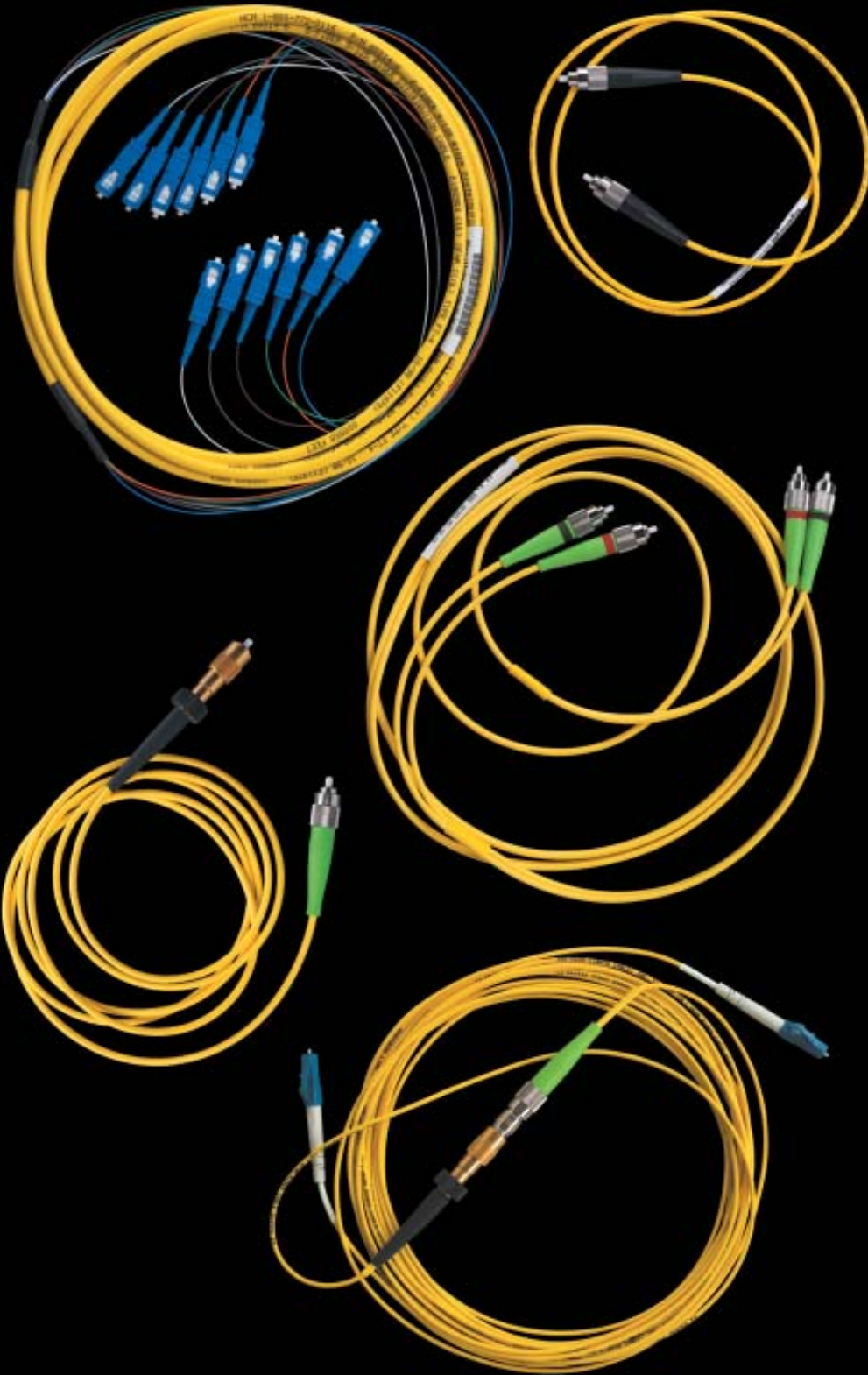


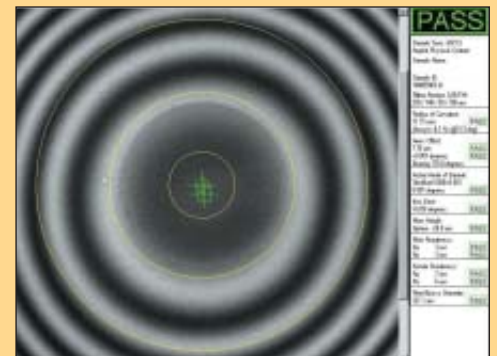
# PATCHCORDS & ATTENUATORS



**EigenLight** offers exceptional quality and reliability in its line of patchcords and in-line attenuators. These custom assemblies are Telcordia qualified and built for the most demanding OEM, production or lab applications.

## FEATURES

- 100% Interferometric Testing on Connectors
- 100% Insertion Loss Testing
- Connector End-Face Geometry to IEC Specifications or Better
- UPC Polish Standard
- Bar Coded Serialization and Documentation (Premium and Master Grade)



**INTERFEROGRAM OF  
CONNECTOR END-FACE**

EigenLight Corporation  
30 Centre Road, Somersworth, NH 03878  
Phone: 603.692.9200 • Fax: 603.692.9205  
[www.eigenlight.com](http://www.eigenlight.com)

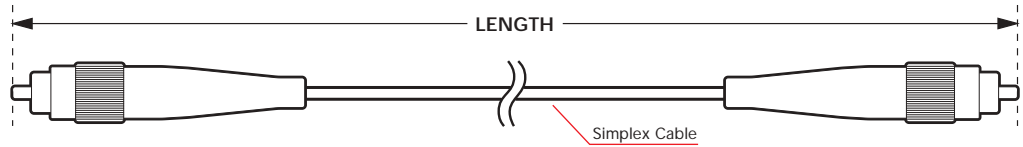
**EigenLight**  
CORPORATION

# PATCHCORDS



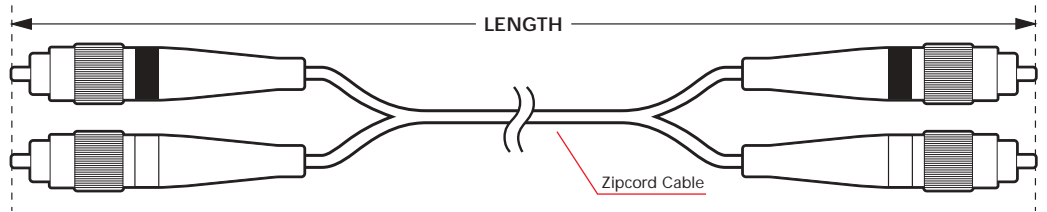
## SIMPLEX PATCHCORDS (J)

Designed for single point-to-point connections, simplex patchcords are available with all industry standard connectors and fiber. When ordering specify length as shown below.



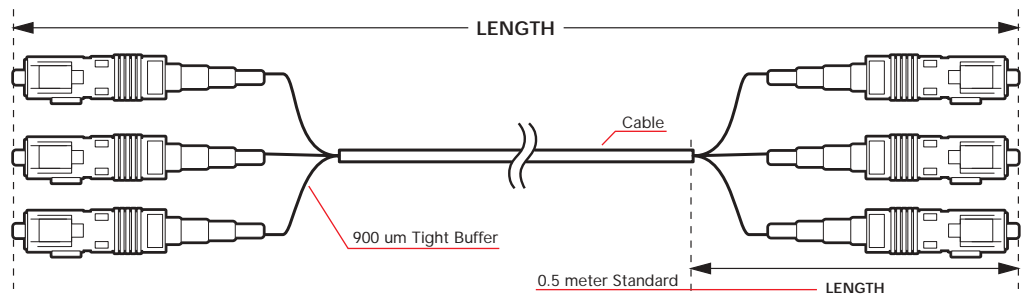
## DUPLEX PATCHCORDS (Z)

Similar to standard patchcords but featuring two fibers in a zipcord cable.



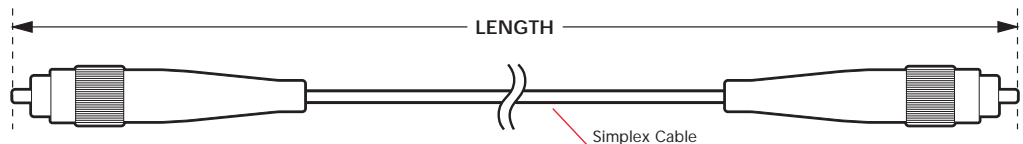
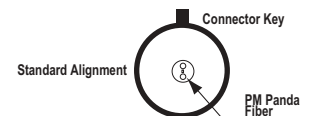
## MULTIPLEX PATCHCORDS (N)

Designed for applications that require a multiplicity of point-to-point connections over the same physical path, these multiple fiber patchcords are available with 4, 6, 12, or 24 fiber counts. Each fiber is color coded and connectorized for easy installation. When ordering specify length as shown below.



## PM PATCHCORDS (P)

PM patchcords use polarization-maintaining fiber to control polarization in point-to-point connections. Available with 980, 1310 or 1550 Panda fiber. Connector types FC/PC and FC/APC only. Slow axis alignment standard.

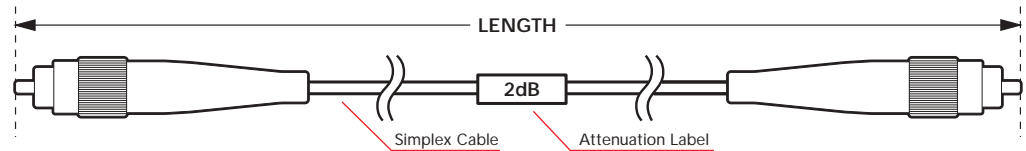


# ATTENUATORS



## FIXED IN-LINE ATTENUATORS (F)

Fixed in-line attenuators can be installed in place of conventional patchcords to provide a constant level of attenuation with >55 dB return loss. Available in singlemode fiber only. When ordering specify length as shown below.



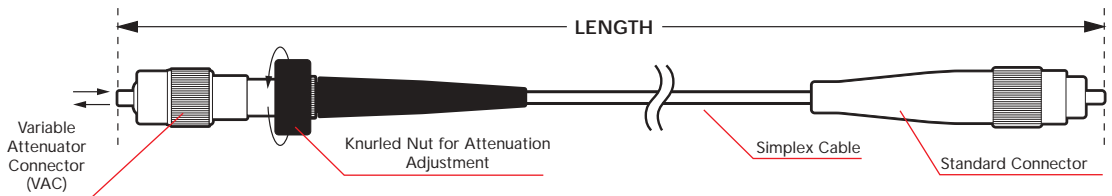
### SPECIFICATIONS

Available Attenuation	1.0 to 20 dB	Minimum Length	1 meter
Attenuation Tolerance <sup>1</sup>	±0.5 dB	Wavelength Range	1300 - 1620 nm
Return Loss <sup>1</sup>	>55 dB	Temperature Range	-20° C to +80° C
Maximum Input Optical Power	+23 dBm		



## VARIABLE ATTENUATOR PATCHCORDS (V)

Variable attenuator patchcords provide a compact and simple means for manually adjusting optical signals in fiber optic systems and test sets. When mated to a standard connector, the variable attenuator connector causes the optical signal to become attenuated by creating a variable air-gap between the connector ferrules. Attenuation is adjusted by means of a self-locking screw mechanism. Available in both single mode and multimode fiber.



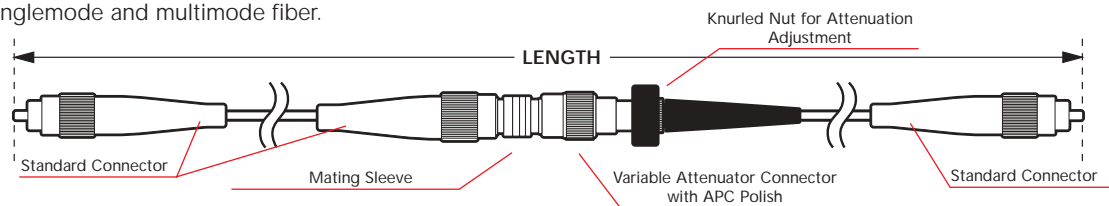
### SPECIFICATIONS

Range of Attenuation	APC VAC, Singlemode	0.5 to 35 dB	Resolution	0.1 dB
	PC VAC, Singlemode	0.5 to 28 dB	Maximum Input Optical Power	+20 dBm
	Multimode	0.5 to 20 dB	Wavelength Range (Singlemode)	1300 - 1620 nm
Return Loss	APC VAC, Singlemode	>60 dB	Wavelength Range (Multimode)	800 - 1580 nm
	PC VAC, Singlemode	14 dB	Temperature Range	0° C to +40° C
	Multimode	14 dB		



## VARIABLE IN-LINE ATTENUATOR (I)

Similar to the variable attenuator patchcord except that a standard patchcord is attached to the variable attenuator connector side. This assembly has an advantage over the attenuator patchcord by allowing mateability with any industry standard connector without sacrificing return loss performance. Available in singlemode and multimode fiber.



### SPECIFICATIONS

Range of Attenuation	Singlemode	0.5 to 35 dB	Maximum Input Optical Power	+20 dBm
	Multimode	0.5 to 20 dB	Wavelength Range (Singlemode)	1300 - 1620 nm
Return Loss <sup>1</sup>	Singlemode	>60 dB	Wavelength Range (Multimode)	800 - 1580 nm
	Multimode	14 dB	Temperature Range	0° C to +40° C
Resolution		0.1 dB		

1. Not Including Connectors

# PATCHCORDS & ATTENUATORS

## GENERAL CONNECTOR SPECIFICATIONS

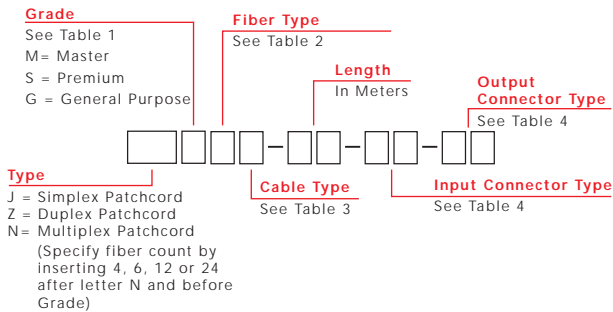
All connectors are guaranteed to meet the following specifications. Custom specifications available upon request.

Parameter	PC	APC	Units
	(Physical Contact)	(Angled Physical Contact)	
	MIN/MAX	MIN/MAX	
Radius of Curvature	10.0 / 25.0	5.0 / 12.0	millimeter
Fiber Height (Spherical Fit)	-50.0 / 50.0	-100.0 / 100.0	nanometer
Apex Offset	0.0 / 50.0	0.0 / 50.0	micron
Angle	-0.3 / 0.3	7.5 / 8.5	degrees
Key Error	N/A	-0.25 / 0.25	degrees
Fiber Surface Roughness	0.0 / 50.0	0.0 / 50.0	nanometer
Ferrule Surface Roughness	0.0 / 50.0	0.0 / 50.0	nanometer
Epoxy Diameter	123.0 / 130	123.0 / 130.0	micron
Return Loss (Mated Connector)	50/NA	65/NA	dB

## Ordering Information

All connectors are tested for insertion loss and end-face geometry.

### Patchcord Ordering Information:



### Attenuator Ordering Information:

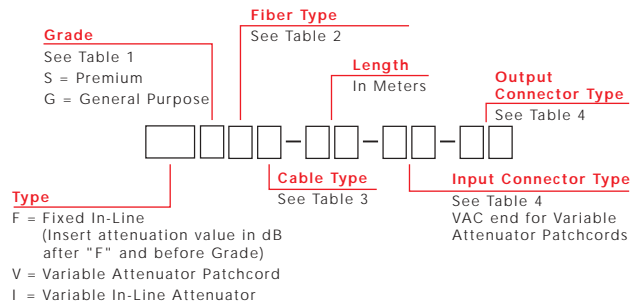


TABLE 1: Grade

Code	Description
S	<b>Premium Grade</b> • Comes with serialization and documentation of loss and end-face geometry. • Connector Loss <0.15 dB
G	<b>General Purpose Grade</b> • Connector Loss <0.3 dB
M	<b>Master Grade</b> • Comes with serialization and documentation of loss and end-face geometry. • Connector Loss <0.05 dB

TABLE 2: Fiber Type

Code	Description
0	Corning SMF28 Singlemode Fiber
1	Lucent Style Singlemode Fiber
2	50/125 um Multimode Fiber
3	62.5/125 um Multimode Fiber
4	Corning HI1060
5	PM Panda 1310
6	PM Panda 1550
7	PM Panda 980 nm

TABLE 3: Cable Type

Code	Description
0	3 mm Diameter
1	2 mm Diameter
2	1.6 mm Diameter
3	900 um PVC Tight Buffer Only
4	900 um Hytel Tight Buffer Only
5	3 mm Diameter Cable with Wire Conductor Between Connectors (Simplex Only)

TABLE 4: Connectors

Code	Connector Type
10	FC
15	FC/APC
20	ST
25	ST/APC
30	SC
35	SC/APC
40	LC
45	LC/APC
50	MU
90	Bare Fiber

Note: Connector losses measured against a master patchcord.