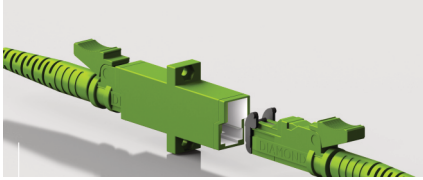




# Fiber Optic Test Jumpers

Tests and Measurement, Active Device Termination, Sensors, Industrial and Military



### Features:

The highest quality of optical connector's assembly, 100% measurement of insertion loss and return loss, 100% inspection of polishing (interferometric measurement), minimal eccentricity of fiber core within ceramic ferrule, color coding, labeling or laser marking on request, meets IEC, CENELEC and Telcordia specifications.

Test Jumpers	Reference SM Patchcord		Master SM Patchcord		Offset Master Patchcord	
	Side A Ref. Connector	Side B Std. Connector	Side A Master Connector	Side B Ref. Connector	Side A Offset Connector	Side B Ref. Connector
IL [dB]*	≤ 0.1	≤ 0.3 (typ.0.22)	≤ 0.1	≤ 0.1	> 0.5 <sup>1)</sup>	≤ 0.1
RL (UPC) [dB]**	≥ 50 (typ.55)	≥ 50 (typ.55)	≥ 50 (typ.55)	≥ 50 (typ.55)	≥ 50 (typ.55)	≥ 50 (typ.55)
RL (APC) [dB]**	≥ 60 (typ.68)	≥ 60 (typ.68)	≥ 60 (typ.68)	≥ 60 (typ.68)	x	x
Connector Type***	SC, E2000...	SC, E2000...	SC, E2000...	SC, E2000...	SC, E2000...	SC, E2000...
Eccentricity [μm]	< 0.5	-	< 0.3	< 0.5	> 1.5 & < 5	< 0.5
Apex Offset [μm]	≤ 30	≤ 50	≤ 30	≤ 30	≤ 50	≤ 30
Radius of Curvature RC/UPC 2.5 Ferr. [mm]	10 ≤ RC ≤ 25	7 ≤ RC ≤ 25	10 ≤ RC ≤ 25	10 ≤ RC ≤ 25	10 ≤ RC ≤ 25	10 ≤ RC ≤ 25
Radius of Curvature RC/UPC 1.25 Ferr. [mm]	7 ≤ RC ≤ 25	7 ≤ RC ≤ 25	7 ≤ RC ≤ 25	7 ≤ RC ≤ 25	7 ≤ RC ≤ 25	7 ≤ RC ≤ 25
Radius of Curvature RC/APC [mm]	5 ≤ RC ≤ 12	5 ≤ RC ≤ 12	5 ≤ RC ≤ 12	5 ≤ RC ≤ 12	5 ≤ RC ≤ 12	5 ≤ RC ≤ 12
Fiber Height FH [nm]	-50.0 ≤ FH ≤ +50.0	-125.0 ≤ FH ≤ +50.0	-50.0 ≤ FH ≤ +50.0	-50.0 ≤ FH ≤ +50.0	-125.0 ≤ FH ≤	-50.0 ≤ FH ≤ +50.0
Operating Temperature (standard/extended) [°C]	20 ~ +70/-40 ~ +85	-20 ~ +70/-40 ~ +85	-20 ~ +70/-40 ~ +85	-20 ~ +70/-40 ~ +85	-20 ~ +70/-40 ~ +85	-20 ~ +70/-40 ~ +85
Measured Against	Master	Reference	Master	Master	/	Master

<sup>1)</sup> For eccentricity ≥ 1.5 μm

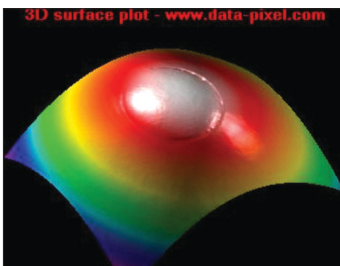
High Performance Jumpers	Standard SM Patchcord		High Quality SM Patchcord		Excellent SM Patchcord	
	Side A Std. Connector	Side B Std. Connector	Side A HQ Connector	Side B HQ Connector	Side A Exc. Connector	Side B Exc. Connector
IL [dB]*	≤ 0.3 (typ.0.22)	≤ 0.3 (typ.0.22)	≤ 0.2 (typ.0.15)	≤ 0.2 (typ.0.15)	≤ 0.1 (typ.0.07)	≤ 0.1 (typ.0.07)
RL (UPC) [dB]**	≥ 50 (typ.55)	≥ 50 (typ.55)	≥ 50 (typ.55)	≥ 50 (typ.55)	≥ 50 (typ.55)	≥ 50 (typ.55)
RL (APC) [dB]**	≥ 60 (typ.68)	≥ 60 (typ.68)	≥ 60 (typ.68)	≥ 60 (typ.68)	≥ 60 (typ.68)	≥ 60 (typ.68)
Repeatability - 500 matings [dB]	+/- 0.1	+/- 0.1	+/- 0.1	+/- 0.1	+/- 0.1	+/- 0.1
Connector Type***	SC, E2000...	SC, E2000...	SC, E2000...	SC, E2000...	SC, E2000...	SC, E2000...
Operating Temperature (standard/extended) [°C]	-20 ~ +70/-40 ~ +85	-20 ~ +70/-40 ~ +85	-20 ~ +70/-40 ~ +85	-20 ~ +70/-40 ~ +85	-20 ~ +70/-40 ~ +85	-20 ~ +70/-40 ~ +85
Measured Against	Reference	Reference	Reference	Reference	Reference	Reference

Possible coding: boot color, housing color, laser marking

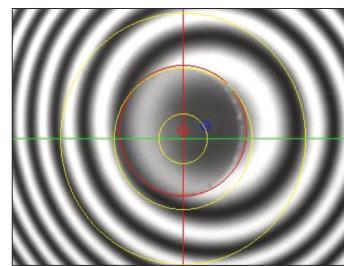
\*) Tested at 1310, 1550 and 1625nm \*\*\*) Tested at 1310 \*\*\* SC, E2000, FC, DIN, MU, LC

## Interferometric Measurement

3D surface plot

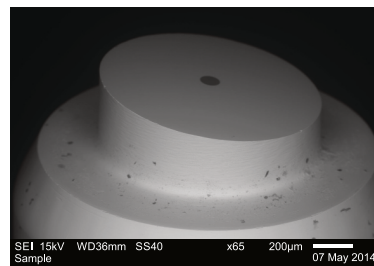


2D surface plot



## Electron Microscope

Optical inspection



Operating Wavelength λ [nm]	Insertion loss IL [dB]	Mode Field Diameter MFD [μm]
1950	≤ 0.3	11
	≤ 1.5	3.2
1060 (980 - 1600)	≤ 0.6	5.8
980 (980 - 1600)	≤ 0.9	4.2
780 (780 - 970)	≤ 0.7	5
630 (600 - 770)	≤ 0.7	5
460 (450 - 600)	≤ 1.2	3.5
405 (400 - 680)	≤ 1.5	3

## Measurement of Optical Parameters



## Armoured Jumpers



## LC/PC Master Connectors

