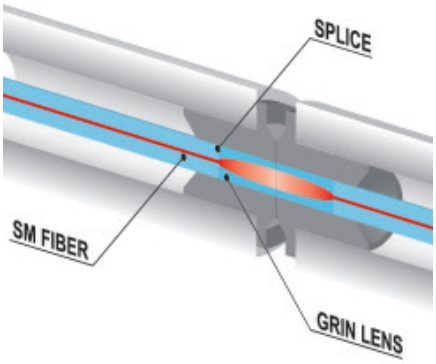
DIAMOND
Fiber Optic Components

PS - Power Solutions

OPTICAL INTERFACE



The recent trend to increase power in optical transmission systems due to traffic increase and the transition to 100G networks results in a higher power density on the optical interface.
Standard singlemode connectors become susceptible to heat related damage when power density reaches 0.3MW/cm².
DIAMOND offers the **PS** optical interface which expands the MFD of a SM fiber by splicing a GRIN lens at the extremity. The MFD at the end of the connector is thus expanded by a factor of 4, increasing the contact surface by a factor of about 16. As a result the heat issues decrease but cleanliness of the connectors and mating adapters is still important.
Using our Active Core Alignment (ACA) technology, Diamond can achieve unrivaled low IL performance for the PS technology by aligning the fiber exit angle instead of the core eccentricity as Diamond usually does on SM fiber.
This Optical Interface is applicable to most connectors interfaces, but due to safety issues Diamond suggests the PS optical interface on E-2000™ and F-3000™. The DMI connector interface is also available for board level terminations.

Specifications of the PS Optical Interfaces:

- 0.1dB Grade ferrules with diameter tolerance	< 0.2µm
- ACA with low exit angle	< 0.15°
- Eccentricity	< 3.5µm
- Increased Mode field Diameter	< ca. 35µm

- Ultra polish with 100% Endface inspection
- Available as PC 0° version

The endface geometry is specified as:

▶ Ferrule radius	10÷20mm
▶ Core Apex	50µm
▶ Protrusion	-50÷200 nm (undercut negative)

Please, contact us for a list of approved fibers and cables.

FEATURES AND BENEFITS

- Long term test at 6W, 2000h on E-2000™ PS connector.
- Low Insertion loss
- Ultra high polish for high return loss
- Improved power resistance (x16)

AVAILABLE AS

- Pigtails and patchcords on the following connector interfaces:
  - E-2000™
  - F-3000™
  - DMI

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SPECIFICATIONS

CONNECTOR TYPE	WAVELENGTH (nm)	IL (dB) AGAINST REFERENCE		RL AGAINST REFERENCE		
		Typ.	Max.	Connected		Unmated
				PC 0°	APC 4°	APC 4°
E-2000™ PS	1625 - 1550 - 1310 1060 - 980	0.2 0.3	0.4 0.6	45 35*	75 60*	50
DMI PS	1625 - 1550 - 1310 1060 - 980	0.2 0.3	0.4 0.6	45 35*	75 60*	50
F-3000™ PS	1625 - 1550 - 1310 1060 - 980	0.2 0.3	0.4 0.6	45 35*	75 60*	50
TEST CONDITIONS		IEC 61300-3-4		IEC 61300-3-6 OLCR method / *OCWR method		

NOTE - The APC version has an angle of 4° instead of 8°, due to a trade-off between Insertion Loss and Return Loss values.

ORDER INFORMATION

To order your connectors using PS technology, please specify:

- The connector type (E-2000™ PS, F-3000™ PS or DMI PS), wavelength and end-face (PC or APC). Example: DMI PS1550 APC or E-2000™ PS980 APC
- Fiber specification: MFD, NA, fiber/cable structure and material, operation wavelength
- Please refer to the individual data sheets for detailed specifications on individual connector types.