

Enhanced Fiber Optic Polarizers

1280nm – 1640nm



FEATURES:

- Very high extinction ratio
- Low loss
- Near zero back reflection
- Wide wavelength operating range
- Small size
- Rugged packaging
- All-fiber construction

EXAMPLE APPLICATIONS:

- PMD measurement
- PDL measurement
- Polarization control
- Single polarization transmitters
- Polarization sensitive modules
- Fiber optic gyroscopes
- Polarimetric sensor systems
- Test & Measurement instrumentation

EVANESCENT FIELD POLARIZERS

Phoenix evanescent field polarizers are produced by replacing the cladding in the locally processed region of the fiber with a polarization selective material. Within the polarizing region one polarization mode of the single mode fiber is highly attenuated and the other mode propagates with virtually no loss. Extinction ratios above 50dB are readily achievable whilst maintaining extremely low transmission loss of the required polarization mode.

ENHANCED RANGE

Phoenix has an extensive selection of polarizers to meet different applications and budgets. The enhanced range shows the full capability of the evanescent field technology providing very high extinction ratio with low excess loss of the required polarization state over a wide band of wavelengths. These are designed specifically for applications in which very pure polarization states, and/or a wide operating wavelength range is required.



SPECIFICATIONS:	Premium	High Grade	Wide Band
Wavelength range ¹	1280nm – 1320nm 1480nm – 1530nm 1530nm – 1640nm	1280nm – 1320nm 1480nm – 1530nm 1530nm – 1640nm	1280nm – 1640nm
Minimum extinction ratio	>40dB	>50dB	>30dB
Insertion loss ²	<0.5dB	<0.5dB	<0.5dB
Return loss ³	>70dB		
Package size ⁴	50 x 2 dia.	50 x 2 dia.	50 x 2 dia.
Operating temperature range ⁵	-5 ⁰ C to 70 ⁰ C		
Transportation/storage ⁶	-40 ⁰ C to 85 ⁰ C		
Fiber type ⁷	SMF 28	SMF28	SMF28
Pigtails ⁸	1m fiber standard, 900µm loose tube optional		
Outer packaging	Stainless steel tube		

All dimensions are approximate and may vary slightly.

Notes to Specifications:

- All specifications are worst case for the wavelength range selected.
- All polarizers are tested and graded into performance groups.
- SM – single mode fiber: PM – polarization maintaining fiber.

1. The devices will provide polarization over the full wavelength range for which the fiber is single mode. Performance characteristics are wavelength dependent and the devices will meet specification as follows:

- Type 15 – 1530nm to 1640nm
- Type 14 – 1480 nm to 1530 nm
- Type 13 – 1280nm to 1320nm

2. Insertion loss is without connectors.

3. The all-fiber technology gives an excellent return loss figure of >70dB.

4. Dimensions are in mm.

5. The operating temperature range is specified for typical telecommunications operation. Please discuss with the sales representative if operation outside the specified range is required.

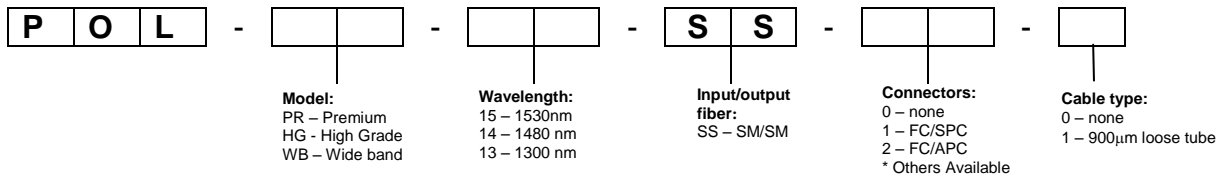
6. The devices are very robust for storage and transportation.

7. Standard single mode Corning SMF 28 fiber is used for the SM devices and PANDA polarization maintaining fiber for the PM devices. The technology is applicable to any fiber type; please contact the sales representative to discuss any alternative fiber.

8. Pigtails are typically no shorter than 1m.

PRODUCT ORDERING INFORMATION:

Note: Not all options below are available in all polarizer types, please check with our sales representative, to ensure your specific requirements can be met.



Phoenix Photonics Limited

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