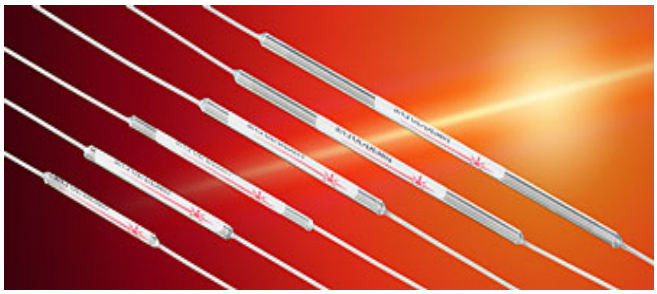
IN-LINE FIBER OPTIC POLARIZER

FULL FIBER TYPE

PARTIAL POLARIZER(LOW ER) AND HIGH ER MODULE

(1280nm ~ 1625nm)



EXAMPLE APPLICATIONS
• PMD measurement
• PDL measurement
• Polarization control
• Single polarization transmitters
• Polarization sensitive modules
• Fiber optic gyroscopes
• Optical fiber sensor systems
• Test & Measurement instrumentation

FEATURES
• High extinction ratio
• Low loss
• Near zero back reflection
• Low cost
• Wide wavelength operating range
• Small size
• Rugged packaging
• All-fiber construction

EVANESCENT FIELD POLARIZERS

PHOTONIK evanescent field fiber optic polarizer modules are fabricated 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 of less than 0.5dB to more than 50dB are readily achievable whilst maintaining extremely low transmission loss of the required polarization mode. This non-invasive technology leaves the fiber core continuous providing optimum performance.

OPERATIONAL WAVELENGTH RANGE

PHOTONIK range of polarizer modules will polarize light of any wavelength from 1280nm to 1625nm in Corning SMF28 optical fiber. Typically extinction ratio and insertion loss increases with wavelength for the SM/SM devices. The polarizer modules are specified for a particular wavelength range although they are operational in the outside wavelength bands, performance may differ slightly to the specifications. Polarization maintaining polarizer moduless have a flat extinction ratio response across the band offering broadband benefits in certain applications.

Contact Information:

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Local Representative:

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STANDARD PRODUCT SPECIFICATIONS:

SPECIFICATIONS	SM/SM	SM/PM	PM/PM
Wavelength range [1]	**1530nm – 1625nm**		
Maximum extinction ratio [2]	>45dB	>40dB	>40dB
Insertion loss [3]	<0.5dB	<1dB	<1.5dB
Wavelength range [1]	**1480nm – 1530nm**		
Maximum extinction ratio [2]	>45dB	>40dB	>40dB
Insertion loss [3]	<0.5dB	<1dB	<1.5dB
Wavelength range [1]	**1280nm – 1320nm**		
Maximum extinction ratio [2]	>35dB	>35dB	>35dB
Insertion loss [3]	<0.5dB	<1dB	<1.5dB
Return loss [4]	>70dB		
Package size [5] standard	50 x 2 dia	75 x 3 dia	100 x 3 dia
miniature	30 x 2 dia	40 x 3 dia	50 x 3 dia
Operating temperature range [6]	-5ºC to 70℃		
Transportation/storage [7]	-40ºC to 85ºC		
Fiber type [8]	SMF 28	SMF28/PANDA	PANDA/PANDA
Pigtails [9]	1m fiber standard, 900um loose tube optional		
Outer packaging	Stainless steel tube		

All dimensions are approximate and may vary slightly.

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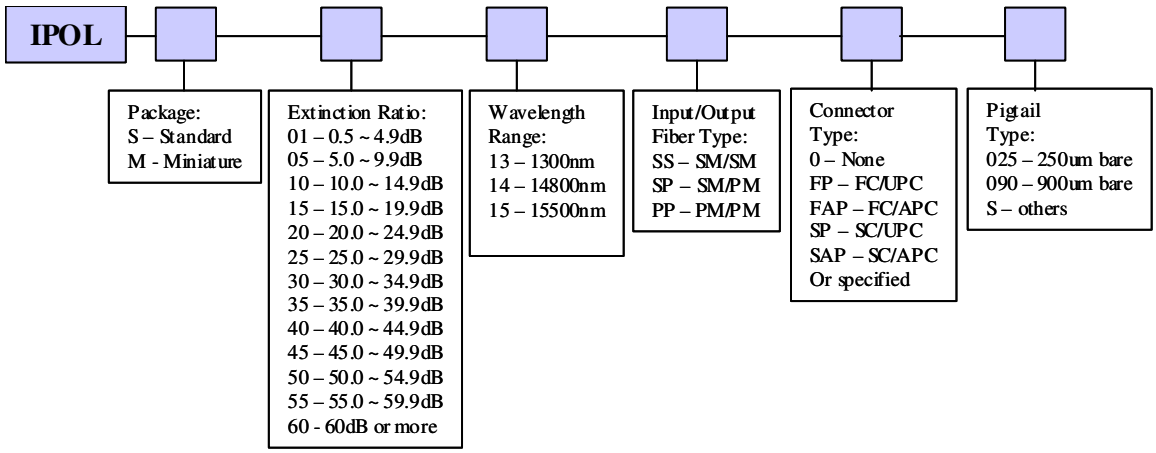
NOTES FOR SPECIFICATIONS:

- All specifications are worst case for the wavelength range selected; actual products commonly exhibit better performance.
- 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 1625nm
   Type 14 – 1480nm to 1530nm
   Type 13 – 1280nm to 1320nm
2. These are the maximum extinction ratios typically achievable for each of the options. If alternative values are required please discuss with our sales representative.
3. Insertion loss is typically in the region of 0.2dB (SM/SM) to 1dB (PM/PM), excluding connectors.
4. The all-fiber technology gives an excellent return loss figure of >70dB.
5. Dimensions are in mm for Standard & Miniature types.
6. The operating temperature range is specified for typical telecommunications operation. Please discuss with the sales representative if operation outside the specified range is required.
7. The devices are very robust for storage and transportation.
8. 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.
9. Pigtails are typically not shorter than 1m.

ORDERING INFORMATION:

Note: Other options are available for all polarizer module types, contact us or our sales representative to ensure your specific requirements can be met.



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