



## Polarization Insensitive Isolator for Hi-Rel (PDSI Series)

Spec. Review No.: SR23959

### Description

The Polarization Insensitive Isolator is designed and manufactured for autonomous vehicles. The unique manufacturing process and optical path epoxy-free design enhance the device high power handling capability. The device is characterized with high performance, high reliability. It has been widely used in submarine repeaters, Raman amplifiers, DWDM systems and other optics communication systems suppress back reflection and back scattering.

### Key Features

- Low Insertion Loss
- High Operating Power
- High Reliability

### Applications

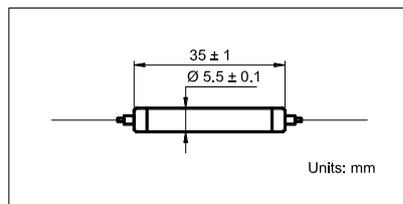
- Repeaters
- Raman Amplifiers

### Specifications

| Parameter   | Unit | Dual Stage     |
|---|------|----------------|
| Center Wavelength ( $\lambda_c$ )                                     | nm   | 1550           |
| Min. Isolation, $\lambda_c \pm 20$ nm, 23 °C, all polarization states | dB   | 50             |
| Max. Insertion Loss, $\lambda_c \pm 20$ nm, all polarization states   | dB   | 0.4            |
| Min. Return Loss, 23 °C   | dB   | 55             |
| Max. Polarization Dependent Loss, $\lambda_c \pm 20$ nm               | dB   | 0.1            |
| Max. Temperature Dependent Loss, $\lambda_c \pm 20$ nm                | dB   | 0.12           |
| Max. Polarization Mode Dispersion                                     | ps   | 0.05           |
| Max. Average Optical Power  | mW   | 500            |
| Max. Tensile Load   | N    | 5              |
| Fiber Type  | -    | SMF-28/200kpsi |
| Failures In Time (FIT)  | -    | < 0.1          |
| Operating Temperature   | °C   | - 40 to +105   |
| Storage Temperature   | °C   | - 40 to +85    |

<sup>1</sup>IL is 0.3 dB higher, RL is 3 dB lower for each connector added.

### Package Dimensions



### Ordering Information

PDSI-①①-②-③-④-⑤-⑥-SUB

①①: Wavelength

②: Grade

③: Connector Type

④: Fiber Type

55 - 1550 nm

P - Premium

1 - FC/UPC

4 - SC/APC

B - 250  $\mu$ m bare fiber

SS - Specify

2 - FC/APC

N - None

L - 900  $\mu$ m loose tube

3 - SC/UPC

S - Specify

S - Specify

⑤: Fiber Length  
1 - 1.0 m  
S - Specify

⑥: Operating Power  
0.5 - 500 mW  
01 - 1000 mW  
S - Specify

