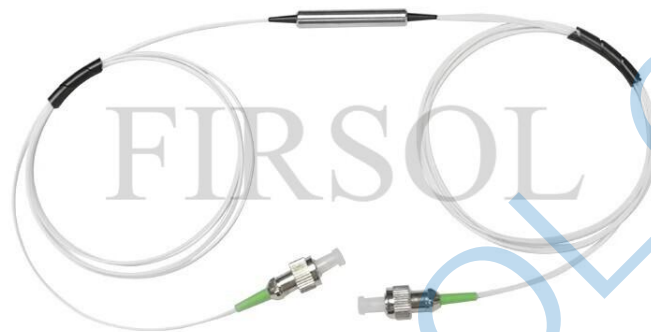


Single Mode Polarization Insensitive Optical Isolator



Description

A Single Mode Polarization Insensitive Optical Isolator is a passive fiber optic device that allows light transmission in one direction while blocking back reflections, ensuring stable operation of lasers and optical communication systems regardless of input polarization state.

Firsol offers customized isolators tailored to user requirements regarding wavelength, power, and fiber type. Our products are widely utilized in fields such as fiber lasers, fiber amplifiers, underwater laser communication, fiber sensing, and scientific research.

Features

- Low Insertion Loss
- High Isolation
- Compact Size
- High Stability and Reliability

Applications

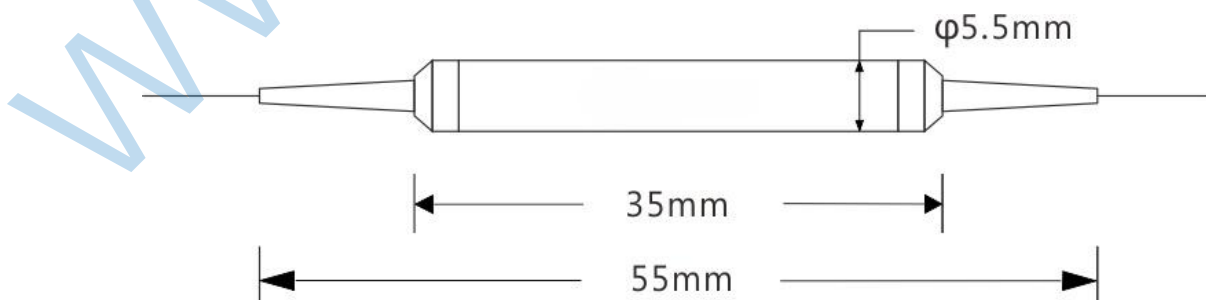
- Fiber Laser
- Fiber Optic Amplifier
- Fiber Optic Sensing
- Fiber Optic Communication

Specifications








Parameter	Unit	Value					
Center Wavelength	nm	1064		1310/1480/1550		1950/2000/2050	
Operating Wavelength Range	nm	±5	±5	±20	±20	±20	±20
Single/Dual Stage	-	Single Stage	Dual Stage	Single Stage	Dual Stage	Single Stage	Dual Stage
Peak Isolation (Typ.)	dB	40	55	45	55	20	40
Isolation (Min.)	dB	32	45	32	45	16	35
Insertion Loss (Max.)	dB	1.8	3.2	0.5	0.6	1.2	1.5
Return Loss (Min.)	dB	50					
Polarization Dependent Loss	dB	≤0.2					
Max Optical Power (CW)	W	0.2	0.1	0.5/1/2/5			
Max Peak Power (Pulse)	KW	<1@ns pulse					
Fiber Type	-	Hi1060		SMF-28e		SM1950	
Package Dimensions	mm	Φ5.5 x L35					
Operating Temperature	°C	-5 to +70					
Storage Temperature	°C	-40 to +85					

Notes: Tested at 25 °C. Data exclude connectors; adding connectors increases insertion loss by 0.3 dB and reduces return loss by 5 dB.

Product Dimensions



Ordering Information

 nm	 W			 m	 μm	
Center Wavelength	Max Optical Power (CW)	Single/Dual Stage	Fiber Type	Pigtail Length	Pigtail Diameter	Connector
1064nm	0.1W	Single Stage	Hi1060	0.5m	250μm Bare Fiber	None
1310nm	0.2W	Dual Stage	SMF-28e	1.0m	900μm Loose Tube	LC/UPC
1480nm	0.5W		SM1950	1.5m		LC/APC
1550nm	1W			2.0m		SC/UPC
1950nm	2W					SC/APC
2000nm	5W					FC/UPC
2050nm						FC/APC
						ST/UPC
						ST/APC

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