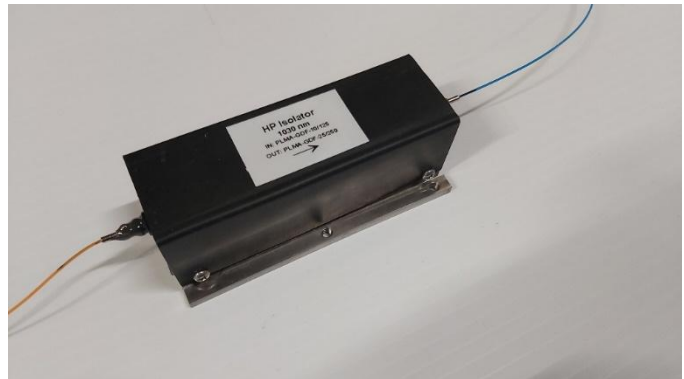


[OEPAS-IWI-100]

## High Power Infrared Wavelength Isolator (OEM)

### Features:

- For high power applications
- In fiber lasers, amplifiers, and other optical system
- For minimizing the optical feedback
- Fiber pigtailed or receptacle type
- Polarization dependent
- Fixed wavelength ranges
- PM, or PLMA fibers
- Thread holes for easy mounting
- High isolation, low insertion loss
- High stability, long term reliability



### Applications:

- Research and development
- Production of fiber lasers and amplifiers
- System testing
- Fiber optic component testing and measurement
- Back reflection protection



OEPAS-IWI-100

### Product description:

The new High-Power Infrared Isolator from O/E Land Inc. is a unidirectional device used to protect a source from back reflections or signals that may occur in optical systems. Back reflections can damage a laser source or cause it to mode hop, amplitude modulates, or frequency shift. In high-power applications, back reflections can cause instabilities and power spikes, and even damaging the light source. Our High-power Isolator is a passive magneto-optic device that preferentially transmits light along a single direction, shielding upstream optics from back reflections.

Operation of the isolator is based on the Faraday Effect. According to this, the plane of polarized light rotates while transmitting through glass crystal that is exposed to a magnetic field. The direction of rotation is dependent on the direction of the magnetic field and not on the direction of light propagation; thus, the rotation is non-reciprocal.

The High-power isolator from O/E Land Inc. consists of an input polarizer, a Faraday rotator with magnet, and an output polarizer. The input polarizer allows only linearly polarized light entering the Faraday rotator. The Faraday element rotates the input light's polarization by 45°, after which it exits through another linear polarizer. The output light is now rotated by 45° with respect to the input signal. In the reverse direction, the Faraday rotator continues to rotate the light's polarization in the same direction that it did in the forward direction so that the polarization of the light is now rotated 90° with respect to the input signal. This light's polarization is now perpendicular to the transmission axis of the input polarizer, and as a result, the energy is either reflected or absorbed depending on the type of polarizer.

### Specifications:

Parameter	Unit	OEPAS-IWI-100
Type		High-power, Fixed wavelength, Polarization dependant, Narrow bandwidth
Versions available	-	Free spaced; Fiber pigtailed
Center wavelength	nm	980, 1030, 1064, 1080, 1150, 1310, 1550, 2000
Center wavelength range	nm	±5
Insertion loss	dB	1.5
Extinction ratio	dB	>20
Isolation	dB	>25
Polarization alignment	-	Slow-axis: passing; Fast-axis: blocking
Power handling (CW)	W	2, 5, 10, 20, 30, 50
Power handling (pulsed; peak)	kW	1 ~ 50
Input beam aperture (free-spaced version)	mm	2.5 or customer specified
Fibre type	-	PLMA-GDF-10/125 PLMA-GDF-25/250, or customer specified
Cable jacket size	mm	0.9 tubing
Operating temperature	°C	+10 to +50
Storage temperature	°C	0 to +60
Dimensions (LxWxH) (approx.)	mm	100x44x36, or others depend on wavelength, power level

### Ordering number:

OEPAS-IWI-100 -WL-P-Type:	WL	P	Type
	Wavelength (nm)	Power handling (W)	FS: Free spaced FP: Fiber pigtailed
Example:	OEPAS-IWI-100 -1030-20-FP		