

# Free Space Optical Isolator (TGGG)

## Product Description

The OITG Series Free Space optical Isolator is an unidirectional light valve that transmits light in normal direction while blocking backreflection and backscattering in the reverse direction. The device protects a laser source from destabilizing feedback or damage from back reflected light. The OITG isolators are based on TGG Faraday crystals of low loss and high optical power threshold. High power fused silica PBS cubes are used for polarization filtering and waveplate is optional to rotate the polarization of the output beam to a desired direction. Double escape ports are built-in for added application flexibility.

With Agiltron's proprietary magnetic-optics technology and proven advanced micro-optics design, it features low insertion loss, high isolation, compact structure, high power handling, and high stability. Agiltron also provides customized design to meet special applications.

## Features

- Low Insertion Loss
- High Isolation
- High Stability
- High Reliability
- Cost Effective

## Performance Specifications

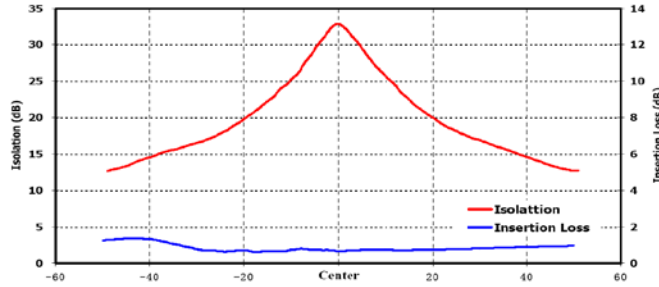
OI Series	Min	Typical	Max	Unit
Center Wavelength	450		1060	nm
Insertion Loss		0.3	0.8	dB
Wavelength Dependent Loss			0.2	dB
Isolation Single Stage	25	35	38	dB
Isolation Double Stage	40	45	55	dB
Optical Aperture	Φ 2.0			mm
	Φ 5.0			
Pulse Damage Threshold	10@10ns		1@8ps	J/cm <sup>2</sup>
Operation Temperature	-10		60	°C
Polarizer Type	Horizontal			
Polarizer Type	PBS Cube			

## Applications

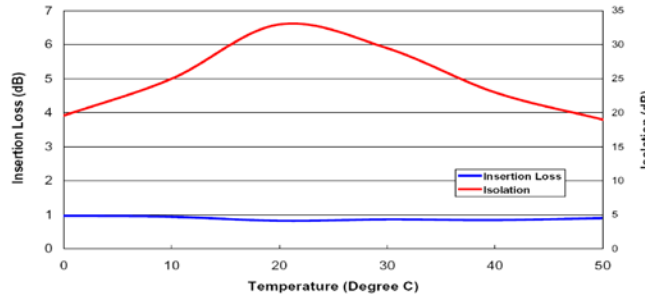
- Optic Sensor
- Laser Systems
- Test and Measurement
- Instrumentation

# Free Space Optical Isolator (785/980/1060 nm)

## Optical Performance (single Stage)

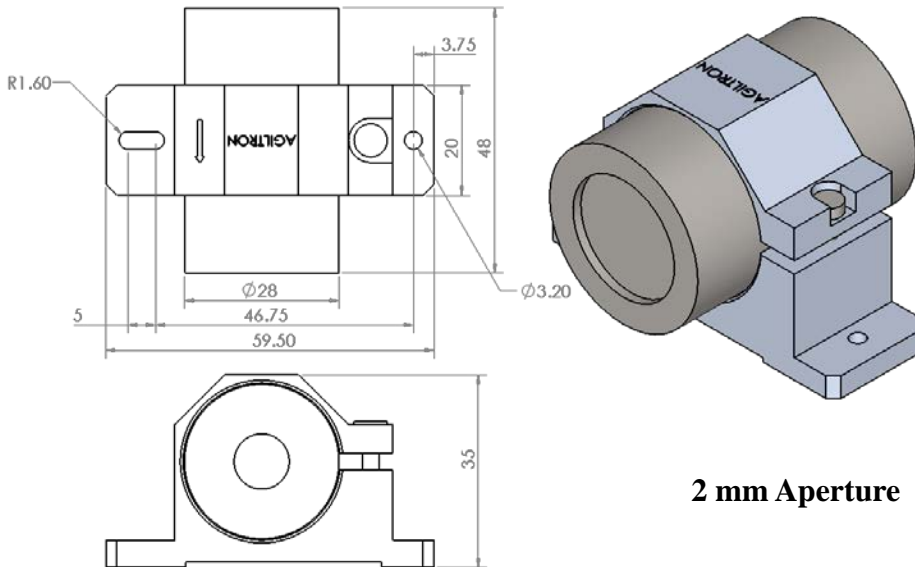


IL/Iso Vs. Temp @ Center Wavelength



## Mechanical Dimension

Note: The listed dimensions are for using thin polacore, for PBS version both ends add about 5mm extrusions

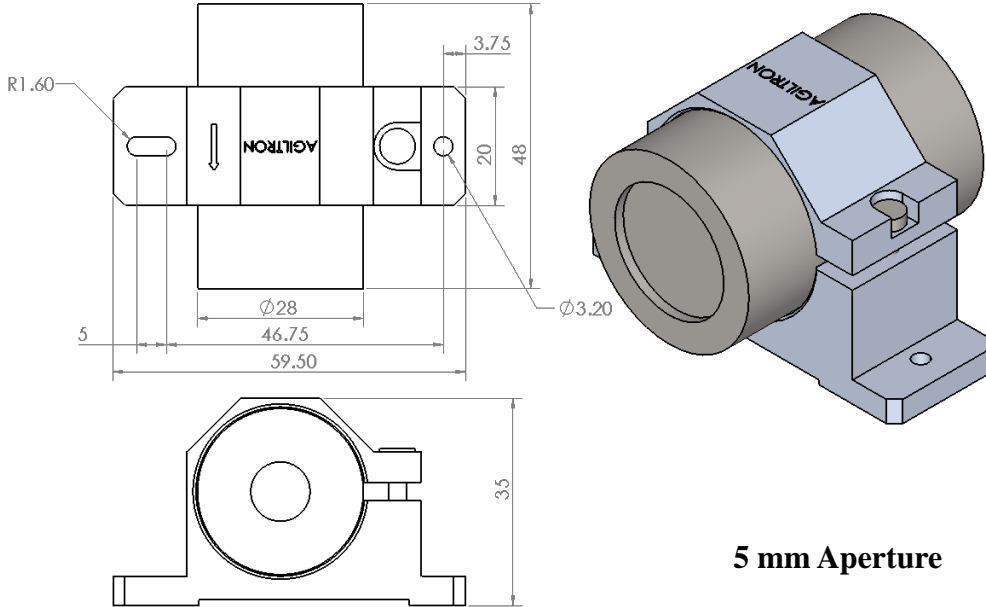


**2 mm Aperture**

\*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

# Free Space Optical Isolator

## (500/650/785/980/1060 nm)



**5 mm Aperture**

\*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

### Order Information

OITG-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Type	Wavelength (nm)	Isolation Stage	Aperture	Power Handling	Waveplate Rotation	Mounting Plate	Polarizer
	Free Space = 1 Special = 0	1060 =16 1050 =15 1030 =13 980 =98 940 =94 895 =89 850 =85 830 =83 780 =78 633 =63 660 =66 670 =67 589 =58 560 =56 532 =53 488 =48 440 =44 405 =40	Single = 1 Double = 2 Special = 0	2mm = 1 3mm = 2 5mm = 5 Special = 0	0.2W = 1 1W = 2 5W = 5 10W = 6 15W = 7 Special = 0	Yes = 1 No = 0	Yes = 1 No = 0	PBS= 1 Polacore = 2