

# Ultra-Broadband NIR Fiber Optical Isolator

1310, 1550, 1900nm, >100nm bandwidth



DATASHEET

BUY NOW



We produce a family of ultra-broadband fiber optical isolators operating over a broad wavelength of up to 160nm. These circulators are polarization-independent, having a flat >25dB typical isolation over the ultra-wide wavelength range, as indicated in the graph below. We offer three wavelength bands centered at 1310nm, 1550nm, and 1900nm. This unique performance attribute makes it an ideal choice for broadband light sources and other optical fiber sensing systems. They are available for SM, MM, and PM transmissions. Agiltron has a volume circulator production operation for making custom-designs meeting special applications or cost requirements. The wavelength and range not listed can be specially ordered.

## Features

- Flat Isolation Over 100nm
- Low PMD
- OEM and Custom Build Available
- High Reliability
- Polarization Dependent

## Applications

- OCT
- Sensor
- Lab Use
- Instruments

## Specifications

Parameter	Min	Typical	Max	Unit
Center Wavelength	1310		1900	nm
Wavelength bandwidth	100	160	170	nm
Isolation	20	25	30	dB
Polarization Dependent Loss			0.25	dB
Insertion Loss <sup>[1]</sup>	1310nm	1	1.3	dB
	1550nm	1	1.3	
	1900nm	1.5	2.2	
Optical Power Handling <sup>[2]</sup>		0.2	5	W
Return Loss <sup>[3]</sup>	50		55	dB
Operating Temperature	0		65	°C
Storage Temperature	-40		85	°C

### Notes:

- [1]. Exclude the connector for SM. The connector adds 0.3dB each
- [2]. Defined at 850nm & SMF version.
- [3]. RL <=35dB for MMF version.

**Note:** For a polarized input light version, the isolation is optimized to block the light reflection of the same polarization. Although lights of other polarizations may also be blocked, the extinction may be poor. PM isolators can be specially made to block backward propagating lights of all polarizations. PM isolators can also be made with a light polarizing function.

**Legal notices:** All product information is believed to be accurate and is subject to change without notice. Information contained herein shall legally bind Agiltron only if it is specifically incorporated into the terms and conditions of a sales agreement. Some specific combinations of options may not be available. The user assumes all risks and liability whatsoever in connection with the use of a product or its application.

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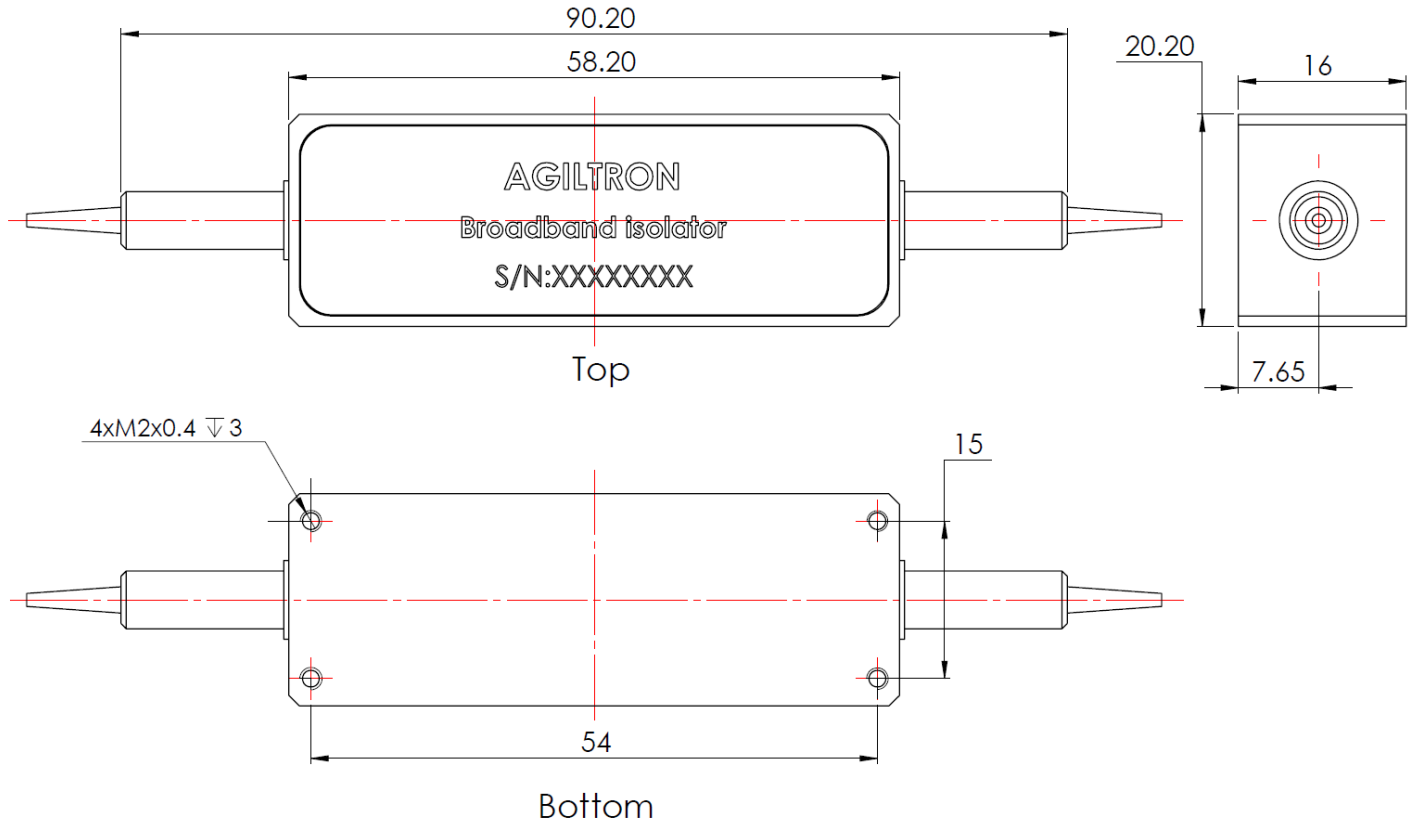
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### Mechanical Dimensions (mm) - Typical



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

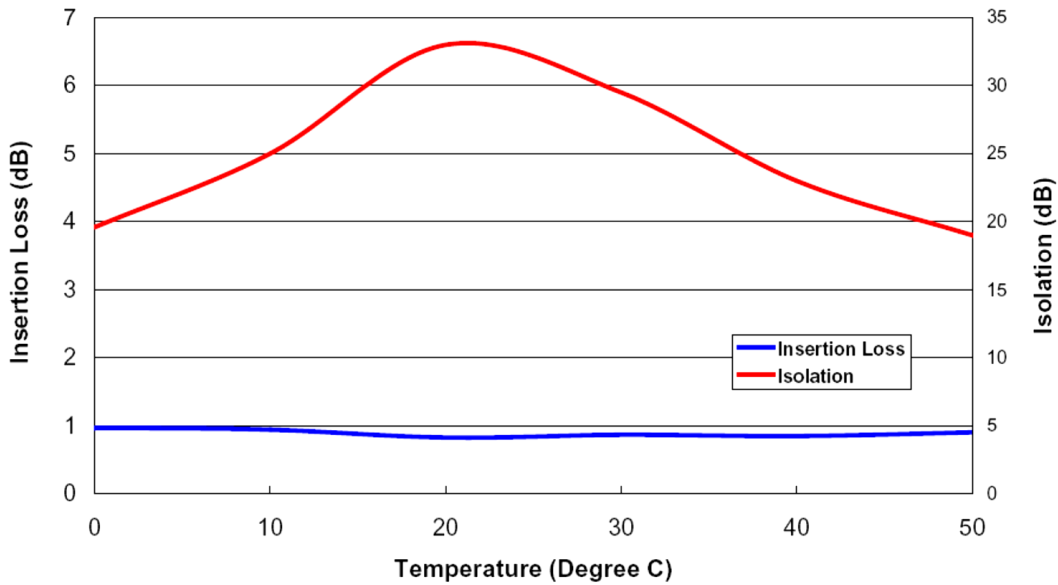
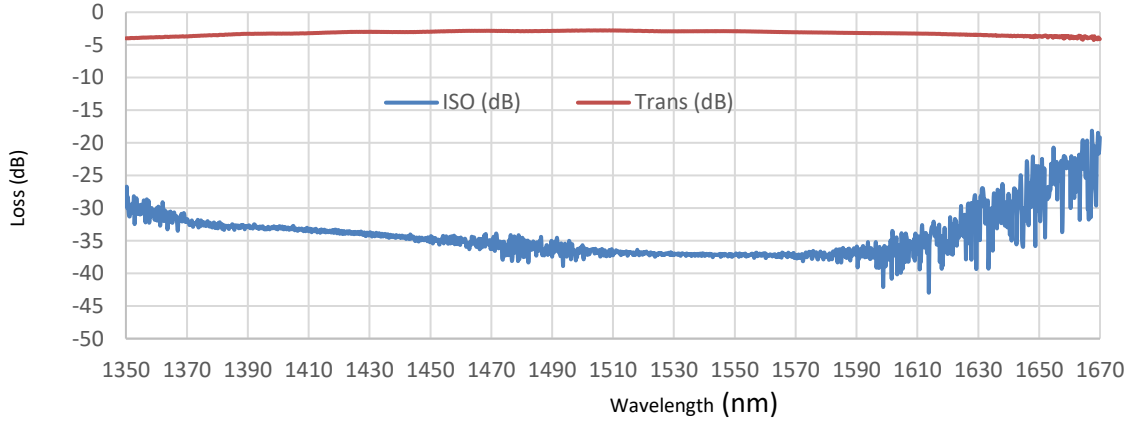
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### Optical Performance (Typical single stage isolator @ 1550nm)



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### Ordering Information

Prefix	Type	Wavelength	Grade	Package	Forward Power	Backward Power	Fiber Type	Fiber Cover	Connector
<b>OISM-</b>	PI* = 1 PD** = 2	1550nm = 1 1310nm = 3 1900nm = 5 Special = 0	Regular = 1 Special = 0	Regular = 1 Special = 0	0.2W = S 0.5W = N 1W = 1 2W = 2 5W = 5 10W = A 50W = B Special = 0	0.2W = S Special = 0	SM28 = 1 PM1550 = 2 PM1310 = 6 SM1950 = 3 PM1950 = 4 SM2000 = 5	Bare Fiber = 1 0.9mm tube = 3 Special = 0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC/PC = 7 Special = 0

\* Polarization Independent

\*\* Polarization Dependent

**NOTE:** Red color for special order