

Ultra-Broadband NIR Fiber Optical Isolator

1310, 1550, 1900nm, >100nm bandwidth



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Features

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

Applications

- OCT
- Sensor
- Lab Use
- Instruments

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.

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 ^[1]	1310nm	1	1.3	dB
	1550nm	1	1.3	
	1900nm	1.5	2.2	
Optical Power Handling ^[2]		0.2	5	W
Return Loss ^[3]	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.

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Rev 07/17/25

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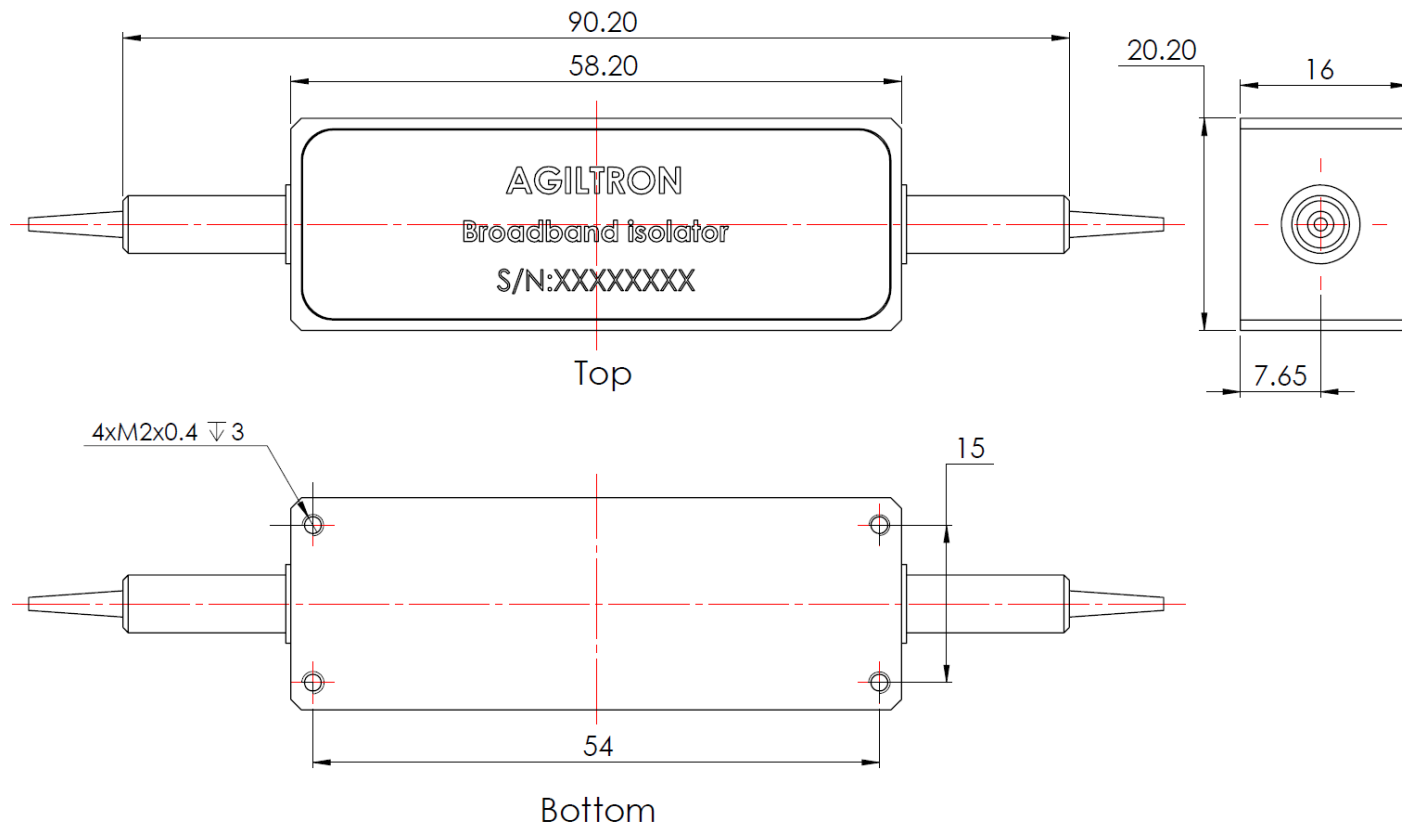
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Mechanical Dimensions (mm) - Typical



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

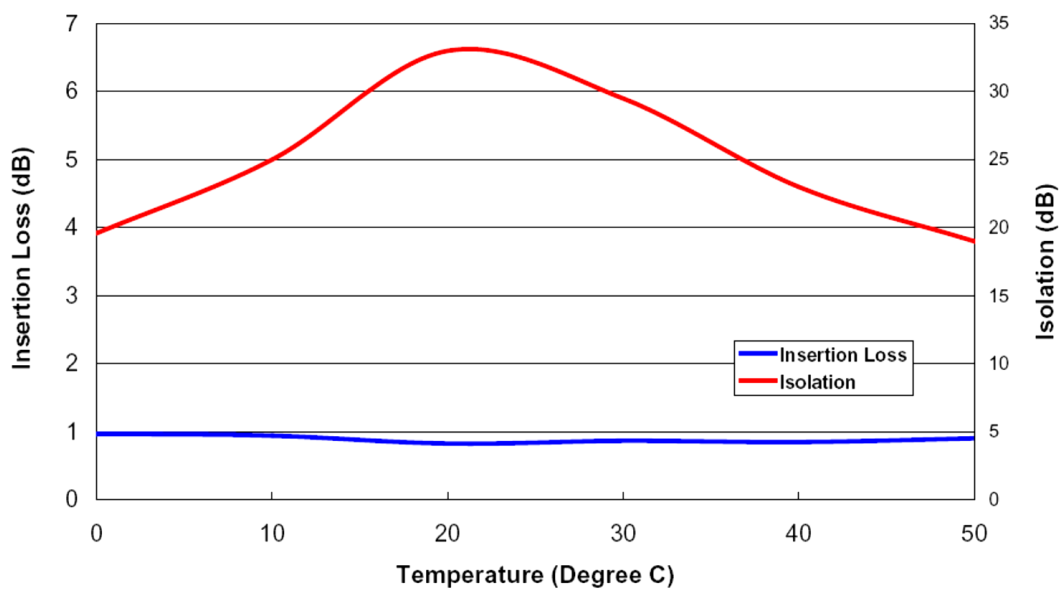
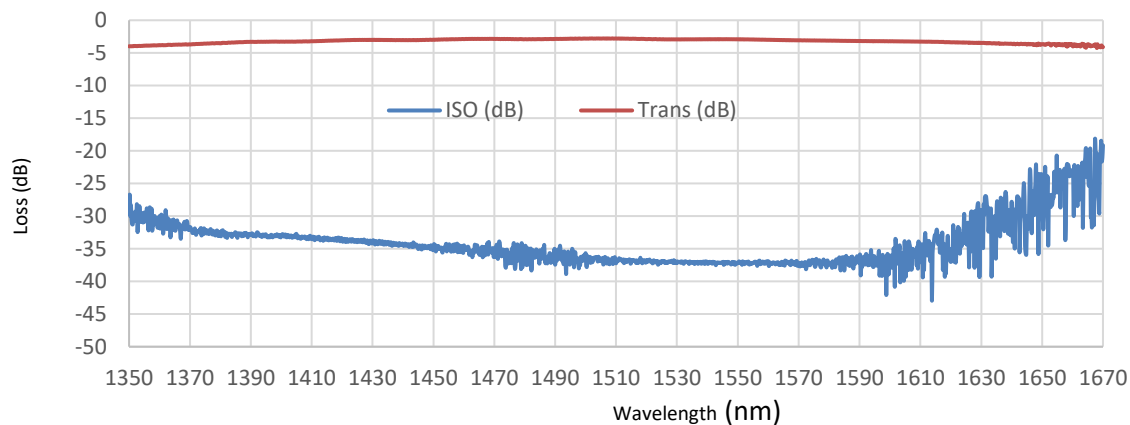
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Optical Performance (Typical single stage isolator @ 1550nm)



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Ordering Information

	B <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prefix	Type	Wavelength	Grade	Package	Forward Power	Backward Power	Fiber Type	Fiber Cover	Connector
OISM-	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