

Bandpass Filter with Attenuation

(20/40 GHz, 3.5V, bias control option)



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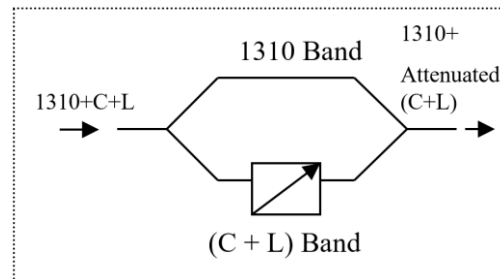
Features

- Excellent Uniformity
- Low Excess Loss
- Low Polarization
- Sensitivity
- Highly Stable & Reliable
- Effective cost
- Customized Design

Applications

- Telecommunications
- CATV Fiberoptic Links
- Fiber Amplifier System
- Fiberoptic Instrumentation

Agiltron BPF series bandpass filter with built-in attenuation function is based on thin-film filter technology and micro-optics package. It features excellent uniformity with wide wavelength range, low insertion loss and designated attenuation for assigned bands. These features give the great flexibility for customer applications. Agiltron expertise team is happy to provide customized optical solutions to meet customers' specific needs.



Specifications

Parameter		Min	Typical	Max	Unit
Operation Wavelength	1310-Band	1270		1330	nm
	C + L-Band	1525		1625	
Insertion Loss	1310-Band		1.0		dB
	C + L-Band		12 ± 1.5		
Polarization Dependent Loss			0.1	0.2	dB
Return Loss		30			dB
Operating Temperature		0		70	°C
Storage Temperature		-40		85	°C

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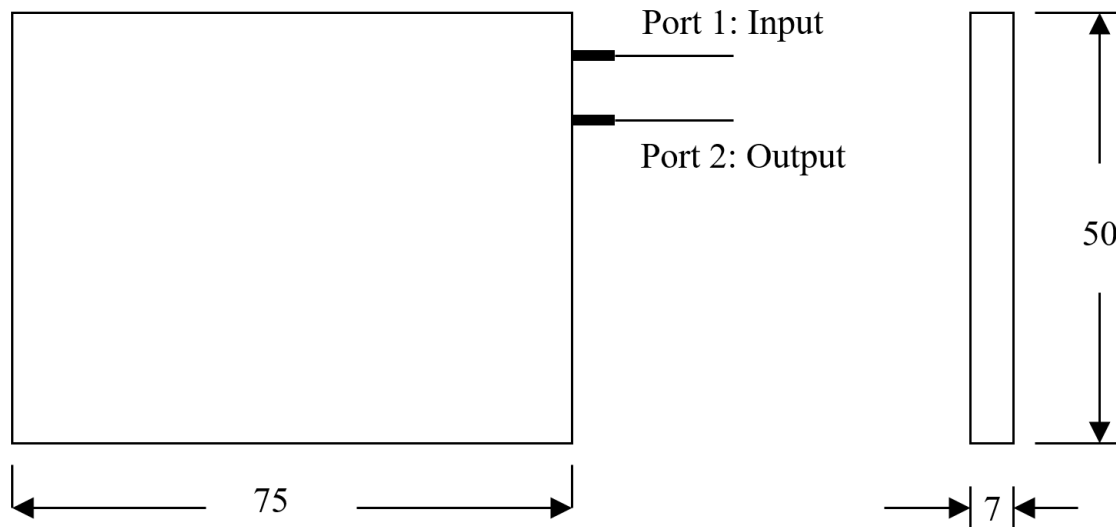
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Mechanical Dimensions (mm)



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

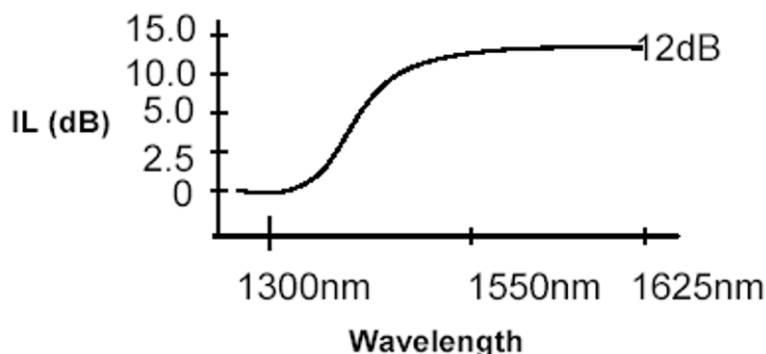
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Spectral Performance



Ordering Information (Part Number)

	1	☐	☐	☐	☐	☐	☐	☐	☐	☐
Prefix	Type	Wavelength	Grade	Package	Configuration	Port	Fiber Type	Fiber Cover	Fiber Length	Connector ^[1]
BPF-		Standard = 1 Special = 0	Regular = 1 Special = 0	Standard = 1 Special = 0	Standard = 1 Special = 0	2-port = 1 Special = 0	SMF-28 = 1	0.9mm tube = 1 Special = 0	0.5m = 1 Special = 0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC/PC = 7 Special = 0

[1]. The default connector configuration uses fiber with 0.9 mm buffer protection. The connector cannot be installed directly onto bare fiber because the bare fiber is prone to damage during shipping. However, the connector can be assembled on bare fiber if a 3 cm protective loose tube is added for reinforcement. The customer may remove this protective tube after testing. The optical power handling of a standard connector is less than 0.5 W for SMF-28 fiber and decreases further for smaller-core fibers.

Application Notes

Fiber Core Alignment

Note that the minimum attenuation for these devices depends on excellent core-to-core alignment when the connectors are mated. This is crucial for shorter wavelengths with smaller fiber core diameters that can increase the loss of many decibels above the specification if they are not perfectly aligned. Different vendors' connectors may not mate well with each other, especially for angled APC.

Fiber Cleanliness

Fibers with smaller core diameters (<5 μm) must be kept extremely clean, contamination at fiber-fiber interfaces, combined with the high optical power density, can lead to significant optical damage. This type of damage usually requires re-polishing or replacement of the connector.

Maximum Optical Input Power

Due to their small fiber core diameters for short wavelength and high photon energies, the damage thresholds for device is substantially reduced than the common 1550nm fiber. To avoid damage to the exposed fiber end faces and internal components, the optical input power should never exceed 20 mW for wavelengths shorter 650nm. We produce a special version to increase the how handling by expanding the core side at the fiber ends.