WaveSource Photonics, Inc.

HIGH POWER PM ISOLATOR & Derivatives

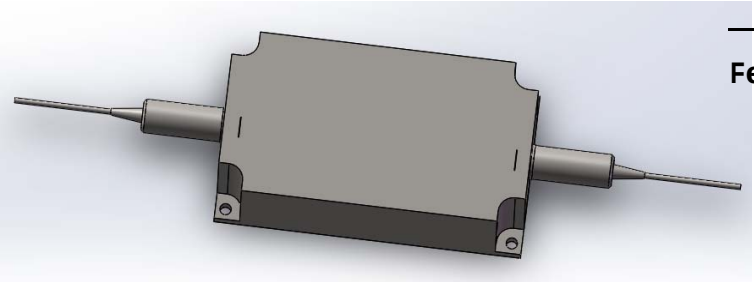
For fiber lasers and amplifiers

The 1.0um wavelength region high-power isolators and derivatives are built using TGG magneto-optic crystal and NdFeB magnets. They have the advantages of high laser damage threshold, low insertion loss, high isolation (32dB), high polarization extinction ratio (> 23dB) and high transmission. With more than 60dB isolation, our two-stage isolators offer the best isolation available on the market. The distinguished high quality is attributed to a combination of our years of experience, advanced design technology aided with computer modeling, and sophisticated manufacturing technology.

They are targeted for applications up to 50W input power. They provide the ultimate protection for Yb- or Er-doped fiber lasers and amplifiers.

We offer various input and output fiber options, such as standard single-mode fiber, PM fiber or large mode area (LMA) fibers with either in single-clad (SC) type or in double-clad (DC) type.

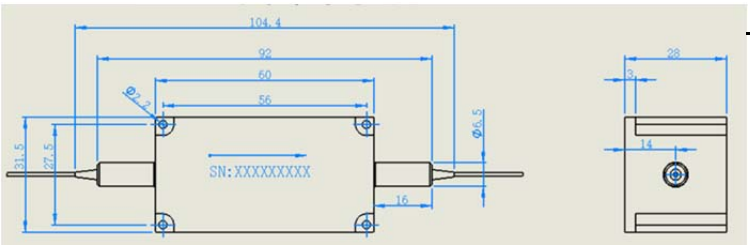
Mode matching functionalities or the so-called mode-field adaptions (MFA) are integrated within the fiber isolators if different fibers for input and output are used. In addition, suppression functionality for amplified spontaneous emission (ASE) can be integrated in the isolator.



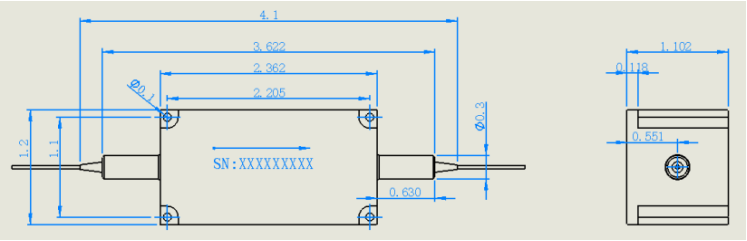
Features:

- >30 dB peak isolation for single stage core, >60dB for dual-stage core
- Up to 50W input power
- Mode field adaption functionality integration
- Up to 30dB suppression on back-reflected broadband ASE
- Compact footprint

In mm



In inch



Applications:

- Decouple laser oscillators from ASE created by amplifiers
- Eliminate intensity and frequency instability in fiber lasers

WaveSource Photonics, Inc, 81 Palm Drive, Union City, California, USA, salesatwsp@gmail.com
www.wsphotonics.com

Specification

Product Type	Isolator	Isolator with build-in BPF	Isolator with build-in MFA	Isolator with build-in BPF & MFA
Operating Wavelength (nm)	1064, 1030, or specified wavelength and passband			
Passband (nm)	+/- 10	+/-1, +/- 2	+/- 10	+/-1, +/- 2
Peak Isolation (dB)	32			
Min. In-band Isolation (dB)	>28			
Max. Insertion Loss (dB, @0.5W)	1.0	1.2	1.0	1.2
Max. Insertion Loss (dB, @0.5W)	1.3	1.5	1.3	1.5
Min. Extinction Ratio (dB, for PM)	23			
Min. Return Loss (dB, Input/Output)	50			
Min. Blocking for Back-Reflected ASE (%) a		95		95
Max. M2	1.2 (PL1060L, PLMA10, 15, 20), 1.3 (PLMA 25)			
Fiber Type b	PM980; PM1060L, PLMA10um, PLMA15um, PLMA20um, &PLMA 25um, or specify			
Max Peak Power Handling (kW, cw)	10			
Max Power Handling (W, ns pulse)	10, 20, 30			
Dimensions (mm, c	60*31.5*28			

a. For passband +/- 2nm

b. M2 is specified for PM98 fiber as input, PLMA fibers with nominal core diamter 10, 15, 20, or 25um output fiber.

c. Dimension is for single stage isolators