The circulator is an irreversible one-way three-port component that allows light propagate in a specific direction. Circulators can be divided into nonpolarization-maintaining circulator and polarization maintaining circulator.

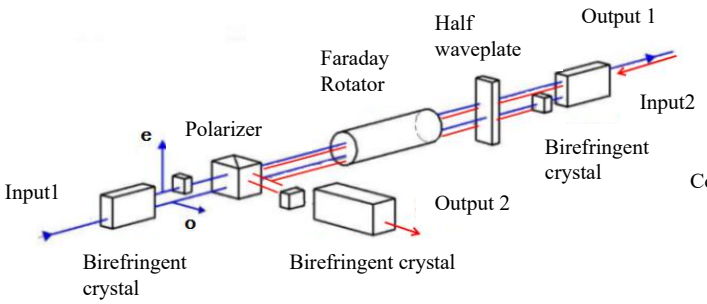
Non-polarization-maintaining circulator consists of birefringent beam displacer, polarization element, Faraday rotator, half-waveplate and collimator.

Polarization-maintaining optical circulator consists of input polarizer, Faraday rotator, half-waveplate, output polarizer and collimator.

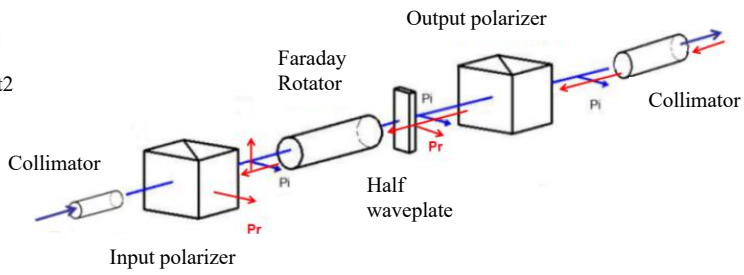
CASTECH produces circulators with low insertion loss, high isolation, low polarization dependent loss and excellent temperature stability. Operating wavelength range is 450~2000nm, and connection of fiber tail can be bare fiber or FC/APC.

Applications

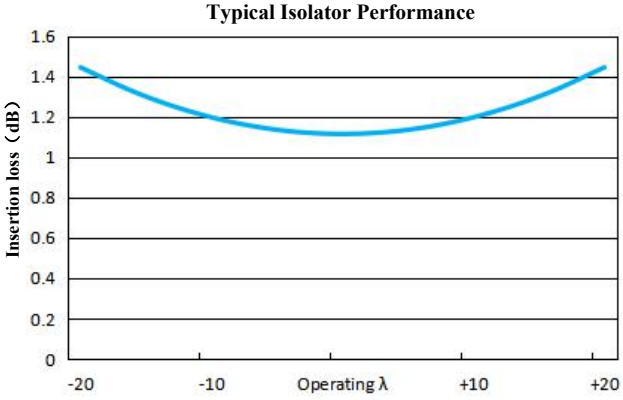
- **Fiber optical sensor system**
- **Bidirectional signal transmission system**
- **Dispersion compensation**

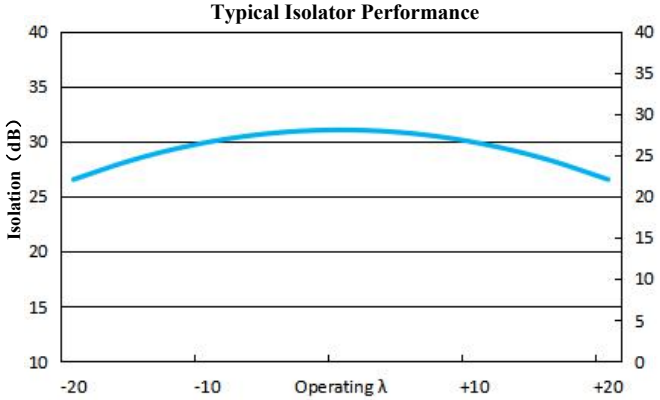


Non-polarization maintaining optical circulator



Polarization maintaining optical circulator





Non-Polarization-Maintaining Type Model Number：HPCIR-t-p-f-λ-e-l-b-h

Type(t)	Power(p)	Fiber Type(f)	Wavelength (λ)	Pigtail Diameter(e)	Fiber Length(l)	Filter(b)	Housing(h)
TRI (Three ports) CIR (Optical Circulator)	0.3W 5 W 30 W 50 W 100 W ...	1 (HI1060) 2 (10/125SCF) 3 (20/130DCF) 4 (12/250DCF) 5 (20/250DCF) 6 (30/250DCF) …	980 nm 1030 nm 1064 nm ...	L (900 μm Loose Tube) B (3 mm Loose Tube)	1 (1 m) 2 (1.5 m) …	C (contained) N (Not contained)	A01 A06 ...

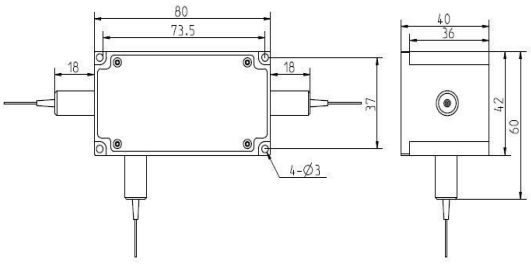
Typical Specifications

Withstand Power	Insertion Loss	Minimum Crosstalk	Peak Isolation
20 W	≤1.2 dB	≥45 dB	＞30 dB
100 W	≤1.2 dB	≥45 dB	＞30 dB

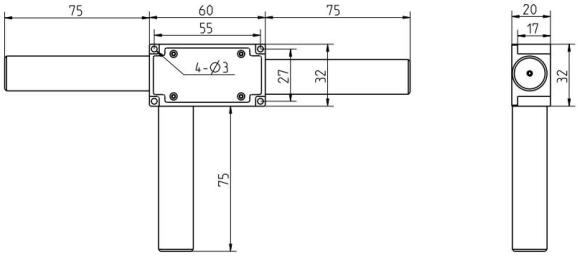
Operating temperature range: 10℃-30℃.

Housing dimensions(mm)：

A01



A06



Polarization-Maintaining Type Model Number：HPCIR-t-p-f-λ-e-l-b-h

Type(t)	Power(p)	Fiber Type(f)	Wavelength (λ)	Pigtail Diameter(e)	Fiber Length(l)	Filter(b)	Housing(h)
TRI (Three ports) CIR (Optical Circulator)	0.3 W 5 W 30 W 50 W ...	7 (PM 980) 8 (PM10/125SCF) 9 (PM20/130DCF) …	980 nm 1030 nm 1064 nm ...	L (900 μm Loose Tube) B (3 mm Loose Tube)	1 (1 m) 2 (1.5 m) …	C (Contained) N (Not contained)	A02 ...

Typical Specifications

Withstand Power	Extinction Ratio	Insertion Loss	Minimum Crosstalk	Peak Isolation
1 W	＜20 dB	≤1.5 dB	≥45 dB	＞30 dB
50 W	＜20 dB	≤1.5 dB	≥45 dB	＞30 dB

Operating temperature range: 10℃-30℃.

Housing dimensions(mm)：

A02