

1850nm 3 Port Polarization Insensitive Optical Circulator (CIR)

Features

Compact Package
High Isolation & Low Insertion Loss
Low PDL
Telcordia GR-1221 Compliant

Application

Fiber Amplifier
Fiber Laser
Surgical Equipment
Testing Equipment



Specifications

Parameters	Unit	3 Port, P1 → P2 → P3, P3 → P1	
Operating Wavelength (λ_{op})	nm	1850±15	
Peak isolation	dB	48	
Isolation (λ_c , 23°C all sop) ^[1]	dB	≥38	
Isolation (λ_{op} , Top, all sop)	dB	≥35	
Insertion Loss (λ_{op} , 23°C all sop)	dB	≤0.8 (Typ. 0.7)	≤1.2 (Typ. 1.1)
Polarization Dependent Loss (PDL)	dB	≤0.20	
PMD	ps	≤0.1	
Directivity (DIR) ^[2]	dB	≥50	
Return Loss (RL)	dB	≥50	
Max Power Handling CW ^[3]	mW	500	
Fiber Type		SMF-28e	SM1950
Operating Temperature	°C	0 ~ +75	
Storage Temperature	°C	-40 ~ +85	

Above data test at room temperature without connectors. With connectors, IL+0.3dB, RL-5dB.

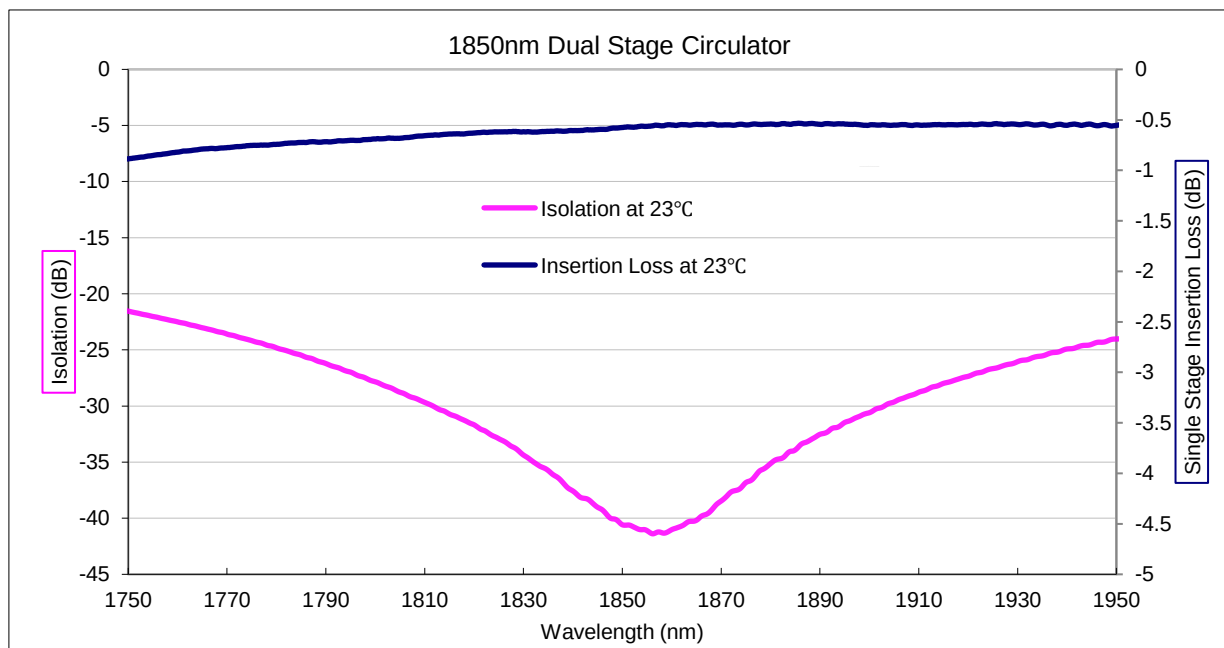
^[1] all sop=all state of polarization.

^[2] $DIR = 10 * \log_{10} (P_{P3} \div P_{P1})$, test light input from P1, P=power in mW, test light input from P1.

While test DIR, coil P2 fibers 3-5 turns around a 10-30mm diameter loop, this prevents back reflections into output P3, which would significantly lower DIR. If connector is needed at P3, an Angle polished (APC) connector will be recommended.

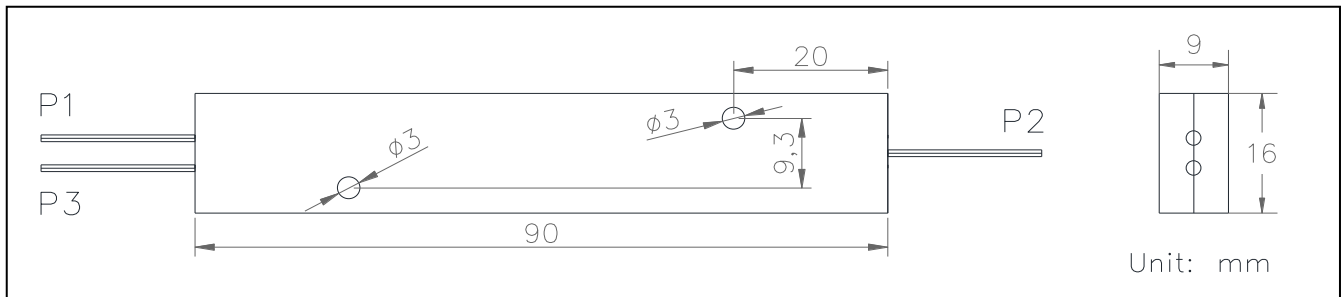
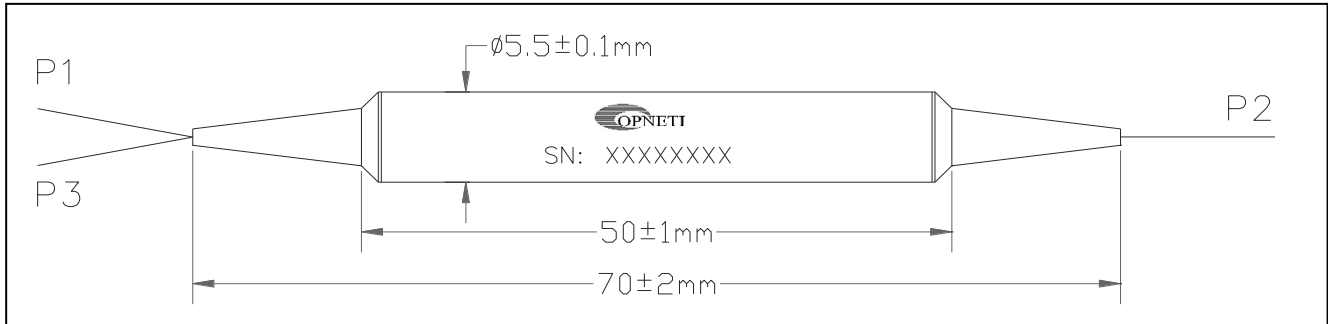
^[3] Higher power available on request.

Typical Spectrum



Package Information

Fiber Length	1m, others on request		
Pigtail Type	250μm Bare Fiber	900μm Loose Tube	2mm/3mm Loose Cable
Dimensions(mm)	φ4.8x29, φ5.5x38, φ5.5x50	φ5.5x38, φ5.5x50, 90x16x9	90x16x9
Approx Weight (g)	35	50	65



Ordering Information

CIR- ①-②-③③③③-④④④-⑤-⑥-⑦⑦-⑧⑧⑧⑧⑧⑧

①	Type	3=3 Port;
②	Grade	P=P Grade;
③	Wavelength	1850;
④	Pigtail Type	250=250μm Fiber; 900=900μm Loose Tube; 2000=2mm Loose Cable; 3000=3mm Loose Cable;
⑤	Fiber Type	1=SMF-28e; S9=SM1950;
⑥	Fiber Length	1=1m; XX=other;
⑦	Connector	NE=None; FA=FC/APC; FC=FC/UPC; SA=SC/APC; SC=SC/UPC; LC=LC/UPC; XX=Others;
⑧	Package size	4.8x29; 5.5x38; 5.5x50; 90x16x9;