

Polarization-Insensitive Circulator ISP (Indoor Use)



Product Description:

Polarization-Insensitive Optical Circulator with the following characteristics:

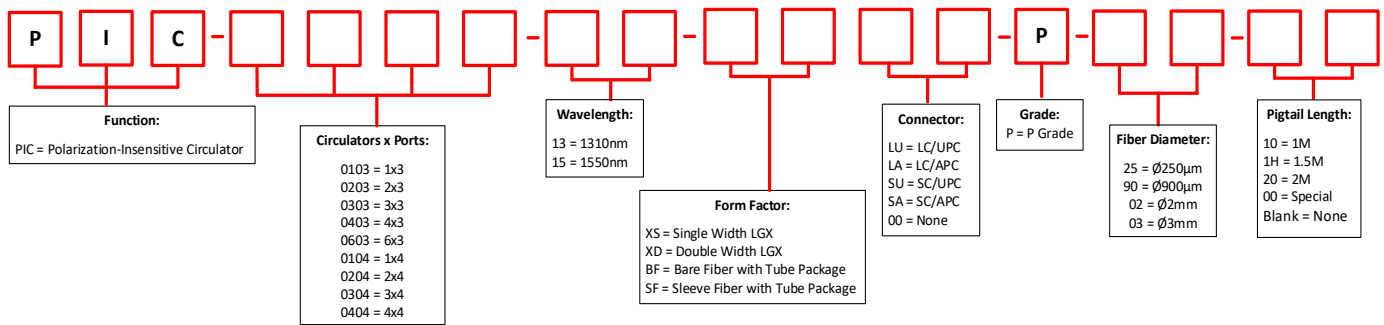
- High Isolation, Low Insertion Loss
- Low Polarization Dependent Loss
- Multiple Form Factor Options with High Stability & Reliability



Applications:

- DWDM Systems, Wavelength Add/Drop
- Bi-direction Communication Systems
- Dispersion Compensation, Optical Amplifier
- EDFA and OTDR utilization

Product Ordering Information



Part Number / Description Example

Part Number	3-Port Description
PIC-0103-13-XSLU-P-25	Polarization-Insensitive Circulator, 1 X 3-Port, 1310nm, Single-width LGX, LC/UPC Connectors, Ø250um, P-Grade
PIC-0103-15-SFLA-P-90-10	Polarization-Insensitive Circulator, 1 X 3-Port, 1550nm, Ø900um Fiber with standard tube, LC/APC Connectors, P-Grade, 1M Pigtails

Polarization-Insensitive Circulator

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Part Number	4-Port Description
PIC-0104-13-XSLU-P-25	Polarization-Insensitive Circulator, 1 X 4-Port, 1310nm, Single-width LGX, LC/UPC Connectors, Ø250um, P-Grade
PIC-0104-13-BFLA-P-25-20	Polarization-Insensitive Circulator, 1 X 4-Port, 1310nm, Ø250um Bare Fiber with standard tube, LC/APC Connectors, P-Grade, 2M Pigtaills

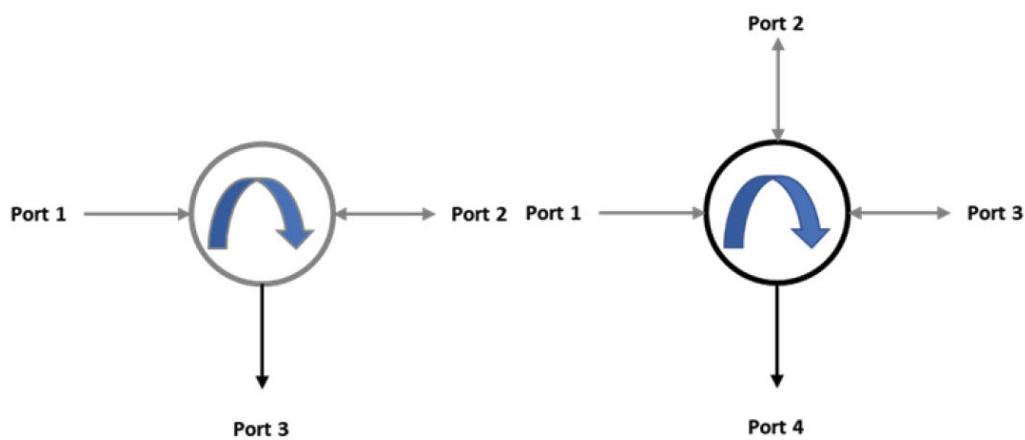
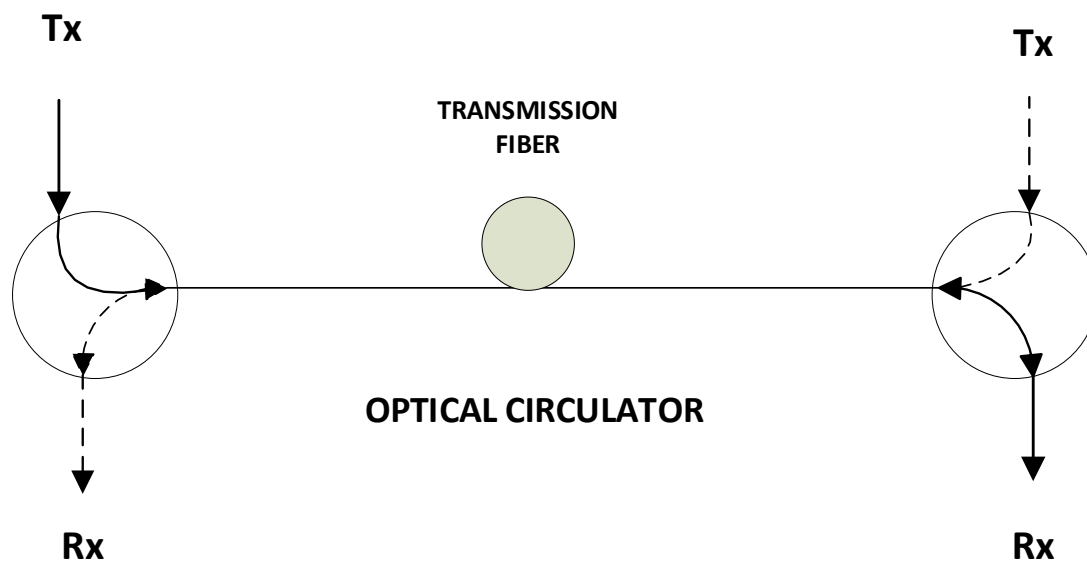
Optical Characteristics

Parameter	CWDM	DWDM	Unit
Configuration	Port 1 to 2, Port 2 to 3	Port 1 to 2, Port 2 to 3, Port 3 to 4	
Operating Wavelength	1310 ±30 or 1550 ±30		nm
Insertion Loss Maximum	20nm	100GHz	
Typical Isolation	ITU ±6.5	ITU ±0.125	nm
Insertion Loss Maximum	0.8	1.2	dB
Typical Isolation	≥ 50	≥ 50	dB
Minimum Isolation	≥ 40	≥ 30	dB
Cross Talk	≥ 50	≥ 50	dB
Polarization Dependent Loss	≤ 0.15	≤ 0.2	dB
Polarization Mode Dispersion	< 0.1		ps
Return Loss	≥ 50		dB
Power Handling	300		mW
Operating Temperature	-10 to 70		°C
Storage Temperature	-40 to 85		°C
Tube Package Dimensions (Ø250/Ø900um)	Ø5.5 x 50L	Ø5.5 x 50L	mm
Package Dimensions (Ø2/Ø3m)	90L x 20W x 10H	90L x 20W x 10H	mm
Fiber Type	SMF-28e (G.657.A1)		

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Optical Design

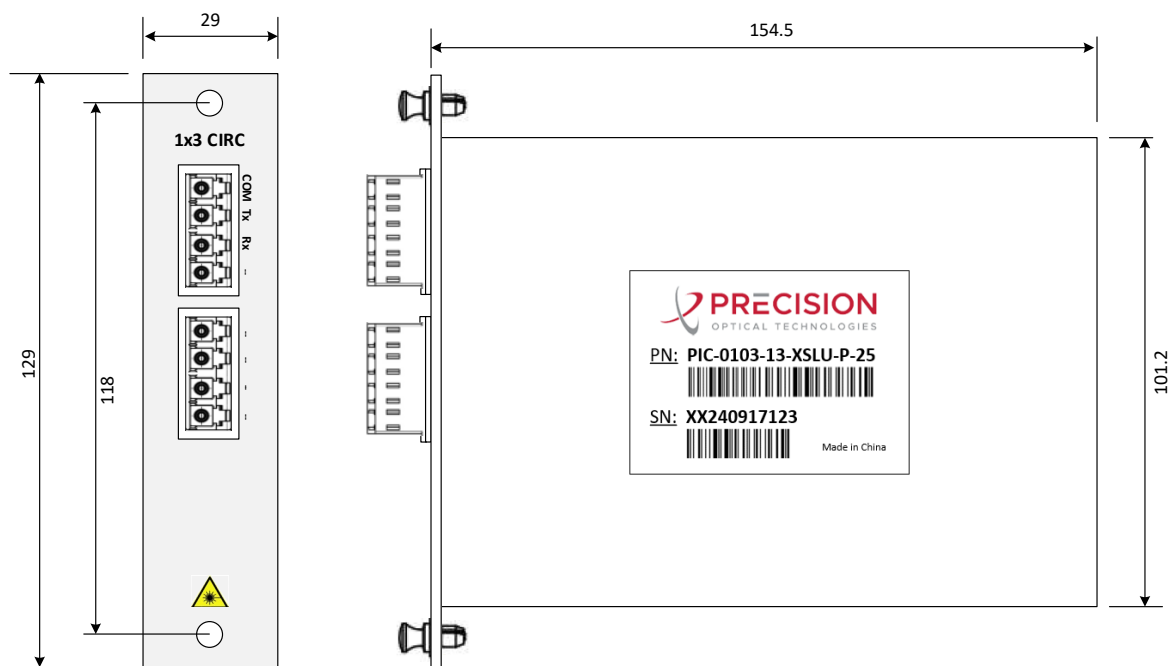


Circulator Design Example (high level)

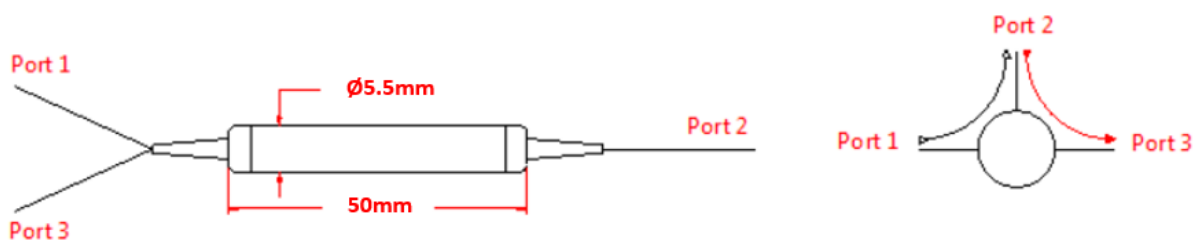
Polarization-Insensitive Circulator

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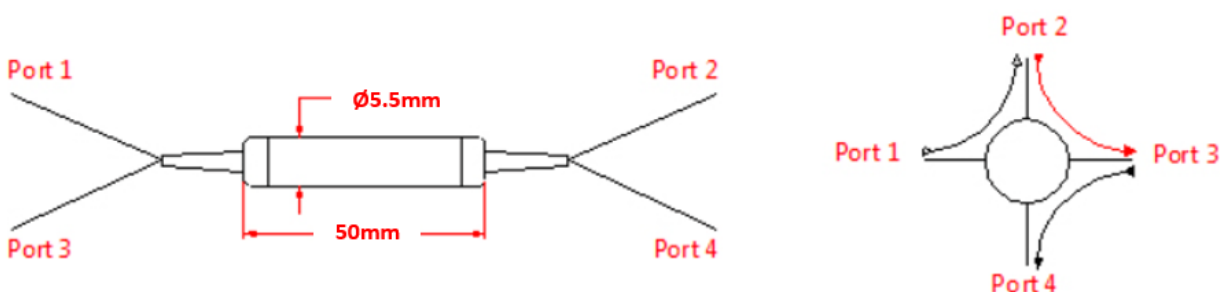
Physical Design



3-Port LGX External Design (mm)
(PIC-0103-13-XSLU-P-25 shown)



3-Port Schematic



4-Port Schematic

Bare/Sleeve Fiber with Steel Tube Design (mm)