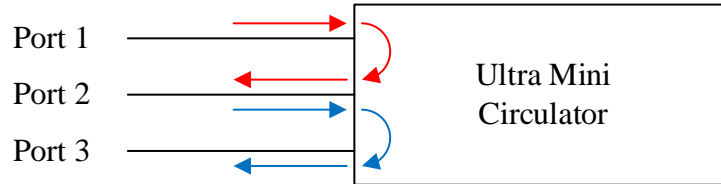


Product: Ultra Mini Optical Circulator

Part Number	Spec Number	Version	Date
MCIRXXXXXXXXXXXX	S010	Rev 02	05/10/2024

1 Function Diagram

This is a folded optical circulator. All fibers are at one side. The function is Port 1 to Port 2, Port 2 to Port 3.



2 Specifications

2.1 Environment Conditions

Item	Parameters	Symbol	Min	Typ	Max	Units	Note
1.	Operating Temperature	Top	0		70	°C	
2.	Storage Temperature	Tstor	-40		85	°C	
3.	Operating Relative Humidity	RHop	5		95	%	[1]
4.	Storage Relative Humidity	RHstor	5		95	%	[1]

Note:

[1] Not to exceed industrial standard of 0.024 kg water per kg of dry air under non-condensing conditions.

2.2 Optical Specifications

Item	Parameters	Symbol	Min	Typ	Max	Units	Note
5.	Operation Wavelength	O Band	λ_{op}	1270 ~ 1330		nm	
		C Band	λ_{op}	1520 ~ 1575		nm	
6.	Insertion Loss (1→2, 2→3) @ λ_{op}	IL			1.0	dB	
7.	Isolation (2→1, 3→2) @ λ_{op}	ISO	30			dB	
8.	Polarization Dependent Loss @ λ_{op}	PDL			0.3	dB	
9.	Directivity (1→3) @23°C	DIR	40			dB	
10.	Return Loss (All Ports) @23°C	RL	40			dB	
11.	Polarization Mode Dispersion	PMD			0.2	ps	G
12.	Optical Power	Pop			500	mW	G

Note:

*Above specifications are for device without connector. IL is 0.3 dB higher, RL is 5 dB lower after connector added.

G: Guaranteed by design.

2.3 Mechanical Specifications

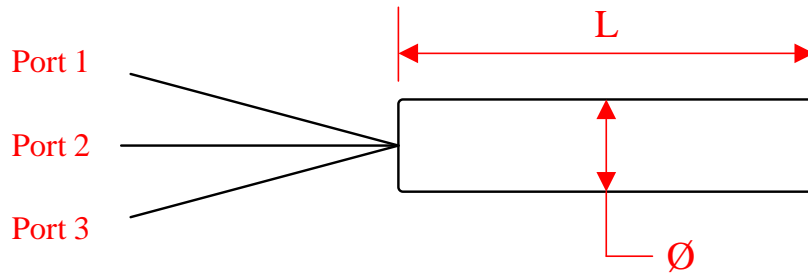
2.3.1 Specifications

Item	Parameters	Symbol	Min	Typ	Max	Units	Note
13.	Fiber Type			G.657 B3			
14.	Fiber Length			By PN		m	
15.	Fiber Jacket			By PN			
16.	Connector Type			By PN			
17.	Package Dimension	Steel Tube		$\varnothing \leq 4.0 \times L \leq 25$		mm	
		Glass Tube		$\varnothing \leq 3.0 \times L \leq 25$		mm	
18.	Fiber Color	Port 1		Black			[2]
		Port 2		Red			[2]
		Port 3		Natural			

Note:

[2] Mark the bare fiber starting at 10~30cm away from the device body to fiber end.

2.3.2 Drawing



3 Device Label, Delivery Data

standard format.

4 RoHS

RoHS compliant.

5 Order Information

