

Ultra-High Speed (5MHz) Polarization Scrambler (preliminary)

Product Description

The polarization scrambler (5MHz) is based on fast speed electro-optical materials functioning as phase retardation with three plates oriented at 0, 45 and 0 degree. The electro-optical materials are modulated at ultra-high speed around 5MHz. Unlike conventional polarization scrambler, it is uniquely non-mechanical. It converts any input state of polarization to randomly polarized states fully covering the Poincare sphere. The polarization scrambler is designed to meet the most demanding operation requirements of ultra-high reliability, fast response, compact size to provide an ultimate solution for polarization randomization.

Features

- No Moving Parts
- High Reliability
- Solid-State High Speed
- Compact Size
- Low Power Consumption

Performance Specifications

Polarization Scrambler	Min	Typical	Max	Unit
Center Operating Wavelength	800	1550	1800	nm
Operating Wavelength Range		100		nm
Insertion Loss ¹		0.6	1.0	dB
Polarization Dependent Loss			0.15	dB
Return Loss	45	50		dB
Modulation Frequency		5		MHz
Intrinsic Birefringence		NO		
Cover All Polarizations		Yes		
Operating Optical Power			500	mW
Operating Temperature		-5* ~ 70		°C
Storage Temperature		-40 ~ 85		°C
Package Dimensions		45X120X10		mm

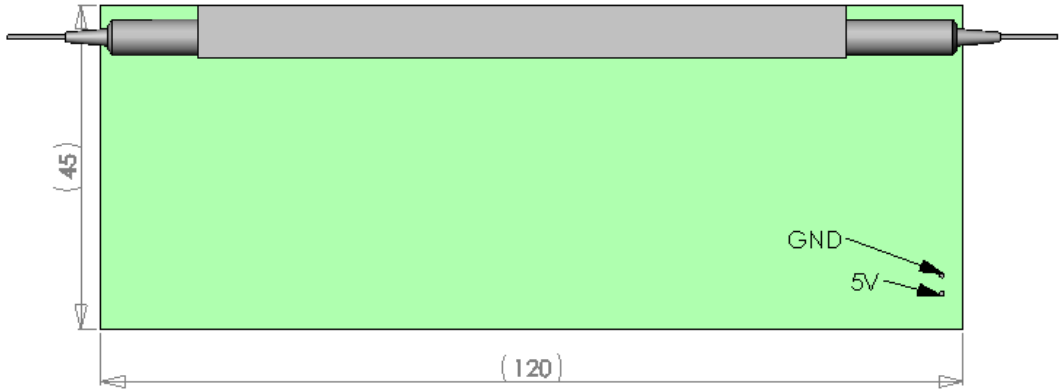
1. Excluding connectors.

Applications

- Polarization scrambler
- Polarization Management
- Instrumentation

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Mechanical Dimensions (mm)



Electrical Driving Requirements

Parameter	Minimum	Typical	Maximum	Unit
Power Supply	4.75	5	5.25	V
Power Consumption	5.5	6	6.5	W

Ordering Information

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Type	Wavelength	State	Package	Fiber Type	Fiber Length	Connector		
	1310 = 3 1550 = 5 Special = 0			SMF-28 =1 Special=0	Bare fiber =1 900um loose tube=3 Special=0	0.25m= 1 0.5m = 2 1.0 m= 3 Special =0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC = 7 Special = 0	

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