

High Speed Polarization Scrambler

Product Description

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.

The polarization scrambler is based on fast speed electro-optical materials functioning as phase retardation with three plates oriented at 0, 45 and 0 degree. They are driving at slightly different frequencies. Unlike conventional polarization scrambler, it is non-mechanical, uniquely offering high reliability and longevity, as well as high speed. The scrambling speed can be varied from 0 to 100kHz or at a fixed 5MHz. It converts any input state of polarization to randomly polarized states fully covering the Poincare sphere.

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	300	1550	1800	nm
Operating Wavelength Range		100		nm
Insertion Loss ¹		0.6	1.0	dB
Polarization Dependent Loss		0.05	0.15	dB
Return Loss	45	50		dB
Degree of Polarization (1000 AVG)			5	%
Modulation Frequency	0	20	5000*	KHz
Modulation Frequency Control Signal	0		5**	V
Control Signal-> Modulation Frequency		Linear		
Power Supply		5 V		
Power Consumption		3		W
Operating Optical Power			500	mW
Operating Temperature		-5 ~ 70		°C
Storage Temperature		-40 ~ 85		°C

*5MHz is fixed

**0 to 5V correspond to 0 to 20KHz

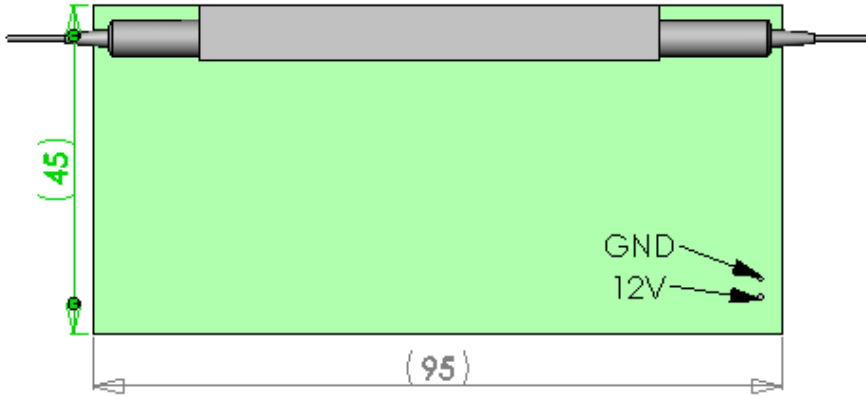
1.Excluding connectors.

Applications

- Polarization scrambler
- Polarization Management
- Instrumentation

Polarization Scrambler

Mechanical Dimensions (mm)



Ordering Information

NOPS-	1 1	<input type="checkbox"/>	1	1	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	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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