

Polarization Scrambler Module

[PS3300]

High Speed Polarization Scrambling

FIBERPRO's Polarization Scrambler Module performs polarization scrambling at high speed and make Degree Of Polarization (DOP) zero on time average.

It is based on all fiber technology that has enabled us to build practically zero insertion loss, back reflection free and a compact size. With reliable performance of PS3300 it can be used in long-haul system, PMD mitigation, component characterization test and sensor application, etc. Furthermore the modulation frequency can be faster than standard module type according to user's request.



PS3300

Features

- High speed scrambling
- All single mode fiber configuration
- Input polarization independent
- Low loss and low PMD
- PMD mitigation
- Compact size

Available Customized design

& OEM business

Specifications

Electrical/ Physical/ Environmental characteristics		
Power Input DC	DC +5V/ +12V/ +24V/ +48V ¹⁾	
Power Consumption	<20VA	
Dimensions	48(h) x 100 (w) x 132 (d) mm	
Weigh	Approx. 0.6kg	
Operating temperature	0~50°C (DOP <15% ²⁾)(with non-condensing)	
Calibration look-up table Temperature range	0~50°C	
Storage temperature	-40 ~70°C	
External control ⁶⁾	External control: enable/ disable	
	RS-232 interface	
Optical Characteristics		
Output DOP	<15% ²⁾	
Modulation frequency	Factory set between 600KHz ~1.2MHz ³⁾	
Frequency difference	Factory set between 100KHz~300KHz ⁴⁾	
Center operating wavelength	1550nm, 1590nm	
Operating wavelength range	>40nm	
Max. Input power	1W	
Insertion Loss	With connectors	<1.5dB
	Without connectors	<1.0dB
Average PMD	<0.3ps	
PDL	With connectors	<0.05dB
	Without connectors	<0.03dB
Back reflection	FC/SPC	<-40dB
	FC/APC	<-60dB
	Without connectors	<-65dB
Input/Output connectorization	900um loose tube pigtail without connectors ⁵⁾	
Fiber length from PZT box	1+/-0.2 meter	

1) User can select the voltage at the time of order.

2) Refer to NOTES following description:

The DOP value may be increased up to 25% temporarily if the temperature is changed 0.5 /min.

Typically the DOP value is less than 5% around room temperature (15 ~35 °C)

The warm up time 30~60 minutes in the static temperature is required for the specified DOP.

- 3) Modulation frequency for each birefringence modulator is fine-tuned for optimum operation at the factory.
- 4) The frequency difference decides the measurement bandwidth limit.
(Refer to PS module manual 3_ Theory, Measurement Bandwidth Limitation).
- 5) Users can specify other types of connectors at the time of order.
- 6) Both external controls must not be used at the same time.