

# Polarization Scrambler Module

## PS3300 / PS3400

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.



## Features

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

## Specifications

Optical Characteristics		
Model	PS3300	PS3400
Output DOP	< 15% <sup>1)</sup>	
Modulation Frequency	Factory set between 600KHz ~ 1.2MHz <sup>2)</sup>	
Frequency Difference	Factory set between 100KHz ~ 300KHz <sup>3)</sup>	
Center Wavelength	1530nm, 1550nm, 1590nm	
Operating Wavelength Range	> 40 nm	> 80 nm
Max. Input Power	1 W	
Insertion Loss	< 1.0 dB (without connectors)	
Average PMD	< 0.3 ps	
PDL	< 0.03 dB (without connectors)	
Return Loss	< 65 dB (without connectors)	
Input/Output Connectorization	900um loose tube pigtail without connectors <sup>4)</sup>	
Fiber Length from PZT Box	1 ± 0.2 meter	
Electrical / Physical / Environmental Characteristics		
Model	PS3300	PS3400
Power Input	+5V / +24V / ±12V & 5V	+5V / ±12V & 5V
Power Consumption	< 20VA	
Operating Temperature	0 °C ~ 50 °C <sup>1)</sup> (DOP < 15%) ( with non-condensing)	
Calibration Look-up Table Temperature Range	0 °C ~ 50 °C	
Storage temperature	-40 °C ~ 70 °C	
External Control <sup>5)</sup>	External control : enable/ disable	
	RS232 interface	
Dimensions (L×D×H)	100mm×132mm×48mm	160mm×135mm×48mm (Normal Type)
		202mm×148mm×60mm (Housing Type)
Weight	approx. 0.6kg	0.8kg

1) 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 )

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

2) Modulation frequency for each birefringence modulator is fine-tuned for optimum operation at the factory.

3) The frequency difference decides the measurement bandwidth limit.

4) Users can specify other types of connectors at the time of order.

5) Both external controls must not be used at the same time.