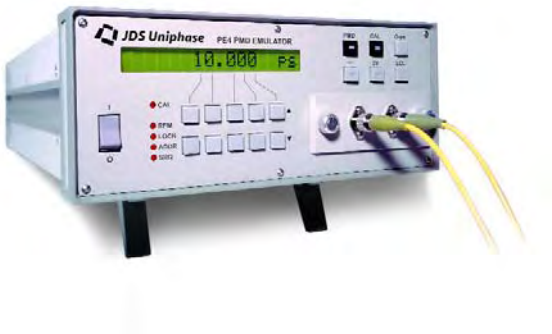
Polarization Mode Dispersion Emulator

PMD Series



Key Features

- High accuracy generation of PMD
- Repeatability of ± 0.02 ps
- PE3 emulation range > 125 ps
- PE4 emulation range > 250 ps
- GPIB and RS-232 remote control

Applications

- Testing PMD effects on systems
- Calibration of PMD measuring equipment

Safety Information

Complies to CE requirements plus UL3101-1 and CAN/CSA-C22.2 No. 1010.1

The JDS Uniphase Polarization mode dispersion (PMD) Emulator produces a controlled amount of differential group delay (DGD). It is used for fiberoptic systems testing, calibration of PMD measurement instruments and PMD sensitivity measurements in high-speed optical transmission systems.

The instrument separates the incoming light into two discrete polarization paths. One of the paths passes through an optical delay element, the other through a matching attenuator, and they are recombined at the output of the unit. The optical delay element allows precise control of the time delay between the two polarization state paths, the DGD. The state of polarization at the output of the instrument is not controlled.

The emulator is a programmable instrument that can be controlled from the front panel or by the GPIB and RS-232 interfaces.

Specifications

Parameter	PE3	PE4
Operating wavelength range	1250 to 1700 nm	
Polarization mode dispersion (PMD) emulation range	- 30 to 125 ps	- 50 to 250 ps
PMD emulation accuracy at 0 ps setting[1]	± 0.1 ps	
PMD emulation resolution	0.002 ps nominal	
PMD emulation repeatability[2]	± 0.02 ps	
PMD emulation relative accuracy[3]	± (0.02 ps + 0.05% of PMD)	
Insertion loss (IL)[1, 2, 4]	- 30 to 0 ps ≤ - 3.0 dB - 0 to 30 ps ≤ - 2.5 dB 30 to 125 ps ≤ - 3.0 dB	- 50 to 0 ps ≤ - 4.0 dB - 0 to 100 ps ≤ - 3.0 dB 100 to 250 ps ≤ - 4.0 dB
Polarization dispersion loss (PDL)[1,3]	- 30 to 0 ps ≤ - 0.5 dB - 0 to 30 ps ≤ - 0.2 dB 30 to 125 ps ≤ - 0.5 dB	- 50 to 0 ps ≤ - 1.0 dB - 0 to 100 ps ≤ - 0.5 dB 100 to 250 ps ≤ - 1.0 dB
Return loss (RL)	> 45 dB	
IN/OUT fiber type	single-mode (SM) 9/125 µm fiber with bulkhead FC connectors	
Input voltage	100 to 240 V AC, 50 to 60 Hz	
Power consumption	100 V A maximum	
Control	GPIB and RS-232 interfaces	
Operating temperature	0 to 40 °C	
Storage temperature	- 40 to 60 °C	
Humidity	maximum 95 % non condensing	
Dimensions (W x H x D)	21.2 x 8.9 x 35.5 cm	
19-inch (48.26 cm) rackmounting	2U high, half-rack width	
Weight	4 kg	

1. At 1550 nm and 25 ± 5 °C.
2. At constant termperature.
3. Exluding connectors.

Ordering Information

For more information on this or other products and their availability, please contact your local JDS Uniphase account manager or JDS Uniphase directly at 1-800-498-JDSU (5378) in North America and +800-5378-JDSU worldwide or via e-mail at sales@jdsu.com.

Sample: PE3+1FP

PE □ + 1 □□

Code	Model
3	PE3
4	PE4

Code	Connector Type
FP	FC/PC
FA	FC/APC