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Artisan Technology Group

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Find the VIAVI Solutions / JDSU PE3 at our website: Click HERE

PMD Emulator

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 RS232 interfaces.



Key Features & Benefits

High accuracy generation of PMD

Repeatability of ± 0.02 ps

PE3 emulation range > 125 ps

PE4 emulation range > 250 ps

GPIB and RS232 remote control

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

Applications

Testing PMD effects on systems

Calibration of PMD measuring equipment

PMD Emulator

Specifications

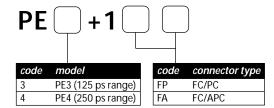
| PARAMETER | PE3 | PE4 |
|---|---|------------------------|
| Operating wavelength range | 1250-1700 nm | |
| PMD emulation range | - 30 to 125 ps | - 50 to 250 ps |
| PMD emulation accuracy at 0 ps setting ¹ | ± 0.1 ps | |
| PMD emulation resolution | 0.002 ps nominal | |
| PMD emulation repeatability ² | ± 0.02 ps | |
| PMD emulation relative accuracy ² | ± (0.02 ps + 0.5 % of PMD) | |
| Insertion loss ^{1,3} | - 30 to 0 ps ≤ 3.0 dB | - 50 to 0 ps ≤ 4.0 dB |
| | 0 to 30 ps ≤ 2.5 dB | 0 to 100 ps ≤ 3.0 dB |
| | 30 to 125 ps ≤ 3.0 dB | 100 to 250 ps ≤ 4.0 dB |
| PDL ^{1,3} | - 30 to 0 ps ≤ 0.5 dB | - 50 to 0 ps ≤ 1.0 dB |
| | 0 to 30 ps ≤ 0.2 dB | 0 to 100 ps ≤ 0.5 dB |
| | 30 to 125 ps ≤ 0.5 dB | 100 to 250 ps ≤ 1.0 dB |
| Return loss | > 45 dB | |
| IN/OUT fiber type | single-mode 9/125 µm fiber with bulkhead FC connector | |
| Input voltage | 100-240 V AC, 50-60 Hz | |
| Power consumption | 100 VA maximum | |
| Control | GPIB and RS232 interfaces | |
| 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 | |
| Operating temperature | 0 to 40 °C | |
| Storage temperature | - 40 to 60 °C | |
| Humidity | maximum 95 % non-condensing | |

- 1. At 1550 nm and 25 \pm 5 °C.
- 2. At constant temperature.
- 3. Excluding connectors.

Ordering Information

Indicate your requirements by selecting one option from each configuration table. Print the corresponding codes in the available boxes to form your part number.

SAMPLE ORDER: PE3+1FP



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INSTRUMENTATION LITERATURE REQUEST

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