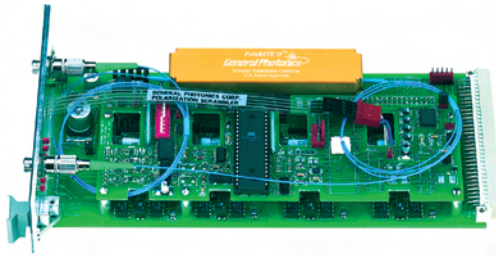


POLARIZATION MANAGEMENT MODULES

Polarization Scrambler Module with Microprocessor Controller



the operation wavelength or enable/disable the scrambler board. Otherwise, the performance of the PCD-004 is identical to that of the PCD-003.

General Photonics' Polarization Scrambler plug-in module uses a breakthrough all-fiber technology to effectively randomize polarization states. This module is designed to be easily plugged into network equipment or measurement instruments with minimal development effort. The PCD-004 integrates a microprocessor-based communication and control board with the PCD-003 scrambler board to allow the module to be remotely controlled via RS-232. In particular, a control computer or microprocessor can be used to turn the module on/off, or change the operation wavelength of the module for optimum performance. There are also on-board buttons to locally change

Specifications:

Insertion Loss	< 0.05 dB
Center Operating Wavelength	Remote or manual selection of 980 nm, 1060 nm, 1310 nm, 1480 nm, 1550 nm, 1600 nm
Operating Wavelength Range ¹	> 100 nm
Output Degree of Polarization ^{2,3}	< 5%
Average PMD	< 0.05 ps
Intrinsic PDL	< 0.05 dB, 0.01 dB typical
Return Loss	> 65 dB
Optical Power Handling	> 1000 mW
Residual Amplitude Modulation	< ± 0.01 dB
Residual Phase Modulation	< 0.1π
Power Supply	±12 VDC/1A to ±15 VDC/1A, +5 VDC/0.2A
Power Consumption	12 W typical
Scrambling Frequencies	Factory set 4 fixed frequencies, distributed between DC to > 700 kHz
Operating Temperature	10 ~ 45 °C
Storage Temperature	-10 ~ 50 °C
Board Dimension	220 × 100 × 30 mm (L × W × H)

Notes: Values are referenced without connectors

1. Center Wavelength ± 50 nm

2. At 500 Hz detection bandwidth

3. Measured from a photodetector at PCD-004 output using a spectrum analyzer. A polarizer is placed in front of the photodetector to convert polarization modulation to amplitude modulation.

Features:

- Minimal insertion loss and back reflection
- Low residual phase and amplitude modulation
- RS-232 control option
- Remote operation wavelength control

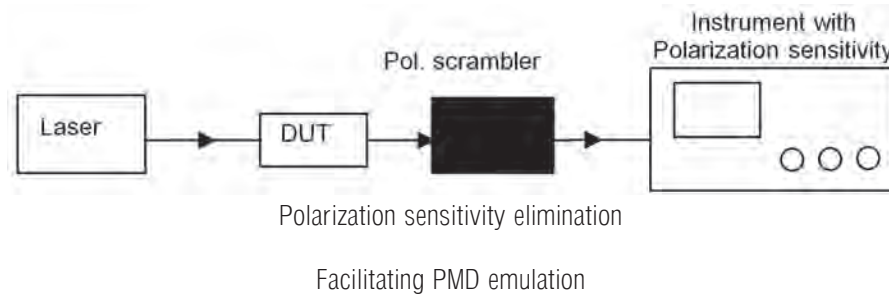
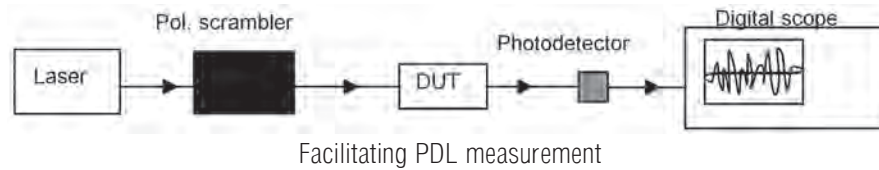
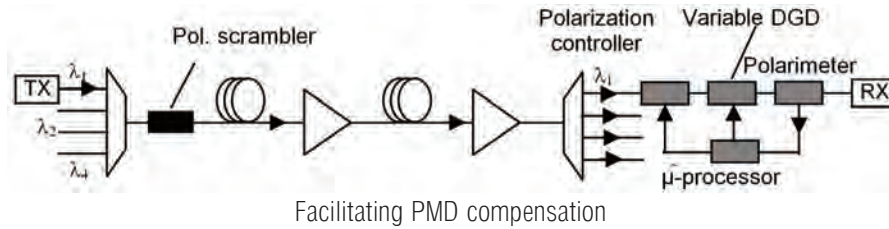
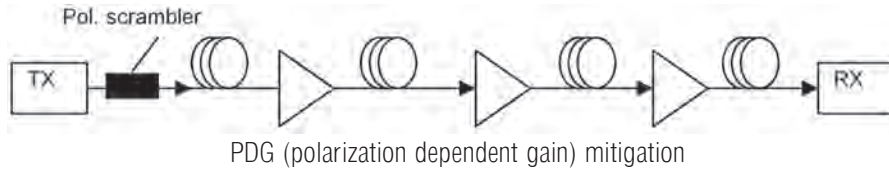
Tech Info: pp. 103, 152
FAQ: p. 171



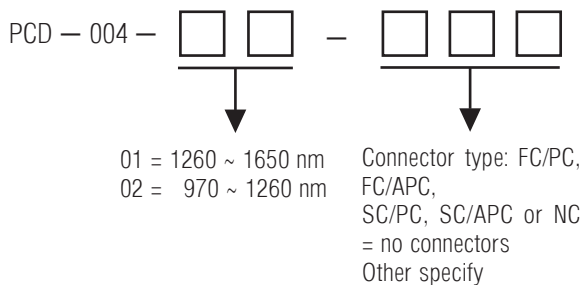
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Polarization Scrambler Module with Microprocessor Controller

Applications:

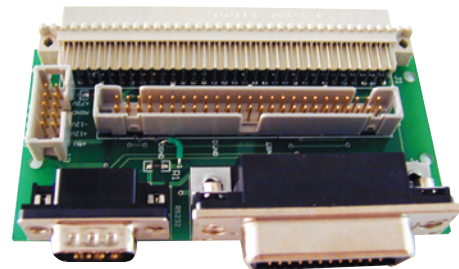


Ordering Information:



Accessories:

ADB-001 (RS-232 adapter board)



This module is compatible with the PolaMAX (PMP-3000) platform, see page 22

See page 40 for standard polarization scrambler, page 44 for tunable mini-scrambler, page 66 for passive depolarizer