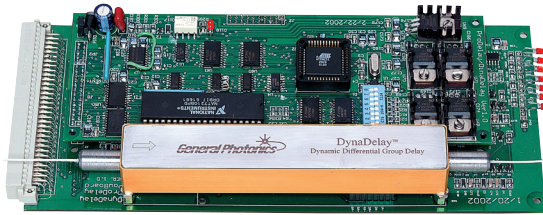


TIMING/DELAY MANAGEMENT MODULES

Dynamic Differential Group Delay Module – DynaDelay™



General Photonics' high-speed dynamic differential group delay (DGD) line provides a varied amount of group delay difference between two linear orthogonal polarization states. DGD is a key component for PMD compensation. DynaDelay can digitally switch the amount of DGD from -45 ps to 45 ps with a resolution of 1.36 ps (6-bit resolution) in less than 500 μ s. With an integrated circuit board and a software package, the device can easily be controlled by a computer or microprocessor. In addition to PMD compensation, this patented device can also be used for PMD emulation or precision TDM bit alignment, or as a true-time delay for steering phased array antennas.

Specifications:

Insertion Loss	1.5 dB max.
Return Loss	55 dB
PDL	0.2 dB typical, 0.35 dB max.
Wavelength Dependent Loss	0.25 dB over C band
1 st Order PMD	- 45 ~ + 45 ps, others specify
DGD Varying Resolution	1.36 ps, other specify
2 nd Order PMD	90 ps ² max.
Transient DGD	1.36 ps max.
Transient Loss	0.7 dB total
Number Of Control Bits	6
Delay Variation Speed	500 μ s
Operating Wavelength	1550 \pm 50 nm, or 1310 \pm 50 nm
Optical Power Handling	300 mW min.
Electrical Interface	RS-232, digital I/O
Electrical Power Supply	12 V/ 0.5 A, 5 V/ 1.2 A
Software	Labview driver for digital I/O interface provided
Operating Temperature	0 ~ 50 °C
Storage Temperature	-40 ~ 80 °C
Dimensions	220 x 100 x 32 mm (L x W x H)

Note: Values are referenced without connectors

Features:

- Digitally switched DGD
- 500 μ s or less delay switching speed
- \pm 45 ps total DGD
- 6 bit (1.36 ps) delay resolution
- Compact size

Applications:

- PMD compensation
- PMD emulation
- TDM bit alignment
- True time delay for RF signal processing

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