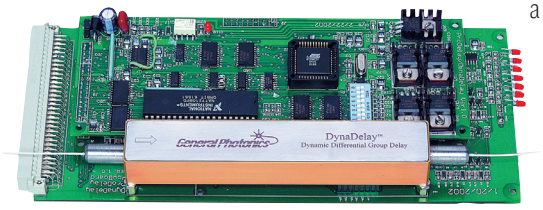
Dynamic Differential Group Delay Module for 40G Systems – DynaDelay™ 40



General Photonics' high-speed variable differential group delay (DGD) line provides a varied amount of group delay difference between two orthogonal linear polarization states. DGD is a key component in PMD emulation and compensation. This 40G DynaDelay is specially designed for the requirements of 40Gb/s systems. It can digitally switch the amount of DGD from 0 ps to 22.5 ps with a resolution of 0.36 ps (6-bit resolution) in less than 500 µs. With an integrated circuit board and software package, the device can easily be controlled with a computer or microprocessor. In addition to PMD emulation and compensation, this patented device can also be used for precision TDM bit alignment.

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
1st order PMD	0 ~ 22.5 ps standard
DGD Varying Resolution	0.36 ps
2nd Order PMD	30 ps^2 max.
Transient DGD	0.35 ps max.
Transient Loss	0.7 dB total
Number Of Control Bits	6
Delay Variation Speed	500 µs
Operating Wavelength	1550 ± 50 nm, or 1310 ± 50 nm
Optical Power Handling	300 mW min.
Electrical Interface	RS-232, digital I/O
Electrical Power Supply	12 VDC/ 0.5A, 5 VDC/ 1.2A
Software	Labview driver for digital I/O interface provided
Operating Temperature	0 ~ 50 °C
Storage Temperature	-40 ~ 80 °C
Board Dimensions	220 × 100 × 30 mm (L × W × H)

Note: Values are referenced without connectors

Features:

- Digitally switched DGD
- 500 µs or less delay switching speed
- 0 – 22.5 ps total DGD
- 6 bit (0.36 ps) delay resolution
- Compact

Applications:

- PMD compensation
- PMD emulation
- TDM bit alignment

Tech Info: p. 138
FAQ: p. 176

Ordering Information:

DGD – 6B2 – □ □ – 20 – □ □ □

- □ □: 15 = 1550 nm; 13 = 1310 nm
- □ □ □: Connector type: FC/PC, FC/APC, SC/PC, SC/APC or NC = no connectors; Other specify

The module can be plugged into PolaMAX™ PMP-3000, see page 22