



PHASE DEMODULATOR

DQPSK Demodulator

ITF Labs' DQPSK Demodulator is comprised of two packaged and qualified All-Fiber delay line interferometers, constructed from two continuous lengths of Corning SMF28 fiber fused to form wavelength-insensitive 3dB couplers. This results in unparalleled insertion loss, fringe contrast, port imbalance and polarization-dependency performance. Phase tuning is achieved using heaters directly deposited on the optical fiber of each interferometer, providing minimal power consumption and fast rise times.

This device is offered in a compact, stable and reliable package. Internally the DPSK has successfully completed qualification testing to Telcordia's GR-1221-CORE central office requirement and is also fully compliant with RoHS requirements. Connectorization is available as an option, with matched pigtail length down to 0.1ps accuracy.



For more information on this or other products and their availability, please contact our customer service at **514.748.4848** (Int'l) / **1.888.922.1044** (Canada & USA only) or via e-mail at info@itflabs.com

KEY FEATURES

- **20-100 Gb/s**
- **Near Zero PDL and PMD**
- **Tunable**
- **Work in C & L Bands**
- **Very Low PDF**
- **Low Excess Loss & High Isolation**

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SPECIFICATIONS

PARAMETERS (1) & (6)	STANDARD CONFIGURATIONS
Bit rate (Free Spectral Range x 2)	20-100 Gb/s
Isolation	25 dB
PDF (2)	1% of the FSR
Operating Wavelength	1530 - 1610 nm
Peak Insertion Loss (3)	<3.6 dB
Differential Delay between Pigtails (4)	<0.25 ps
Heater Resistance	375 Ω
Tuning Rise Time (5)	200 ms
Tuning Fall Time (5)	200 ms
Operating Case Temperature	0 - 65° C

- (1) All specs are typical values only.
(2) Δf between polarization eigenstates – more details available upon request.
(3) Includes wideband 3dB splitter to each delay line.
(4) Delay difference between ports 1 & 2, 3 & 4.
(5) τ such that $\Delta \phi \propto 1 - e^{-t/\tau}$.
(6) All measurements are “worst case” values over operating band of both ports.

Note: two delay line interferometers for aggregate bitrate of twice the FSR.

ORDERING INFORMATION

ITF Labs can also develop custom multimode power combiners to meet a wide range of technical requirements. We also offer DPSK for 2.5 G to 55 G applications. Check our new μ DPSK for 20 G to 70 G applications.



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