



# PHASE DEMODULATOR

## $\mu$ DPSK Demodulator

ITF Labs' micro-DPSK ( $\mu$ DPSK) Demodulator is an All-Fiber delay line interferometer 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 a heater directly deposited on the optical fiber, providing minimal power consumption and fast rise times.

This device is offered in an ultra compact, stable and reliable package perfect to be integrated inside an MSA package. It is also fully compliant with RoHS requirements. Free from resonance below 2 kHz, the device can operate in the presence of ambient vibration. 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](mailto:info@itflabs.com)



actual size

**THINEST IN THE MARKET**

### KEY FEATURES

- 20, 40, 50, 70 GHz and Custom Rates
- Fits Inside 300 pin MSA Package
- Near Zero PDL and Insertion Loss
- C + L Band Operation
- Very Low Power Consumption

# PHASE DEMODULATOR

## μDPSK Demodulator

### SPECIFICATIONS

PARAMETERS (1) & (6)	STANDARD CONFIGURATIONS			
Free Spectral Range	20 GHz	40 GHz	50 GHz	70 GHz
Isolation	28 dB			
Optical Return Loss	> 50 dB			
PDF (2)	0.2 GHz	0.4 GHz	0.5 GHz	0.7 GHz
Operating Wavelength	1530 - 1610 nm			
Peak Insertion Loss (3)	0.7 dB			
Differential Delay between Pigtails (4)	< 0.25 ps			
Heater Resistance	325 Ω			
Tuning Rise Time (5)	150 ms			
Tuning Fall Time (5)	150 ms			
Typical Power Consumption	150 mW			
Operating Case Temperature	-5 to 70° C			
Size	49 x 29 x 4.3 mm (L x W x H)			

(1) All specs are typical values only.

(2) Δf between polarization eigenstates – more details available upon request.

(3) Does not include contribution from connectors.

(4) Delay difference between ports 1 & 2; applies to connectorized units only. Offered either unterminated or with connectors.

(5) Time to reach half way point.

(6) All measurements are “worst case” values over operating band of both ports.

### ORDERING INFORMATION

Please contact our Sales Department to advise your FSR specification & request a quotation. We also offer DQPSK for 20G to 100G applications.



**ITF Labs**

400 Montpellier Blvd  
Montreal, Quebec H4N 2G7 CANADA

Tel: 514.748.4848

Fax: 514.744.2080

1.888.922.1044

www.itflabs.com info@itflabs.com