

# microwave photonic systems

*OPDL-5000-DL-4G: Rack Mounted RF Photonic Delay Line, 4 GHz*

## OPDL-5000-DL-4G: Rack Mounted 4 GHz Delay Line



### Supports Fixed and Variable Delays Over Frequency Ranges from 100 MHz to 4.0 GHz

The MPS Optical / Photonic Delay Line (OPDL) is a "Best in Class" integrated subrack that leverages MPS's field proven optical packaging methodologies, proprietary control software, and RF / Photonic integration techniques.

The OPDL-5000-DL-4G provides time delay capability for Radio Frequency (RF) input signals from 0.1 GHz to 4.0 GHz, is packaged in an 1RU x 19" rack chassis, configurable with delays up to 500 us, and available options for all RF and optical connectors.

The OPDL-5000-DL-4G can be configured with multiple time delay segment values. The delay values of the segments can either be configured as discrete time delay values, or can be configured as a binary  $2^n$  series. The binary  $2^n$  series configuration provides the ability to select delay values over a broader range with smaller time increments. Delay values are visible on the front panel display and can be incremented through the use either the front panel key pad or remotely using the digital communications interface.

The OPDL-5000-DL-4G has an option to integrate Variable Optical Attenuators (VOA) which allow the operator to balancing the system gain profile. Similar to the switch, the VOA is controlled by the front panel control keys or through the digital communications interface.

Contact MPS for additional details and available options.

### Market Applications

- Test & Calibration Labs
- Radar Target Simulation
- Signal Processing
- Phase Noise Testing

### Features & Options

- Fixed or Variable Delay Options
- High Optical Pathway Isolation
- Front Panel Control Display
- Remote Status Monitor and Control
- Unity Gain Options
- 2 Year Warranty
- CD ROM User Manual



FODS - Rack Mounted, Auxiliary Fiber Optic Delay Line Spool

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### Specifications

#### System Performance Parameters:

Operational Frequency	100 MHz to 4.0 GHz
Delay	Up to 500 us, Must Specify At Time of Order
Delay Accuracy	1%
Flatness:	+/- 2.0 dB
RF Input Power, Operational	-100 dBm to 0 dBm
Input VSWR	2.0:1 (Max) , 1.5:1 (Typical)
Output VSWR	2.0:1 (Max) , 1.5:1 (Typical)
RF Connectors	SMA (Female) or Customer Specified
Impedance	50 Ohm

#### System Interface Parameters:

Remote Monitor and Control	RS-232 via DB-9
Local Monitor and Control	Front Panel Key Pad and Vacuum Fluorescent Display

#### Optical Performance Parameters:

Optical Wavelength	1310 nm or 1550 nm
Optical Connector	FC/APC
Fiber Optic Cable Type	Single Mode

#### Additional Specifications:

Power Supply	Auto Ranging, Universal, 230 VAC, 50 Hz
Power Connector	3-Pin Male
Power Control	On/Off Switch
Storage Temperature	-45°C to +85°C
Operating Temperature	0°C to +60°C
Dimensions	19" x 14" Rack Mount, 1RU Standard, 3RU Option

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