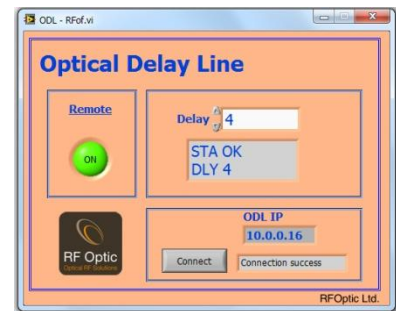




Applications:	Key features:
Radar Calibration & Testing	Delays: 0.1-300 μ sec (fixed), special request >300 usec.
Signal & Phase Noise Processing	Frequency Range: 0.1 to 18 GHz
Extension of radar range site	Delay accuracy: 0.1%
Clutter Canceler	Remote Control: RS-232 or Ethernet
BIT (built-in test)	High Dynamic Range
EW Systems - Jammers	Variety of configurations
Path Delay Simulation	Up to 15 usec can be housed in Mini enclosure

Options:
ODL with 2, 4, up to 8 switchable delays
Delay accuracy of 0.1 % (not less than 25 nsec)
RF Bypass
Dispersion Compensator for long delay line
Various Gain
Control RS-232 or TTL or Ethernet
Full BIT using signal detection at the receiver



RFOptic's optical delay line ODL series provides a high performance solution for testing and calibration of radar systems, or for RF communication. The ODL converts analog RF signals to optical signals and back. The RF input signal is converted into an optical modulated signal, which is then transmitted into a single mode fiber, creating a fixed time delay defined by the fiber length. After passing through the fiber, the optical signal is converted back into an electrical RF signal, which is identical to the input RF signal.

Any fixed time delay between 0.1 and 300 μ sec can be provided to customers. The Optical Delay Line is operated as a standalone unit with no need for any intervention by the operator. It can be also controlled externally from a PC through various communication user interfaces. RFOptic's ODL unit is a compact solution, which provides superb performance including accurate time delay and with an ultra silent operation.

The ODL can be purchased with an integral switch unit supporting up to 8 predefined time delay values in a single ODL unit. For certain applications, RFOptic offers a low cost ODL solution of up to 5GHz based on direct modulation.

The table below describes the specifications of the **ODL-18G-S232** for DSTL:

Parameter	Unit	Specifications	Note
RF			
Frequency range	GHz	0.5-18	
Delay time	µsec	40 and 60	100 usec by combination of 40 usec and 60 usec delays. Two DCF integrated units are required to compensate the dispersion loss
Delay accuracy	%	1	
Delay repeatability	%	<0.01	at +/- 5 °C variations
System RF gain	dB	(-30) to (-35)	without the delay line loss
Noise Figure at 10GHz	dB	45	without the delay line loss
Group Delay Variation	psec	± 100	
1dB Input Compression point	dBm	≥15	
Max input RF power	dBm	+23	
Spurious	dBc	≤-80	
Phase noise (at 10kHz offset)	dBc/Hz	≤-130	
RF Flatness (not including amplifier)	dB	≤± 3.5	
I/O VSWR	-	2.2:1	
Impedance	Ohm	50	
Mechanical			
1550 nm laser CW optical power	mW	≤ 20	
Communication	-	RS-232	
RF connectors	-	SMA	
Power Supply	DC	5	DC socket is connected to 220VAC external power supply
19" Rack mounting	mm3	440 x 450 x 133	See mechanical drawing
Operating Temperature	°C	0 ÷ 60	
Storage	°C	(-40) ÷ +85	
CE conformity		Yes	