



FIBER OPTIC SWITCH
(Model 036)

KEY FEATURES AND PRODUCT HIGHLIGHTS

- High Port Count
- Rapid Switching Time at 30 ms
- Low Insertion Loss (<1.5 dB)
- Low Wavelength Dependent Loss (<0.3 dB)
- O, C and L band operation
- USB 2.0 Interface

Luna Technologies' **Fiber Optic Switches**

(FOS) 008 and 036 are cost-effective 1xN optical switches with impressive performance and flexibility. With low insertion loss, low wavelength dependent loss and flexible port count, manufacturers can perform high-port count optical test and measurement including DWDM channel testing and multiplexed optical sensing with reduced time and cost. The FOS can be integrated with Luna's other industry-leading test and measurement products to enable scalable integrated testing for the manufacturing floor. Luna's FOS is the only switch certified and tested to be fully specification compatible with our award-winning line of fiber test products. Not all fiber switches are the same. Rely on our experience.

Fiber Optic Switches (FOS) 008 and 036 Product Specifications

PARAMETER	TYP	MAX	UNITS
Insertion Loss	1.2	1.5	dB
Wavelength Dependent Loss ¹	0.2	0.3	dB
PDL	0.1	0.15	dB
Repeatability ²	0.02	0.04	dB
Return Loss		-50	dB
Crosstalk		-50	dB
Switching Time		30	ms
Port Count	1x8 or 1x36		
Wavelength Range	1290-1330 & 1530-1610		nm
Fiber and Connector type	SM FC/APC		
Interface	USB 2.0		
Operating Temperature	5	70	°C
Storage Temperature	-40	85	°C
Chassis Description	Standard 2U 19" Rackmount (1x36) 4.75"x10.25"x10.4" Benchtop (1x8)		

¹ Measured over +/- 20 nm range
² IL repeatability over 100 cycles

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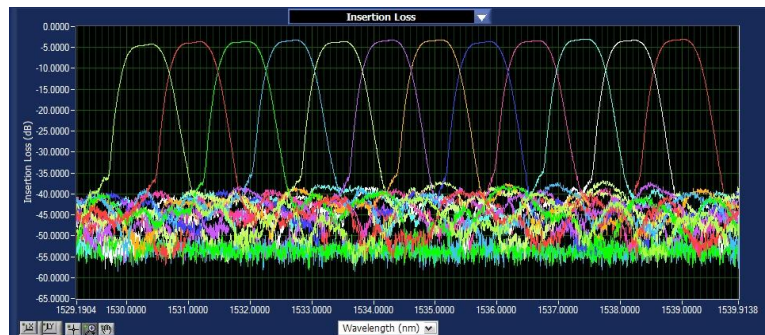


APPLICATION EXAMPLES

Multi-port DWDM Component Testing

Luna Technologies' Fiber Optic Switches provide a cost-effective way to multiplex fiber optic testing requirements. An example where multiplexed testing can save both time and expense is in manufacturing test of modern, multi-channel dense wavelength division multiplexed (DWDM) fiber components and systems. Typical components, found in a DWDM architecture, include both static and dynamically controlled multi-channel filters (AWGs, ROADMS, etc.). As bandwidth increases, so do the testing requirements for these backbone components. Typical testing requirements for DWDM components include Insertion Loss, Polarization Dependant Loss, Chromatic Dispersion, Group Delay Ripple and Polarization Mode Dispersion, which are all measured with high wavelength resolution (< 10pm) over the entire communications band (e.g. 1525 nm – 1565 nm). For multi-port components, this may lead to hours of testing for a single component.

Luna Technologies' solution is simple: Integrate our Optical Vector Analyzer with the FOS 036 using our Software Developer Kit for easy introduction of multiport testing into any environment. Stable, configurable and fast, this combination enables testing a high-port count DWDM for all parameters in a matter of minutes.



All-parameter, multi-port component testing in minutes

Fast and Accurate Fiber SKEW Measurement

Skew measurements can now be made on multimode and/or single-mode fiber cables and ribbons using Luna's user-friendly Software Developer Kit in conjunction with a Luna Optical Backscatter Reflectometer and the Luna Fiber Optic Switch. The skew measurement capability relies on the OBR's ability to measure minute reflections (< -135 dB) out to 2 kilometers with zero dead zone and industry-leading sub-millimeter spatial resolution.

Skew is determined by making a single-ended time-of-flight measurement of each fiber in a cable strand and computing the path differential, which is then graphically displayed to the user. With the single click of a button, this can all be achieved in less than one minute. Additionally, with the same measurement, the user can apply OBR software tools to characterize the dispersion of each fiber in the cable strand, and reduce overall test time and the duplication of equipment.

