SWITCHLIGHT™

S.M.A.R.T. Optical Solutions

Switch **M**onitor **A**mplify **R**eplicate **T**ap

Features…

- Multi-functional, S.M.A.R.T. device with extremely small footprint
- Selective optical signal filtering
- Lossless optical signal multicasting
- Affordable customization and scalability

Benefits…

- Reduce size and increase flexibility & manageability of active & passive optics
- Access individual optical signal(s) for monitoring purposes
- Eliminate additional IL incurred with traditional optical multicasting
- Simplify management & integration with existing resources

M2 Optics' ***patent-pending*** SWITCHLIGHT™ integrates a number of optical technologies, both active and passive, into a single 1RU or 2RU platform. The SWITCHLIGHT™ has a separate subsystem for each of these functional areas, which allows for customizable, build-to-order systems without sacrificing affordability. The subsystems are **S**witching, **M**onitoring, **A**mplifying, **R**eplicating, and **T**apping. Using subsystems also enables cost-effective scalability and simplified management of the entire system making the SWITCHLIGHT™ the **S.M.A.R.T.** choice!

Switching

- Supports asymmetric, full duplex switching for one-to-many (up to 1x128) and many-to-one (128x1) apps with ultra-low insertion loss (~ <1.0dB)
- Enables tool sharing for testing or monitoring applications
- Allows for any bit-rate or service over SM or MM fiber

Monitoring

- Captures all traffic on the fiber network via passive optics
- Distributes selected optical signals to the correct monitoring, storage, or analysis device
- Automates physical layer control for upper layer monitoring applications

Amplifying

- Up to 4 amplifiers with a max gain of 35dB
- Reduces space associated with typical amplifier solutions
- Eliminates or reduces loss associated with optical multicast applications and boosts signal strength in low power monitoring environments

Replicating

- Broadcasts 1 signal up to 128 times
- Multicasts 1 signal up to 64 times or 8 signals 8 times each in a single RU
- Enables individual light paths to be remotely turned on/off
- Increases resource efficiency

Tapping

- Provides "intelligent" passive optical taps
- Creates multicast groups based on internal connectivity
- Transforms high-touch, labor intensive tasks to remotely accessed and controlled configuration changes

Each SWITCHLIGHT™ comes equipped with LIGHTCLICK™ software as a standard feature. LIGHTCLICK™ offers both an easy-to-use, web-based GUI utilizing HTML5 for fast response times and TCL, PERL, and Python APIs to simplify integrating the SWITCHLIGHT™ into your network.

M2 Optics, Inc.
120 Penmarc Drive, Suite 109, Raleigh, NC 27603
PH: 919-342-5619 F: 919-341-1672 TF: 866-269-2902

Version Drawings

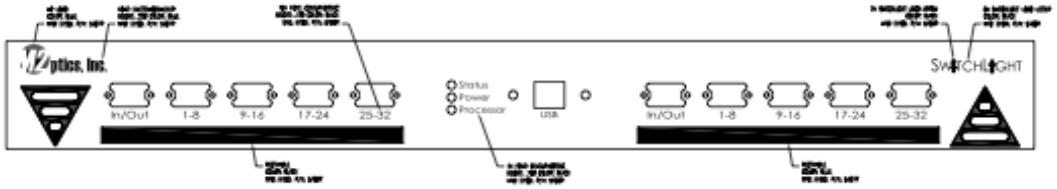

Figure 1: 1RU SwitchLight™

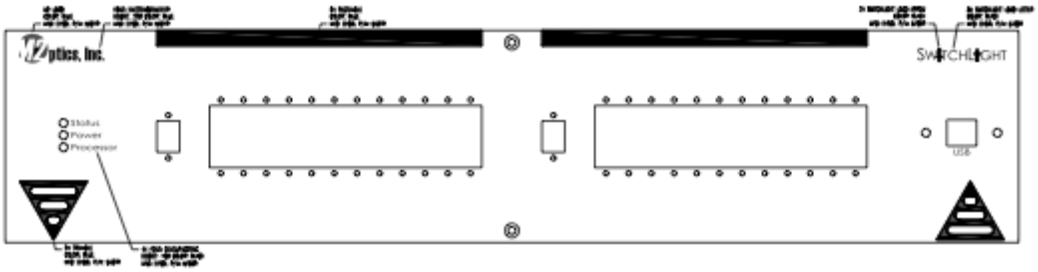

Figure 2: 2RU SwitchLight™

Typical Specifications

Characteristic	Switch	Amplifier	Taps
Fiber Type	Single-mode or Multimode	Single-mode	Single-mode or Multimode
Wavelength Range	850+/-40nm; 1260-1650nm	1530-1565nm	850+/-40nm; 1260-1650nm
Max. Input Signal	N/A*	0dBm	–
Min. Input Signal	N/A*	-30dBm	–
Max. Output Signal	N/A*	10dBm	–
Min. Output Signal	N/A*	-10dBm	–
Gain	–	30-35dB	–
Insertion Loss	1.0dB	–	1x2 = 3.4dB 1x4 = 7.1dB 1x8 = 10.2dB 1x16 = 13.5dB 1x32 = 16.5dB 1x64 = 20.5dB
Return Loss	≥50dB	≥40dB	≥55dB
Crosstalk	≥65dB	–	–
PDL	≤0.05dB	0.3dB	0.1dB
WDL	≤0.25dB	–	0.3dB
Switching Time	25ms** / 25ms+(10x*n*)***	–	–
Storage Temp.	-40°to +85°		
Operating Temp,	0°to +65°		
Power	24VAC/5A/120W External Power Supply (UL / CUL / TUV / BSMI / CCC / CB / FCC / CE)		

* The switch is capable of dark fiber switching and extremely high-powered switching, so the minimum and maximum optical signal outputs are inconsequential.
** 25ms for adjacent port connections.
*** 25ms + 10ms per port for non-adjacent port connections

For specific ordering information, please contact M2 Optics' sales at sales@m2optics.com or call 919-342-5619 or toll-free at 866-269-2902.