

OPTICAL CIRCUIT SWITCHES

LW-64 Silicon Photonic Optical Switch

Model LW-64

64x64 non-blocking silicon photonic switch module covering the full C band, with better than 27 dB channel isolation.



Key Features

- Non-blocking 64x64 fabric — any input reaches any output with no contention
- Transparent to data rate, modulation format and protocol
- Full C-band coverage on a standard 50 GHz DWDM grid
- Channel isolation better than 27 dB
- Silicon photonic integration in place of discrete free-space optics
- Stackable into 1024x1024 systems through an optical backplane

Applications

- Reconfigurable data center and AI cluster interconnect
- Optical layer protection and fast path restoration
- Automated optical test benches and burn-in racks
- Research testbeds for optically switched network topologies

Overview

The LW-64 is a 64x64 non-blocking optical switch built on a silicon photonic chip. It steers light from any input port to any output port without converting to an electrical signal, so the data rate, modulation format and protocol running over the link are irrelevant to the switch.

Because switching happens in the optical domain, a path costs no transceiver power and adds no serialization latency. The module covers 1538.58 nm to 1563.86 nm on a 50 GHz grid, which maps onto standard DWDM channel plans, and holds channel isolation above 27 dB across the band.

The LW-64 is the building block for our larger systems: sixteen of these modules form the input and output stages of the 1024x1024 switch system, and a single module packaged in a 19-inch chassis becomes the rack-mount 64x64 unit.

Specifications

Optical Performance

PARAMETER	VALUE	UNIT	CONDITIONS
Channel Configuration	64 x 64, non-blocking		
Wavelength Range	1538.58 – 1563.86	nm	Full C band
ITU Band	C17 – H48		
Channel Spacing	50	GHz	Standard DWDM grid
Insertion Loss	6 – 8	dB	Port to port, typical
Channel Isolation	> 27	dB	

NOTES

1. Insertion loss is stated port to port across the fabric and varies with the path selected. Contact sales for the loss budget of a specific configuration.
2. Connector type, pigtail length and fiber management are configured to order.

Order or request a quote

+1 (619) 500-4899 · sales@lightwitphotonics.com
lightwitphotonics.com
Monday–Friday, 8:00 AM – 6:00 PM Pacific

Lightwit Photonics Co., Ltd.

Datasheet issued 2026-09-06
Rev. controlled document

Specifications are subject to change without notice and do not constitute a warranty. Confirm all parameters with Lightwit Photonics sales before ordering.