

Innovation for the next generation



MLO4034

Optical Switch Box

Fully Automatable | Transceiver Testing Solution | Single-mode or Multi-mode | Integrated WDM, Power Meter & VOAs | Integrated Switch Matrix | LCD Touch Control Panel | Supports quad channel parallel and WDM transceiver testing



Summary

At MultiLane, one of our main objectives is to provide transceiver testing at an affordable price point. From 10 Gbs to 400 Gbs Ethernet, we have always made sure to keep up with the changes in the industry, and we continue to develop our products and solutions to offer fully automated testing that shows good correlation to incumbent solutions.

Our latest introduction to the MultiLane product family is the MLO4034 Optical Switch Box. The MLO4034 is a stand-alone optical switch box that can support the testing of optical transceivers. Instead of having separate components such as optical switches, wavelength demultiplexers, hand-held power meters and VOAs, the MLO unit has all of them integrated in a single box. It is also part of the ML7007 Series of automated transceiver test solutions. The latter targets the fully automated testing of 10G to 400G optical transceivers. The MLO4034 Optical Switch Box plays a pivotal role in the ML7007 Series by enabling automatic switching between the fiber connections without user intervention as it includes optical switches, variable attenuators, power monitors and a WDM demultiplexer.

MLO4034

Optical Switch Box

Introduction

The MLO box enables users to test optical transmitter characteristics and optical receiver sensitivity of transceivers up to four parallel fibers or four wavelengths. The box includes the required optical switches and is also equipped with integrated power monitors, variable optical attenuators and a WDM demultiplexer.

Available variants are:

- MLO4034-CWDM4 (SM)
- MLO4034-LR4 (SM)
- MLO4034-PSM4 (SM)
- MLO4034-SR4 (MM)

Eight channel variants are available upon request.

The MLO box can be operated either from its touch panel, Windows GUI or from the ML7007 Series of productivity automation software.

Key Features

- FC/APC connectors for reduced return loss
- Built-in programmable optical attenuator
- Built-in power meter
- Cost-effective, small footprint, rugged instrument
- A complete set of APIs and a dozen of example code to speed up integration under Linux and Windows, using Python, LabView, MATLAB and C#

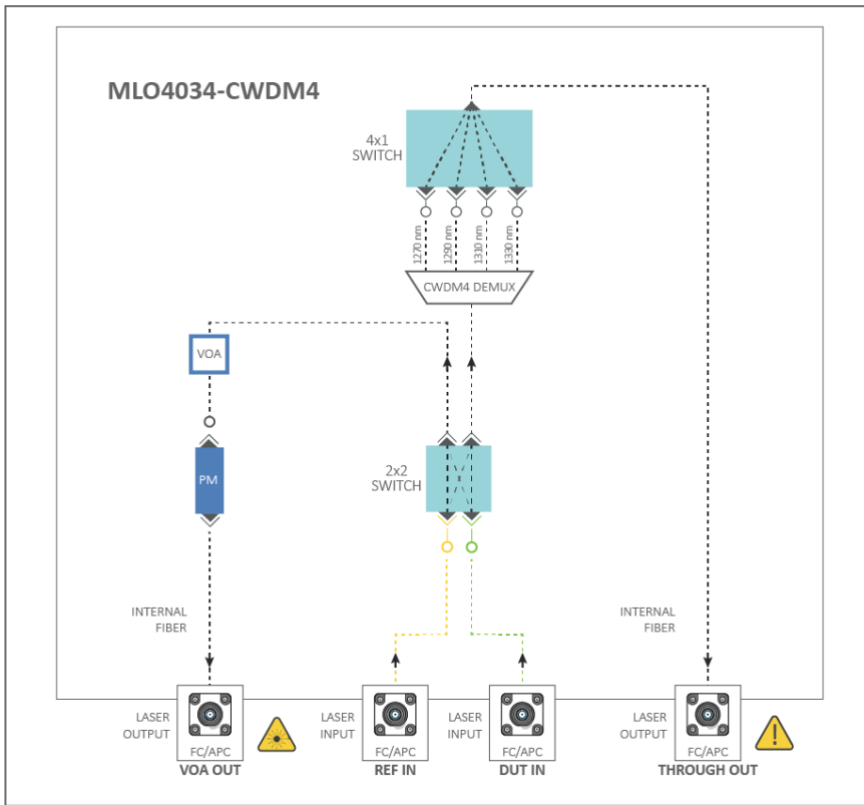
Typical Applications

- Production testing of 10G to 400G transceivers
- Optical transceiver test
- Transceiver manufacturing test
- Transceiver evaluation and validation
- Sensitivity testing of optical receivers

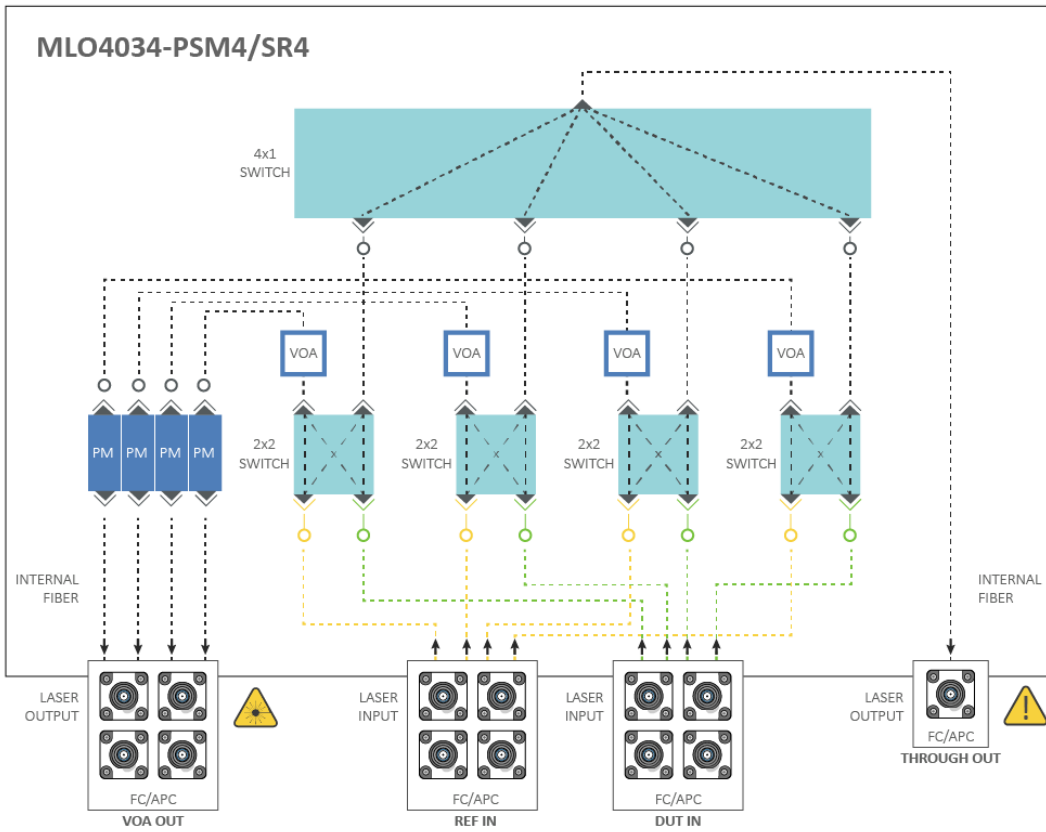
Specifications (Typical)

Parameter	Specifications
SM Wavelengths	1260 – 1620 nm
MM Wavelengths	780 – 860 nm
IL on VOA path	3 dB typical
IL on Through CWDM	3 dB typical
IL on Through PSM	2 dB typical
Max Optical Power Rating	50 mW
Switch Type	MEMS non-latching
VOA & Switching Time	500 ms
Optical Fiber Input SM	9 / 125 μm
Optical Fiber Input MM	50-62.5 / 125 μm
Connector Type	FC/APC
Temperature Range	-5 ~ 70 °C
Line Power	100 ~ 240 V ac, 50/60 Hz
Weight	~ 1.5 kg

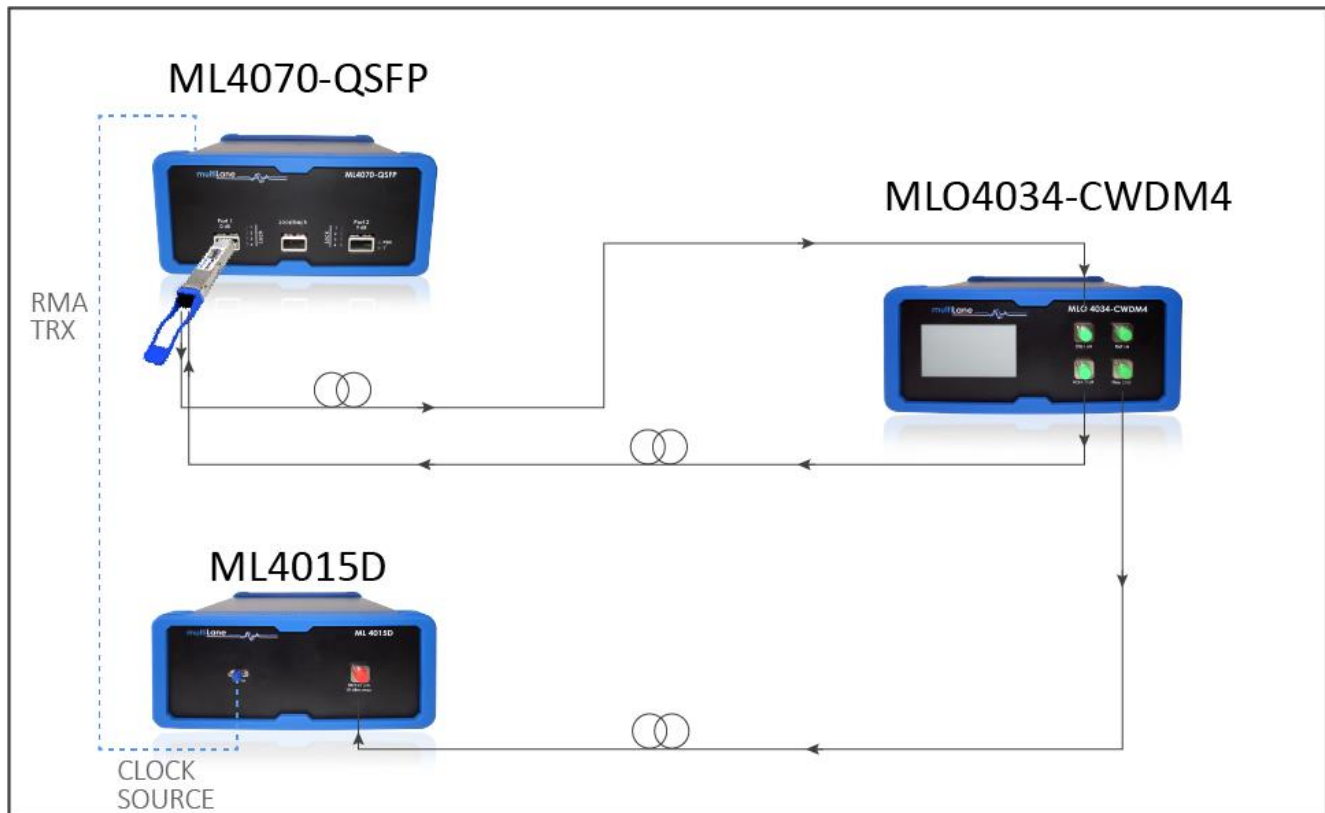
MLO4034-CWDM4/LR4 Block Diagram



MLO4034-PSM4/SR4 Block Diagram

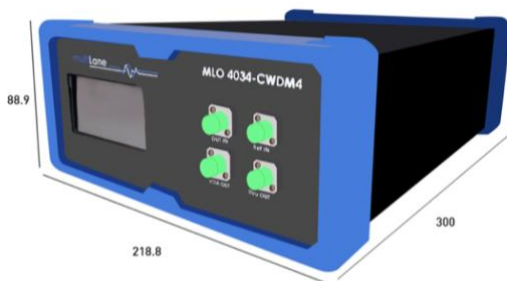


Typical Test Configuration



Mechanical Dimensions

The MLO4034 is a benchtop instrument that also fits in a 19 inch 2U rack. The CWDM4 and LR4 variants are half-rack size, while the PSM4 and SR4 are 19 inch wide. MultiLane can supply the needed brackets upon request.



Complementary Products

- ML4015D Optical DSO (SM or MM, 40 GHz or 25 GHz)
- ML1016D-CR Optical Clock Recovery
- ML7007 Series automation software
- ML4070-QSFP/SFP/QDD host emulator, margin tester BERT
- ML4054-400 400G manufacturing BERT
- ML4039D/4079D 200/400G BERT

Ordering Information

Part Number	Schematic
<p>MLO4034-PSM4</p> <p>4 parallel single-mode fiber variant</p>	
<p>MLO4034-SR4</p> <p>4 parallel multi-mode fiber variant</p>	
<p>MLO4034-CWDM4</p> <p>4 channel single-mode fiber, WDM variant on CWDM wavelength grid</p>	
<p>MLO4034-LR4</p> <p>4 channel single-mode fiber, WDM variant on LR4 wavelength grid</p>	



North America

48521 Warm Springs Blvd. Suite 310
Fremont, CA 94539
USA
+1 510 573 6388

Worldwide

Houmal Technology Park
Askarieh Main Road
Houmal, Lebanon
+961 5 941 668

Asia

14F-5/ Rm.5, 14F., No 295
Sec.2, Guangfu Rd. East Dist.,
Hsinchu City 300, Taiwan (R.O.C)
+886 3 5744 591