

The most rugged high-performance embedded parallel optics.



Optical Tester SR4 50G  
4 lane transmit +4 lane receive

## Optical Tester SR4 50G

### Features

- Designed to operate up to 12.5 Gbps per lane.
- 4× TX and 4× RX high-speed lanes each accessible via a differential pair of SMA connectors.
- AC coupled high-speed signals.
- Single power supply, standard wall-plug interface.
- Also available, Optical Tester SR4 12.5G:  
1× TX and 1× RX high-speed signal each accessible via a differential pair of SMA connectors.

### Product summary

The Optical Tester SR4 is the perfect vehicle for testing and experiencing the *LightABLE*™ SR4 transceiver modules. The Optical Tester SR4 consists of a printed circuit evaluation board with a pluggable SR4 transceiver module. The *LightABLE* SR4 optical transceivers offer four asynchronous lanes operating at up to 12.5 Gbps per lane. These modules are designed for very short reach applications (1 m to 100 m) with support on 50/125 micron multimode fiber (OM3).

This product needs to be associated with all the necessary hardware, test and measurement equipment and software in order to perform the characterization of an optical link.

### Applications

- Assess electrical and optical signal quality from the *LightABLE* SR4.
- Perform bit error rate and eye diagram test on the *LightABLE* SR4 and optical interconnect.
- 4 lane EO/OE lab-grade generator.
- Test various communication protocols such as Ethernet, PCIe, and Infiniband over the *LightABLE*.

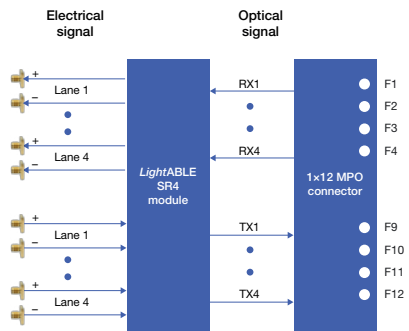
## Recommended test equipment

A wide variety of electrical and optical measurements can be performed with the Optical Tester SR4 based on the transceiver module. As a general guideline, we recommend the following test equipment:

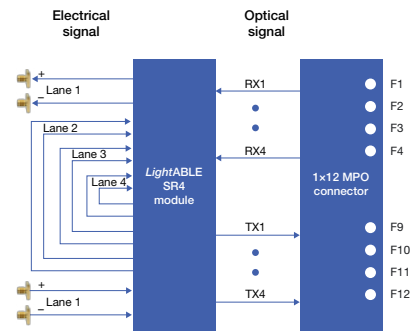
- SMA cables with a bandwidth in excess of 40 GHz are preferred.
- A pulse generator and a signal analyzer to perform both signal patterns (eye diagram) and bit error rate measurements (BERT).
- All measurements on the electrical outputs of the receiver board should use an oscilloscope with a minimum bandwidth of 18 GHz.
- Calibrated optical attenuator and power meter for optical tests at 850 nm.

## Optical Tester SR4 diagrams and dimensions

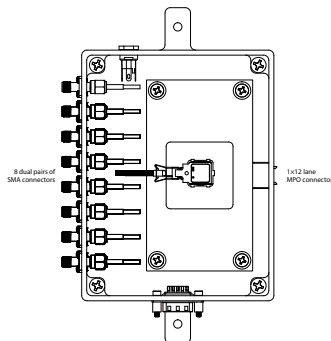
The Optical Tester SR4 is available in two configurations: 50G (4+4 lane) and 12.5G (1+1 lane). Dual pairs of SMA connectors on the periphery of the Optical Tester SR4 give access to TX and RX RF signal for each lane. Optical access is provided via standard MPO connector with a 1 × 12 MT ferrule.



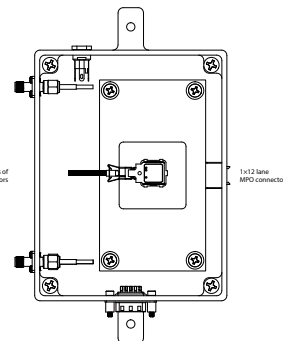
The Optical Tester SR4 50G allows RF electrical access to four TX lanes and four RX lanes of the SR4 transceiver.



The Optical Tester SR4 12.5G allows RF electrical access to one TX and one RX lane. The remaining 3 lanes of TX and 3 lanes of RX of the SR4 transceiver are configured as electrical loopbacks.



Optical Tester SR4 50G technical drawing



Optical Tester SR4 12.5G technical drawing

The Optical Tester SR4 measures approximately (D×W×H) 13 x 20 x 5.5 cm.

## Optical Tester SR4 ordering information

Part Number	Description
LHD040018312102	1 × Optical Tester SR4 50G
LHD040018312101	1 × Optical Tester SR4 12.5G
684-00001	1 × Power supply 110 VAC to 9 V DC
500-00003	1 × MPO (1 × 12 MT) to 12 × FC fan out multimode optical fiber (OM3)
600-00012	1 × FC to FC adaptor

THE *Light* on Board® Company

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