

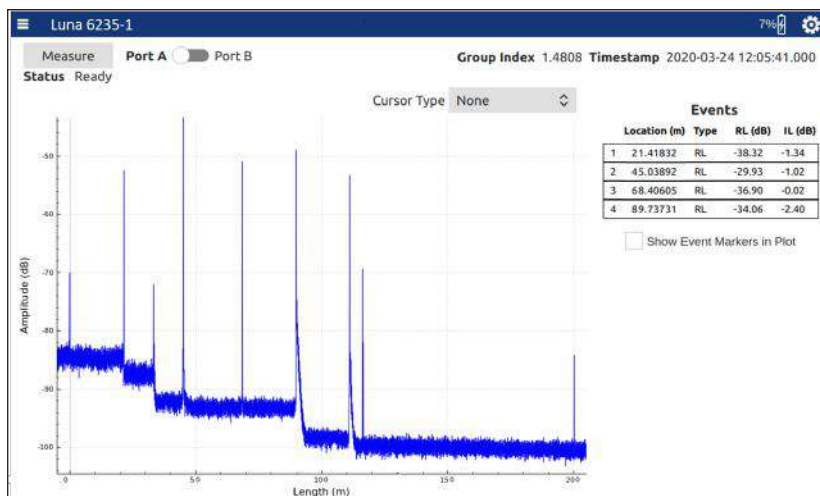
# OBR 6235

Portable Optical Backscatter Reflectometer

The Luna OBR 6235 is a portable and rugged ultra-high resolution reflectometers with extended range for testing fiber optic links in data centers and longer networks in aerospace, naval and industrial applications.

The OBR 6235 utilizes optical frequency domain reflectometry (OFDR) technology to measure distributed return loss (RL) and insertion loss (IL) with sub-millimeter spatial resolution, high precision and high dynamic range. The OBR 6235 is a rugged battery powered integrated system with an intuitive touchscreen user interface, making it ideal for field maintenance applications.

The OBR 6235 extends the measurement length range to 500 m, making it ideal for precision testing of data center interconnects.



The OBR 6235 maps reflection versus length with high resolution, automatically detecting RL reflection events and IL locations that exceed user defined thresholds.

## KEY FEATURES






- Fully portable and rugged OBR with extended length range
- Track and analyze return loss (RL) and insertion loss (IL) versus length
- Sub-millimeter sampling resolution with no “dead zones”
- Measure optical path latency and length with high precision
- Detect and precisely locate reflective events

## APPLICATIONS

- Measure and verify optical latency in critical interconnects
- Troubleshoot fiber assemblies in the field
- Diagnose and validate fiber optic links in data centers
- Precisely locate IL sites, high RL connections, fiber breaks, etc.
- Maintain avionics, aerospace, naval, industrial and data center networks

**The OBR 6200 Series provides portable high-resolution reflectometry for field and maintenance applications**

## SPECIFICATIONS

PARAMETER	SPECIFICATIONS		
<b>Measurement</b>			
Number of optical ports	1 port		
Measurement length modes	100 m	200 m	500 m
Sampling resolution (two-point) <sup>1</sup>	0.20 mm	0.40 mm	1.0 mm
Delay/latency measurement accuracy	20 ps	40 ps	95 ps
Length measurement accuracy <sup>2</sup>	4 mm	8 mm	19 mm
Wavelength scan range	4 nm	2 nm	0.8 nm
Center wavelength	1546.7 nm		
Measurement time	10 s		
<b>Return Loss Measurement</b>			
RL dynamic range <sup>3</sup>	70 dB		
Total range <sup>4</sup>	0 to -129 dB		
Sensitivity <sup>4</sup>	-129 dB		
Resolution <sup>5</sup>	± 0.1 dB		
Accuracy <sup>5</sup>	± 0.5 dB		
<b>Insertion Loss Measurement</b>			
IL dynamic range, in reflection mode <sup>6</sup>	15 dB		
Resolution <sup>7</sup>	± 0.1 dB		
Accuracy <sup>7</sup>	± 0.2 dB		
<b>General</b>			
Optical output power	4 mW		
Battery runtime	3 h		
Battery charge time	2 h		
Touchscreen display	10.1", 1280 x 800 resolution		
Data I/O ports	USB-C, RJ45 Ethernet		
Optical connector	FC/APC		
Weight	10.1 lb (4.6 kg)		
Case size	13.4 x 8.7 x 2.8 in (34 x 22 x 7 cm)		
<b>Environmental</b>			
Operating temperature	-20 to 35 °C (0 to 35 °C charging)		
Storage temperature	-20 to 60 °C		
<b>Certifications</b>			
    			

## NOTES

- Distance between two sample points in SMF-28.
- Does not include errors associated with user-supplied group index of refraction
- Range between strongest reflection greater than -60 dB and noise floor.
- Noise floor return loss at half of maximum length.
- Measured with 1 cm integration width.
- Two way loss before backscatter reaches noise floor and IL measurements are no longer possible.
- Measured with integration widths of 25 cm, 50 cm and 125 cm for 100 m, 200 m and 500 m modes, respectively.

## ORDERING

Product	Description	Includes
OBR 6235-1	Portable OBR	OBR 6235-1 single-channel system, adapter cables with FC/APC and SC/APC connectors, accessory kit, power supply/charger and ruggedized shipping case

