## **BOLT Overview**

#### **Features**

Measures the length of both single mode and multi-mode fiber with accuracy of  $\pm 2.5$  meters

Doubles as a stable -10 dBm 1310nm single mode light source (BOLT-1 only)

Generates a pulsed signal for use with fiber identifiers

Easy-to-read bright red 7-segment LED display

15 hours continuous use on one 9v battery

Low battery indicator

Handheld

Lightweight

Product manuals come in PDF format on CD. Adobe Acrobat Reader<sup>™</sup> is required to view these documents.

# **Key Specifications**

Measurement Range up to 25 kilometers

Accuracy ±2.5 meters

Center Wavelength 1310nm

**Resolution** up to 0.001 kilometers

(1 meter)

**Dimensions** 4.94 x 2.75 x 1.28 in

Weight 6 ounces





MADE IN USA

N.I.S.T. Traceable

## **Beaming Optical Length Tester**

### **Applications**

BOLT stands for Beaming Optical Length Tester, and offers a unique, low-cost alternative for users who need to measure the length of optical fibers.

Fiber installations are increasingly required to have fiber length measurements to comply with bid requirements. Rather than purchase certification test sets that can cost thousands of dollars, the BOLT can be added to an installer's existing fiber test kit.

These length testers use a "round-robin" method of measuring fiber length. This is accomplished by looping back two fibers at one end of the fiber run with a patch cord. The round trip time that the light takes to travel through both fibers is converted to length in kilometers, then divided by two to show the length of the fiber cable. There is no need to measure the length of all the fibers; the length measurement can be applied to all fibers in the cable. This method of length testing provides accurate measurements, and saves time and money.

Measuring fiber by the jacket is an accepted method of measurement; however, there are many scenarios where this may not be valid. Length markings may be hard to reach if they are already terminated in a patch panel. Fiber links may also go through multiple cross-connects or have splices in the middle, thereby making jacket markings invalid. Optical measurement of fiber produces accurate results without the need for jacket markings.

Optical measurement also saves time by eliminating the need to estimate the length of the fiber run with a measuring wheel. This method is especially troublesome and inaccurate in networks that traverse walls, are in a star topology, or contain riser cables.

The BOLT uses a 1310nm infrared laser that can measure fiber links of up to 25 kilometers, and is accurate to within  $\pm 2.5$  meters. In addition to length testing, the BOLT's stabilized laser permits it to do double duty as a single mode light source, and a pulsing mode allows for easy fiber location when used with a fiber identifier.

NOTE: To avoid confusion, the BOLT is NOT an OTDR-like device. THE BOLT DOES NOT TEST LENGTH TO A FAULT. IT IS ONLY CAPABLE OF MEASURING THE LENGTH OF A FIBER LOOP.

O.W.L. Optical Wavelength Laboratories

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