MILLER®

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DLS355

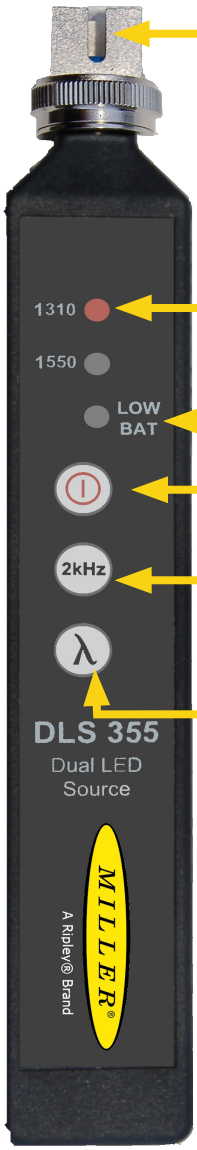
Dual Laser Source
User Guide

Contents

Introduction

The DLS355 dual Laser source is a low cost compact multimode test Laser used for verifying the proper function of fiber optic networks. This document will serve as an overview of the major features and functions of the device and will offer tips for troubleshooting common issues in optical networks.

Device Overview



Connector Adapter
The DLS355 comes with an SC screw-on adapter by default, however additional adapters are available and are user replaceable.

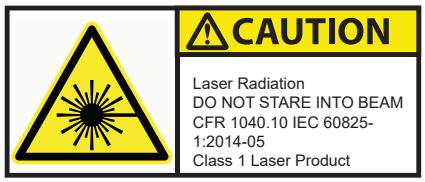
Wavelength Indicator
This unit offers 1310nm and 1550nm wavelengths. When the DLS355 is turned on, the red light indicates which wavelength is selected. The red light will blink to indicate when the 2khz modulation is turned ON.

Low Battery Indicator
This indicator light will light up when the CR2 battery needs to be replaced.

Power Button
Press this button to turn the DLS355 ON and OFF. The unit will turn off automatically after 15 minutes by default. To disable this timeout hold the power button for at least 5 seconds when turning ON.

2kHz Button
Toggles 2kHz tone on the currently-selected wavelength. This is usefull for detecting which fiber is being tested at the other end however the modulation reduces output power by

Wavelength Button
cycles through either 1310nm or 1550nm wavelengths



DO NOT STARE INTO BEAM

Important Safety Information

Read and understand all of the instructions and safety information in this manual before operating this tool.

Laser Hazard

Avoid eye exposure to open fiber connectors and interfaces when working with fiber systems. They may be connected to a live laser source.

Do not look into the output port of a laser source.

Point fiber endfaces toward non-reflective surfaces to prevent reflection of laser.

Electric Shock Hazard

Pay attention to proper battery polarity. Do not mix battery types or manufacturers.

Do not open the unit with the exception of the battery compartment door.

Use this unit only for its intended purpose as outlined in this document.

Damage to Item Hazard

Do not leave item in direct sunlight or near heat sources, submerge in water, or subject unit to strong impact.

Cover the fiber interface with the flip-cap when not in use.

Do not throw this product away.

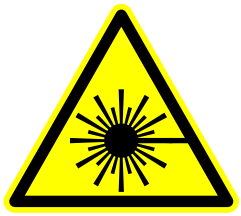
Contact your local recycling station to dispose of properly.

Basic Testing

Caution: Invisible Laser Radiation

Please note that 1310nm and 1550nm wavelengths are not visible to the human eye. Do not look directly into the output port of the DLS355 or directly into any fiber connector that may be live.

Since the Laser is invisible to the eye, the eye's natural blink reflex is suppressed. This can cause damage to the retina.



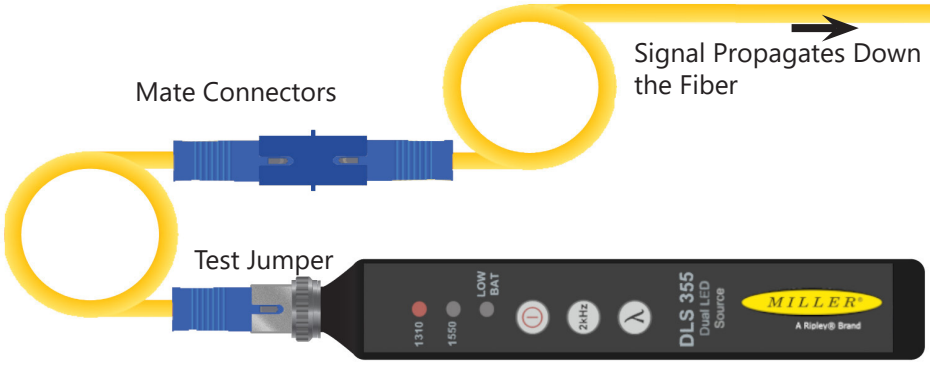
FDA 21 CFR 1040.10 and 1040.11

IEC 60825-1: 2007-03

Class 1 Laser Product

Transmitting Light

The DLS355 transmits either the 1310nm or 1550nm wavelength on Multimode fiber. Be sure to use a test jumper to mate the DLS355 to the fiber under test. this allows you to isolate the DLS355 from any dirt on the fiber being tested and allows you to set reference when doing relative power tests.



Output Power

The DLS355 is calibrated to have an output power level of -5dBm. Variations in power level between -5dBm and -8dBm may be normal depending on the quality and age of the test jumper, the DLS355 output port, and other factors.
Always ensure the DLS355 is transmitting an acceptable power level before performing an insertion loss test. Simply insert the test jumper (plugged into the DLS355) into a companion power meter set to the dBm mode. The power meter will indicate the measured output power of the Laser. If this reading is not near -5dbm first inspect the DLS355 ferrule with an Inspection Scope. If it passes according to IEC try using a different test jumper. If none of these resolve your issue please contact Tech support -see the final page of this document for contact information.

Using 2kHz

To output a 2kHz tone simply turn the device on, select your desired wavelength, then press the "2kHz" button. The wavelength indicator will begin blinking to confirm to the user that 2kHz tone is being output. Plugging in a power meter like the RP450 will display an onscreen notification and output a loud beep to alert the user at the other end that a tone has been detected. To disable the tone simply press the 2kHz button again.

Maintenance

Caring for the DLS355 Output Port

The DLS355 utilizes a physical fiber connection at the output port. This ensures a steady power level for performing insertion loss tests.

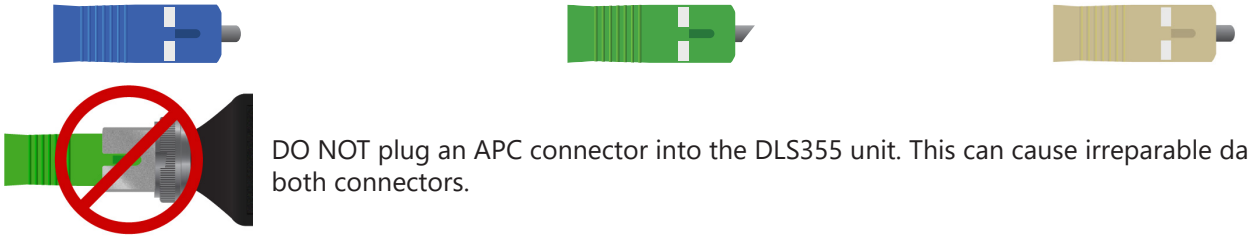
Be aware that any test jumpers must be inspected and cleaned before plugging into the DLS355 unit. If soiled or damaged connectors are inserted, they can cause damage to the DLS355 output port and the unit may need to be repaired.

The test jumper has physical contact with the ferrule inside the DLS355.

To clean the ferrule inside the DLS355:

- Unplug the test jumper
- Unscrew the adapter until it spins freely, then pull
- Inspect the ferrule with an approved microscope, clean if necessary, and replace adapter

Singlemode fibers usually have either blue (UPC) or green (APC) connectors. The DLS355 Laser source uses a UPC connector so neither beige nor green connectors are appropriate.



DO NOT plug an APC connector into the DLS355 unit. This can cause irreparable damage to both connectors.

Certifications, and Contact Information

Calibration Certificates

The DLS355 comes calibrated and should be recalibrated every 2 years. Included with the DLS355 is a calibration certificate, and free recalibration within 2 years of the date of purchase. To start the calibration process simply call or email technical support!

Warranty

The DLS355 comes with a 2 year warranty for any manufacturer defects or damage due to reasonable use. o start the RMA process simply email or call technical support!

Light Source Accessories

Light Source Adapters	
Part Number	***Description***
AC 022B	SC Adapter
AC 023B	FC Adapter
AC 024B	ST Adapter
AC 025B	LC Adapter

Patch Cord Accessories	
Part Number	***Description***
AC 550	MM SC-LC - 1m simplex
AC 551	MM SC-SC - 1m simplex
AC 552	MM LC-LC - 1m simplex
AC 600	SC-SC simplex bulkhead
AC 601	LC-LC simplex bulkhead

Specifications

LASER SOURCE	
Wavelength	1310 & 1550
Output Power	-5.0 dBm
Output Stability	±0.05dB (1 Hour) ±0.03dB Long-Term (15 min warm-up)
Spectral Width	5nm
Optical Interface	SC/FC/ST/LC Interchangeable
Tone Output	2 kHz
Laser Class	Class 1 (FDA 21 CFR 1040.11)
Power	Push Button Toggle
Battery	CR2
Operating Temperature	-10° to +50° C
Storage Temperature	-30° to +60° C
Dimensions	15.5cm x 2.38cm x 1.9cm
Weight	3 oz

Certifications and Contact Information

This product conforms with health, safety, and environmental protection standards for products sold within the European Economic Area (EEA). This product was tested by an ISO 17025 accredited laboratory and complies with the following CE directives and standards listed below:

Directives:
Electromagnetic Compatibility (2014/30/EU)
Low-Voltage (2014/35/EU)
Standards:
EMC: EN 61326-1:2013 Industrial
Safety: EN/IEC61010-1:2010+A1:2016

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Contact Support

contact us with any questions pertaining to this or any other Ripley product.

Call Us:
(603) 524-8350

Email Us:
tech.support@odm.ripley-tools.com

Visit Us Online: www.ripley-tools.com