Overview

The **OP250** is a configurable stabilized light source available with a variety of LASERs or LEDs. Offered in a single or dual port configuration with selectable wavelengths, various power levels and industry standard optical interfaces. This instrument offers all the features and functions necessary for the development, testing and inspecting of optical components and cables. The stand-alone, internally powered module also connects to a USB port on any computer.

OptoTest offers drivers and applications which allow the user to perform common measurement tasks as well as data logging or time-stamped stability measurements. OPL-2 allows the user to adjust output power from 0 to 100%.

Features

- Source stability of 0.02 per hour (per 1ºC variation)*
- Wide variety of source wavelength options, including 635nm, 850nm, 1310nm, and 1550nm among many others
- Various types of sources including LEDs, Fabry-Perot lasers, and VCSELs
- Customizable fiber type such as 9/125µm, 50/125µm, 62.5/125µm, 105/125µm, 100/140µm, and POF
- Many common source connector outputs such as FC, SC, and ST
- Single or dual port configuration
- Remote control of output power via USB
- Integrated temperature monitoring
- Internal rechargeable Lithium-Ion battery

Standard wavelengths
Single Mode: 1310/1550; Multimode: 850/1300

Contacting OptoTest Corporation

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Notice of Proprietary Rights

Warranty Information

OptoTest Corp. warrants this product to be free from defects in material and workmanship for a period of one year from date of shipment. During the warranty period we will, at our option, either repair or replace any product that proves to be defective. To exercise this warranty contact OptoTest Corp. headquarters. You will be given prompt assistance and return instructions. Repairs will be made and the instrument returned, transportation prepaid. Repaired products are warranted for the balance of the original warranty period, or at least 90 days.

NOTE: Do not send instruments for any reason without contacting OptoTest headquarters first.

OptoTest
Test Solutions for Fiber Optics

OP250
Stabilized Light Source
Short Instructions

OP250

online resources

Source Specific Parameters

Source Wavelength

The nominal wavelength for each source is indicated by the module part number *(for example OP250-LD-850 would utilize an 850nm LED source).*
The actual center wavelength for each source can vary within ± 20nm.

Output Power

The nominal output power for each source is a minimal specification. With the source level adjustment set to maximum this nominal output power should be achieved*.
**A clean connector and matching fiber type is necessary to achieve this.*

Power Stability

Inherently the **OP250** sources are stable to better than ±0.05dB**. For true single mode sources this stability can be easily achieved by using all singlemode fiber. For stability measurements using multimode fiber the results can expand beyond this range due to changes in modal distribution (caused by fiber movement and temperature).
**Over 12 hours with a max. change of 1ºC*

Laser Classifications

All **OP250** source units with internal laser sources utilize a Class I LASER Source.

OptoTest strongly suggests that all necessary precautions be taken whenever any Class I or Class III LASER source is used.

Power ON | Off Button
Push button to power the module, a green standby indicator(s) will light up. This will put the module into standby mode, the sources are not active. Push the button to turn power off.

NOTE: Connecting to the USB port will power on the module into standby mode. If the unit is powered off and data is sent via USB the module will power on as well.

Increase/Decrease Optical Power
Pushing the up or down button will increase or decrease the optical power of the selected source(s). If the button is pressed continuously the rate of increase will speed up and eventually stop at the minimum respectively maximum of the setting.

NOTE: The range of the power adjustment is different for each laser and to be used for minimal fine tuning of source power. For loss measurements a proper REFERENCE is necessary all the time.

Source Mode
Single Source Module:
The source mode button activates or deactivates the source. If activated the yellow indicator lights up.

Dual Source Module:
The source mode button sequentially activates or de-activates the two sources in the following order: source 1, source 2, both sources, all off. The corresponding yellow indicators will light up.

OP250
Stabilized Light Source

850nm VCSEL

62.5/125µm

USB   5VDC

Source Description
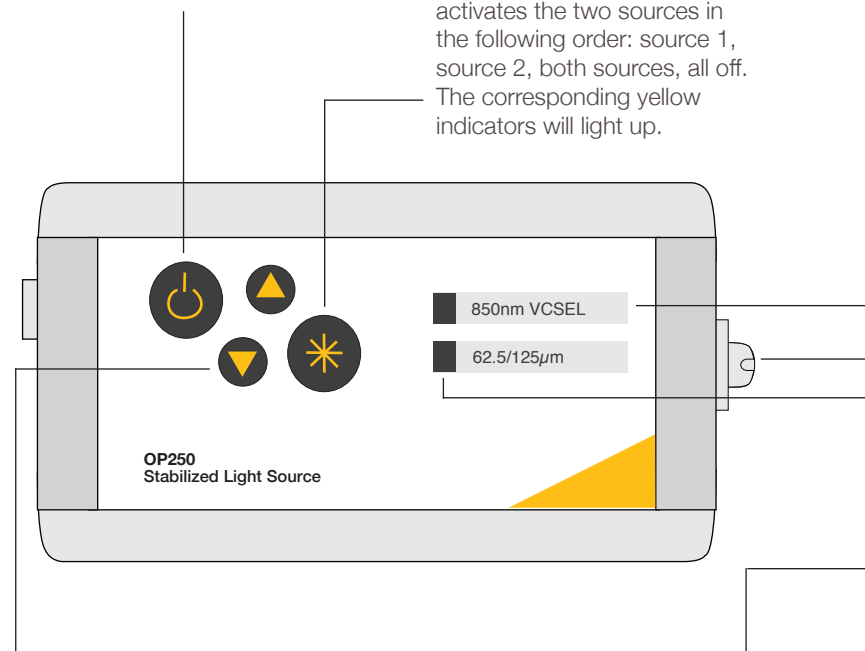The wavelength and nominal source power are noted in the corresponding fields.

Optical Port
Depending on the option the OP250 is equipped with one or two optical ports. If not in use the optical port should be kept clean from dust and covered with the appropriate cap.

LED Indicators
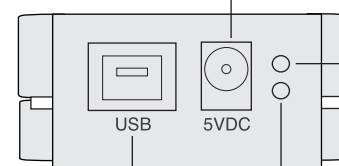**Green LED:** Indicates standby power of corresponding source. During USB traffic the upper green LED will flash briefly.

Yellow LED: Indicates the corresponding source is active. During adjustment of the source power the corresponding LED will flash briefly.

Connector for external DC power supply
Voltage range: +5VDC nominal, 0.5A

negative contact   positive contact

Note: Charging a fully discharged battery through this port requires 0.5A current. Over voltage on this port will overheat the internal charging circuit.

LED Indicator for external DC voltage. Lights up if external voltage is present.

LED Indicator for USB port voltage. Lights up if USB port is active, powers the module and charges battery.

USB Port
Use USB A-B cable to connect to the computer port. The USB port provides power to the module, charges the battery and provides the high speed data interface to the computer.