

PRODUCT OVERVIEW

OptoTest's OP350 is a reliable and versatile handheld optical light source incorporating up to six mixed LED, laser, and visual fault locator (VFL) emitters in a rugged and compact package. Paired with an OptoTest handheld optical power meter, the OP350 is ideal for mixed multimode and single-mode fiber testing, and is an essential tool for installers, contractors, and field technicians.

Combining multiple source wavelengths and functions into one compact package means fewer instruments to take along and less equipment juggling for faster, more confident measurements.

The OP350 is available in a wide range of models including LED-only, laser-only, and mixed LED and laser sources. Available wavelengths are 470 nm to 1300 nm for LED sources, and from 1310 nm to 1625 nm for laser sources. Ultra-stable LED and laser sources are available with zero warm-up time and are ideal for long term monitoring and optimal performance under varying optical return loss (ORL).

KEY FEATURES & BENEFITS

• Excellent Optical Power Stability for Reliable and Repeatable Measurement

Typical stability over temperature is 0.35 dB for LED sources and 0.6 dB for laser sources. Stability over temperature for ultra-stable zero warm-up sources is as low as 0.2 dB max for LED and laser sources.

• High Reconnection Repeatability

Reconnection repeatability of 0.1 dB over a wide range of LED and laser wavelengths provides steady output power every time the OP350 is connected to perform measurements.

• Standards Compliant LED and Laser Sources for Maximum Measurement Confidence

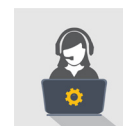
LED sources are controlled and certified to ensure compliance with Encircled Flux (EF) standards without additional conditioning patch leads. Laser sources are compliant with CWDM standards covering typical cable qualification for the O, E, S, C, and L bands, including the water absorption peak, 1625 nm.

• Supports One-Touch Autotest Capability Using a Compatible OptoTest Power Meter

One-touch Autotest synchronizes the instrument settings and test process with a compatible OptoTest optical power meter, such as the OP310, using the fiber under test. Enables fast, reliable, and repeatable testing in less time and with fewer user errors. Up to 6 wavelengths can be tested, with 3 wavelengths displayed simultaneously along with the nominal power level for each source.

• Supports Tone Detection with Multi Fiber ID

Paired with an OptoTest optical power meter incorporating Multi Fiber ID, the OP350 can be used to identify up to 12 different fibers, in addition to standard optical test tones, i.e., 270Hz, 1KHz, and 2KHz. This makes continuity testing, polarity testing, and fault finding fast and reliable.



TECH SUPPORT

Our team of experts is ready to assist you.



WARRANTY

OptoTest offers a three-year warranty on this product.

APPLICATIONS

- Field Insertion Loss Testing
- Field Polarity Testing
- Field MPO/MTP® Testing (large area detector)
- Fiber Identification (when used with an optical power meter)

KEY FEATURES & BENEFITS (cont.)

- **Optional VisiTest Visual Fault Locator**

When used with a compatible OptoTest optical power meter, VisiTest blinks the active connected fiber, saving time, training, and guesswork. VisiTest output is both visible red and infrared, enabling long distance fault finding using a clip-on fiber identifier.

- **Simple Controls with Large Backlit LCD Display**

Multi-function buttons make accessing all measurement wavelengths and features easy and intuitive. High contrast display can be read in bright sun; backlight can be used in dark environments.

- **Interchangeable Connectors are Protected Against Drops and Impact**

The OP350 accommodates all industry standard fiber optic connectors, including FC, LC, ST, D4, MU, LSA-DIN47256, and E2000. Built-in bumpers and an integral dust cover protect the connector interface against damage and contamination. The dust cover doubles as a stand when used on a benchtop or other surface.

- **Flexible Power Options**

The OP350 can be powered using two AA-type alkaline batteries, rechargeable NiMH batteries, or external micro USB power. Internal NiMH battery charging can be selected by moving a jumper in the battery compartment. Typical battery life using Autotest mode for LED sources is 80 hours, 90 hours for laser sources.

- **Meets MIL PRF 28800F class 2 general requirements for maximum durability in the field**

The OP350 features a strong, moisture resistant polycarbonate case with rubber edges and corners to withstand harsh outside environments. The case has been designed and tested to withstand one meter drops onto a hard surface.

GENERAL SPECIFICATIONS

Battery Life	Laser/LED source: 90/80 hours in Autotest
Size/Weight	7.5 x 4.1 x 1.4" (190 x 105 x 35 mm) / 0.9 lb (420 gm). Shipping 3.3 lb (1.5 kg)
LCD Size	2.9 x 2.2" (74 x 55 mm)
Operating /Storage	-15 to 55 °C / -25 to 70 °C
Relative Humidity	0 ~ 95 %
Case	Polycarbonate / rubber edges & corners, moisture resistance, 1-meter drop tested
Dust Cap	Captive, functions as tilt bail when slid open
Power	2 Alkaline AA cells or 2 x NiMH AA cells, user selectable charging; Ext power input via micro USB; Selectable auto-off, low battery indicator, backlit display

OPTICAL LIGHT SOURCE SPECIFICATIONS

	1310/1550nm Laser	CWDM ¹ Laser	1625nm Laser	650nm VisiTester ²	850/1300nm LED	1310/1550nm LED	470/520nm LED ⁵	Comments
OP350								
Short term stability (dB)	0.04	0.06	0.06	N/A	0.01	N/A	0.01	For 15 min, typical $\pm \Delta 2^\circ\text{C}$, after warm up, ORL < -25 dB
Stability over temp (dB)	0.6	0.6	0.6	N/A	0.35	N/A	0.35	Typical
OP350 Ultra Stable³								
Short term stability (dB)	0.03	0.05	0.05	N/A	0.01	0.03	N/A	For 15 min, max, $\pm \Delta 3^\circ\text{C}$, no warm up
Stability over temp (dB)	0.2	0.2	0.2	N/A	0.35	0.2	N/A	Max
OP350 / OP350 Ultra Stable								
λ initial tolerance (nm)	20	6.5	20	5	N/A	20	15	at 25 °C
λ width, nm	3	< 1	3	3	N/A	35/48	25	FWHM, typical
λ nm/°C	0.4	0.1	0.4	0.1	0.4	0.4	N/A	Typical
Mode Controlled Source	N/A	N/A	N/A	N/A	Mode controlled	N/A	N/A	50/125 compliant: IEC 61280-4-1 {Ed.1.0}, TIA 526-14A & TIA TSB-178.
Reconnection repeatability ⁴ dB	0.1	0.1	0.1	0.1	0.05	0.1	N/A	95% confidence
Modulation	270 Hz, 1 kHz, 2 kHz $\pm 2\%$, 12 Multi-Fiber ID tones, 2 Hz blink for VisiTester							
Output power level	See table below for output power level of specific model							
Output power accuracy	± 1 dB (for Laser/eLED @ SMF, Multimode LED @ 62.5 μm , POF @ 1 mm)							

1: CWDM laser wavelengths: 1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610 nm.

2: The VisiTester option mixes a laser VFL with Autotest, so at the power meter end, the active test fiber winks, making it obvious to the user. It also extends practical fault finding.

3: After initial warm-up, practical stability is affected by ambient temperature variations. On the OP350 Premium no warm-up, the stability is ± 0.03 dB.

4: The OP350 light sources achieve very high reconnection repeatability of 0.1 dBm which provides steady output power every time connecting the sources.

5: Light source model with LED of these wavelengths do not support Autotest.

Source Wavelength Sets (per port)	SMF	50 μ	62.5 μ	1mm
850-1300 nm LED	N/A	-22.5	-20	N/A
850-1300 nm LED with VFL	N/A	-25.5	-23	N/A
470-520 nm LED	N/A	N/A	N/A	-13
1310-1550 nm Laser	0	N/A	N/A	N/A
1310-1550 nm Laser with VFL	-3	N/A	N/A	N/A
1310-1550 nm High Power	+5	N/A	N/A	N/A
1310-1550 nm Ultra Stable Laser	-4	N/A	N/A	N/A
1310-1550-1625 nm Laser	-3	N/A	N/A	N/A
1310-1550-1625 nm Laser with VFL	-7	N/A	N/A	N/A
1310-1550-1625 nm Ultra Stable Laser	-7	N/A	N/A	N/A
1310-1490-1550-1625 nm Laser	-3	N/A	N/A	N/A
VFL Source	+2	-35	-22.5	N/A

1: Instruments with multimode and single mode options will have two source ports.