NETIVE TOOLS

USER MANUAL

NOPM-100

Optical power meter with VFL



Safety

Read this manual before you use the device for the first time. Keep it with the device.



WARNING The device has a 650 nm red laser source (VFL). Never look directly into the beam, the VFL output or the end of a fiber or connector while the red light is on. Also never look into a fiber that may carry invisible light. It can damage your eyes.

CAUTION Do not insert a connector with a dirty or badly polished end face (ferrule) into the ports. It damages the sensor and gives wrong readings.

- Power adapter: use only DC 5 V / 1000 mA, as stated on the device label.
- Do not open the device. If the "Troubleshooting" table does not solve a problem, contact us.
- Keep the device dry and out of the reach of children.

What it does

The NOPM-100 combines an optical power meter and a visual fault locator (VFL) in one device. It measures power and loss, and its red light shows breaks, bends and bad splices.

- Measurement range −70 to +6 dBm, from 800 to 1700 nm.
- 9 calibrated wavelengths: 850, 980, 1270, 1300, 1310, 1490, 1550, 1577 and 1625 nm.
- Readings in dBm, dB, mW, µW and nW.
- 650 nm red light, continuous or flashing.
- Auto power-off, display backlight and memory of the last wavelength.

What is in the box

- NOPM-100 optical power meter with VFL
- AA batteries
- User manual, test certificate and warranty card

If anything is missing, contact us before you use the device.

The device at a glance



#	Part
1	Ports on top: power measurement and red light output (VFL) · FC / SC adapters (ST optional)
2	LCD display

Buttons

Button	What it does
⏻	Hold for about 1 second to turn the device on. Hold it down to turn it off. Short press: turns auto power-off off.
UNIT	Changes the unit: dBm, dB, nW.
REF	Keeps the current reading as the reference value for relative measurement. The display shows the reference value in dBm.
λ	Changes the wavelength (9 options).
LIGHT	Turns the red light (VFL) on or off. When it is on, the display shows "650" at the bottom right.
GLINT	With the red light on: makes it flash. Press again for continuous light.
GLINT + LIGHT	Turns the display backlight on or off.

> **NOTE** The device always starts with a 10-minute auto power-off. When you turn it off, the mark at the top left of the display disappears.

Measuring power

Absolute power

1. Turn the device on with ⏻.
2. Use **λ** to select the wavelength of the signal, e.g. 1310 nm.
3. Clean the connector and connect it to the measurement port.
4. The display shows the power as a linear value (mW) and in dBm.

Relative power (loss)

1. Select the wavelength and connect the reference source.
2. Press **REF**. The current value becomes the reference.
3. Connect the link you want to measure. The display shows the absolute power and the difference from the reference in dB.

> **NOTE** 1 nW equals −60 dBm. The formula is: dBm = 10 · log(nW) − 60.

Red light (VFL)

1. Connect the fiber or patch cord to the red light output.
2. Press **LIGHT**. The red light comes on.
3. For flashing light, press **GLINT**.
4. Where the fiber has a break or a sharp bend, the red light shows through the jacket.
5. Press **LIGHT** again to turn it off.

> **WARNING** Before you turn on the red light, make sure nobody is looking into the other end of the fiber.

Calibration adjustment

Only if you have a reference source of known power. A wrong setting makes every following measurement wrong.

1. Press **λ**, **REF** and **UNIT** together. "CAL" appears at the bottom right of the display.
2. Use the buttons in the table:

Button	What it does
REF	Raises the reading by 0.05 dB
UNIT	Lowers the reading by 0.05 dB
λ	Changes the wavelength
⏻	Saves the setting
REF + UNIT	Restores factory values (the display shows "FAC")

Batteries

The device runs on 3 AA batteries or a rechargeable lithium battery, and on a DC 5 V / 1000 mA adapter. Battery life: at least 48 hours.

When the battery runs low, the battery indicator flashes every second and the device turns itself off after 10 seconds. Replace or charge the batteries before you turn it on again.

Troubleshooting

Problem	Possible cause	What to do
Faint display	Low battery	Charge or replace the batteries.
Display does not come on	Low battery or other cause	Restart the device. Charge or replace the batteries.
Strange readings	Faulty, dirty or blocked adapter	Reconnect the adapter and clean the sensor.

Care

- Clean the sensor often with a round-tip fiber cleaning swab. It must be free of grease and dirt.
- Use the same adapter whenever possible.
- Fit the dust caps when you are not measuring.
- Remove the adapter carefully so you do not scratch the end of the sensor.

Specifications

Wavelength range	800–1700 nm
Calibrated wavelengths	850 / 980 / 1270 / 1300 / 1310 / 1490 / 1550 / 1577 / 1625 nm
Measurement range	−70 to +6 dBm
Uncertainty	±5 %
Display resolution	Linear 0.1 % · logarithmic 0.01 dBm
Detector	InGaAs
Connectors	FC / SC (ST optional)
VFL	650 nm · continuous or flashing
Auto power-off	10 minutes
Power	3 AA batteries or lithium battery · DC 5 V / 1000 mA
Battery life	at least 48 hours
Operating temperature	−10 to +60 °C
Storage temperature	−25 to +70 °C
Dimensions	190 × 100 × 49 mm
Weight	254–282 g

Specifications are the manufacturer's and given for reference. Measurement range and power supply are from the device label.

Warranty and service

2-year warranty · Service at our Lab in Thessaloniki

The warranty is valid for 2 years from the date of the purchase invoice. It covers faults caused by defects in materials or workmanship.

- We repair the device free of charge at our Lab in Thessaloniki.
- If the device cannot be repaired within the 2 years, we replace it free of charge.

The warranty does **not** cover damage caused by accidents, drops, liquids or use other than described in this manual, or a device that has been opened or repaired by others.

How to request a repair

1. Contact us before you send the device: netivetools.com/en/ypostirixi · info@netivetools.com · +30 2312 313333.
2. Tell us the model, the serial number (S/N), the invoice number and the problem you see.
3. We tell you how to send the device to our Lab.

Do not open the device yourself. Opening it voids the warranty.

> **NOTE** Register your device at netivetools.com/en/eggyisi. This helps us find its history faster.

Disposal and recycling



Do not throw the device or its battery away with household waste. Take them separately to a collection point for electrical and electronic equipment and batteries, or return them to us. Separate collection protects the environment and helps recycling.

NETIVE TOOLS

Built by technicians

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shop.netivetools.com/en/proion/nopm-100

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