

UT692D/UT692G Optical Power Meter User Manual

I. Safety Warning

⚠ This manual contains the necessary operation instructions and equipment maintenance methods. Please read each part of it carefully before using the meter.

⚠ If the manual is not read or the operation instructions are not understood, the operation may cause inaccurate test results or damage the meter, or even endanger personal safety.

⚠ Mini-USB charging port is reserved for charging lithium battery, which is not applicable currently.

⚠ This version of the manual is subject to change without prior notice.

Symbol Description

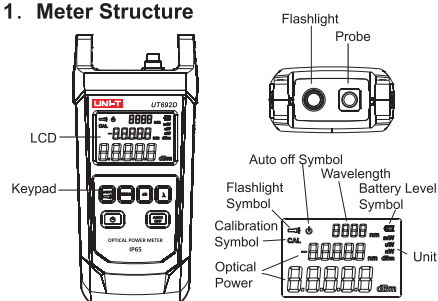
Symbol	Description
	Double insulated
	Warning
	Conforms to EU standards
	Do not discard the battery as unsorted municipal waste. Please place it in a fixed battery recycling station for disposal.
	Please read the instructions before using.

II. Overview

The UT692 series handheld optical power meters are mainly used to measure the power of optical signals. The meters are designed to meet the ergonomics requirements and advanced cold molding technology is adopted to make them beautiful and durable. Built-in type detector is used for the meters to make it well-protected. Furthermore, the optical power meters have various functions, including IP65 dust and water prevention, backlight display, auto power off, wavelength memory, user calibration, and ultra wide optical power test range. They are widely used in optical cable construction and maintenance, optical fiber communication, optical fiber sensing, optical CATV and other fields.

III. Structure

1. Meter Structure



2. Key Description

Key	Description
	Power key. Power the meter on by pressing this key within one second and off by long press.
	This key enables the auto power off function (The top left corner of the LCD will display a reminder), which will power off the unit when no keys have been pressed for 10 minutes.
	1. Press the key for 2s in the power on state to turn the flashlight on or off. The flashlight symbol will be displayed in the top left corner of the LCD. 2. Press the "LIGHT" key once to turn the LCD backlight on or off. If no keys have been pressed within 2 minutes, the LCD backlight will be automatically turned off. The backlight can be turned on again by pressing the "LIGHT" key once under this condition. The LCD backlight is turned on and the flashlight is turned off by default.

	Long press this key to automatically zero the optical power meter. At this time, the LCD is fully displayed to indicate the success.
	Press the "dB" key to toggle the meter's measurement mode between relative power (dB) and absolute power (dBm) to measure the optical power at the corresponding wavelength.
	Eight calibrated wavelengths (850, 980, 1300, 1310, 1490, 1550, 1625 and 1650 nm) can be selected by this key and displayed on the LCD simultaneously.

IV. Features

- Linear mW and nonlinear dBm simultaneous display
- IP65 dust and water prevention
- Auto power off function
- Low battery indication
- Backlight on/off function
- Flashlight function
- User self-calibration function
- Wavelength memory function
- FC, SC and ST port
- 60 hours minimum battery life
- Conforms to EN61326-1:2013 and EN61326-2-3:2013 standards

V. Specifications

Item	UT692D	UT692G
Measurement Range (dBm)	-70~+10	-50~+26
Wavelength Range (nm)	800~1700	
Connector	Universal connector FC/SC/ST (FC as standard, SC and ST adapter as options)	
Detector Type	InGaAs	
Uncertainty	±5%	
Calibrated Wavelength (nm)	850, 980, 1300, 1310, 1490, 1550, 1625, 1650	
Display Resolution	Linear: 0.1%, logarithmic: 0.01dBm	
Operating Temperature	0°C~40°C	
Storage Temperature	-10°C~50°C	
Auto Power Off (min)	10	
Power Supply	1.5V AA alkaline battery (3 pcs)	
Battery Operation Time (h)	≥60	
Low Battery Indication	Low battery indication at approximate 3.3V, auto power off at approximate 3V	
Dimensions (mm)	189×87×45	
Net Weight (g)	286	

Remark

1. Wavelength Range: a calibrated operating wavelength range from 800nm to 1700nm, in which the optical power meter can work under specified index.
2. Measurement Range: the range in which the maximum power can be measured according to the specified index.
3. Uncertainty: the error between the measurement results of a given optical power and a standard optical power.

VI. Measurement of Absolute and Relative Power

1. Absolute Power Measurement
Set the test wavelength and access the test optical signal. Then the screen will display the measured linear value (in mw, nw, pw) and nonlinear value (in dBm) of the absolute optical power.
2. Relative Power (Loss) Measurement (used in conjunction with light source)
Relative power measurement is mainly used to measure insertion loss or fiber link loss.
 - a). Use a standard test jumper to connect the output port of the light source to the detection port of the optical power meter.

- b). Set the test wavelength and access the test optical signal. Then the screen will display the measured linear value (in mw, nw, pw) and nonlinear value (in dBm) of the absolute optical power.
- c). Press the "dB" key. The absolute optical power measured by the optical power meter will be saved as the reference power value and displayed as xx.xx dBm on the second line of the screen.
- d). Connect the jumper to be tested to the light source and the optical power meter. The difference between the current optical power value and the reference power value will be calculated by the optical power meter and displayed as y.yy dB on the third line of the screen, which is approximately insertion loss of the jumper.

Note:

- ① P (Reference power value) (dBm) = p (Light source output power) (dBm) - L (Insertion loss of the standard test jumper) (dB)
- ② L (Insertion loss of the jumper to be tested) (dB) = P (reference power value) (dBm) - p (current power value) (dBm) - L (Insertion loss of the standard test jumper) (dB)

VII. Self-calibration and Factory Reset Instructions

1. Press "ZERO" + "LIGHT" simultaneously (press again to exit the calibration mode) to enter the calibration mode. At this time, the character "CAL" is displayed in the top left corner of the LCD. Press the "LIGHT" key to add 0.05dB and dB key to decrease by 0.05dB at a time. This is used to calibrate the measurement error. After adjusting, press the power key to save the calibration data.
2. Press "ZERO" + "AUTO OFF" simultaneously to restore factory settings.

VIII. Standard Configuration

No.	Article	Qty
1	Optical power meter	1 pc
2	User manual	1 pc
3	1.5V AA alkaline battery	3 pcs
4	Cloth bag	1 pc

IX. Common Troubleshooting

Fault Prompt	Possible Cause	Solution
LCD displays weakly	Low battery	Replace the battery
Booting up cannot be displayed	Low battery or other causes	Reboot or replace the battery
LCD displays data abnormal	The connector is faulty, dirty or locked	Reconnect the connector and clean the sensor

X. Daily Maintenance

1. Please keep the end face of the sensor clean, free from grease and contamination. Do not use unclean or non-standard adapter connectors. Do not insert the end face with poor polishing. Otherwise, the end face of the sensor will be damaged, resulting in errors in the test.
2. Once the optical power meter is not in use, please cover it with a dust cap immediately to protect the cleaning of the end face and prevent long-standing exposure to dust in the air resulting in measurement error.
3. Please insert and remove the optical adapter connector carefully to avoid scratches on the port.
4. Please clean the sensor surface regularly. When cleaning, please use a special cleaning swab to wipe it gently in the circumferential direction.