

UT698-15KIT UT698-30KIT

Optical Power Meter & LAN Cable Tester



User Manual

PREFACE

Thank you for purchasing the new Optical Power Meter & LAN Cable Tester. To use this product safely and correctly, please read this manual thoroughly.

After reading this manual, it is recommended to keep the manual at an easily accessible place, preferably close to the device, for future reference.

LIMITED WARRANTY AND LIABILITY

Uni-Trend guarantees that the product is free from any defect in material and workmanship within one year from the purchase date. This warranty does not apply to damage caused by accident, negligence, misuse, modification, contamination and improper handling. The dealer shall not be entitled to give any other warranty on behalf of Uni-Trend. If you need warranty service within the warranty period, please contact authorized service center or send the product back with problem description.

This warranty is the only compensation you can obtain. Uni-Trend will not be responsible for any special, indirect, incidental or subsequent damage or loss caused by any reason or speculation. As some areas or countries do not allow limitations on implied warranties and incidental or subsequent damage, the above limitation of liability and stipulation may not apply to you.

Statement

1. Please carefully read and correctly understand the warnings and operating instructions in the user manual before using the engineering pen.

2. Please use the device correctly in strict accordance with the user manual.

3. Lasers are harmful, so please pay special attention to eye protection.

When the laser is working, it is strictly forbidden to look directly into the red light.

4. If you operate the device without reading the user manual or understanding the instructions in the manual, it may cause inaccurate measurement results or damage the device or even endanger personal safety.

5. Laser is a heat-generating device. The higher the temperature, the shorter the laser life. Try to avoid high-temperature environments when using it and not recommended to use it continuously for a long time.

6. After a period of use, please clean the interface with a special fiber optic cleaning cotton swab.

7. After use, please cover the dust cap to prevent dust.

8. When not used for a long time, the lithium battery may self-discharge and the voltage may be too low to start the device. Please charge it before use.

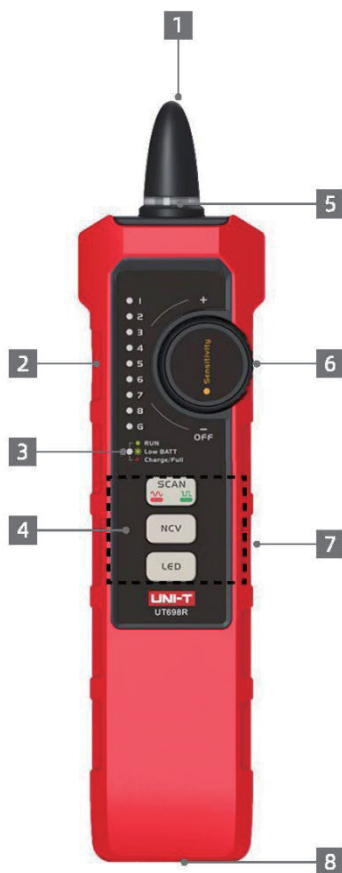
Optical Power Meter

Module removable



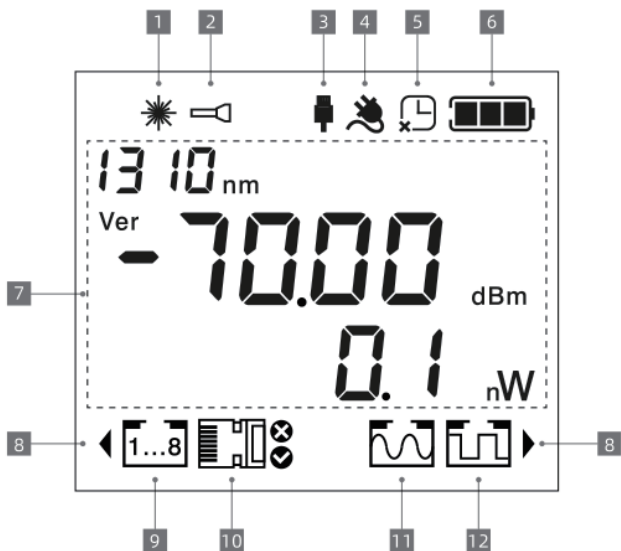
1. VFL interface
2. LED lights
3. OPM interface
4. RJ45 test socket (cable sequence, cable crimping test).
5. Button area
6. RJ45 cable tracing test socket
7. Type-C interface
8. Network cable test module

LAN Cable Tester



1. Probe
2. Headphone jack
3. Status indicators
4. Button area
5. LED lights
6. Switch knob
7. Type-C interface
8. RJ45 test socket

Displays



- 1.VFL icon 2.LED icon 3.USB communication icon
- 4.Power icon 5. Power saving OFF icon
- 6.Battery state icon
- 7.Information display area of Optical Power Meter
- 8.Test socket location icons
- 9.Network cable sequence function icon
- 10.Network cable crimping function icon
- 11.Cable tracing (Analog) icon
- 12.Cable tracing (Digit) icon

Optical Power Meter Power On/Off





Short press " " button to power on the device and enable the power saving function automatically. It will be auto power off after 11 minutes



if no operation. To disable the power saving function, long press " "

" button to power on in the device's power-off state. The " " icon will light up at the top, indicating that the power saving function is off. After power-on,



short press " " to make backlight ON/OFF. Long press " "



" button on any screen to power off the device.

Optical Power Meter Charging



Use the recommended power adapter and the standard charging cable to connect to the Type-C interface. The "🔌" icon lights up, indicating that the power supply is connected. The "🔋" icon increases dynamically, indicating that it is being charged; the icon remains stationary when it is fully charged.

*Recommended power adapter: 5V/1A

LAN Cable Tester Charging



When the power is not connected, power on the device normally, the indicator light details are as follows:

 **RUN** Green light,
battery power is normal.

 **Low BATT** Green
light flashes, indicating low
battery.

Use the recommended power adapter and standard charging cable to connect to the Type-C interface. The indicator light lights up, indicating that the power supply is connected.

 **Charge/Full** Red
light on: Being charging; Red
light off when fully charged.

*Recommended power adapter: 5V/1A

Optical Power Meter



In power-on state, enter the optical power meter interface and short press



“ ” button to switch wavelength. The device supports measurement of 10 calibrated wavelengths: 850nm, 980nm, 1270nm, 1300nm, 1310nm,

1490nm, 1550nm, 1577nm, 1625nm, and 1650nm. Short press “” button to switch units and view the set REF value; long press to set the current measured value to a new REF value.

Optical Power Meter Storage & Viewing



- Storage: In the optical power meter interface, long press " " button to

store the current measurement information, and its current storage No. will be displayed on the interface. The device can store maximum 500 data records. After exceeding 500 records, the first record will be overwritten. (Only used to store optical power values)

- Viewing: In the optical power meter interface, long press " " button to

enter the storage viewing. Short press " " or " " button to

turn pages, and long press to turn pages quickly. Short press " " button to exit the storage interface.

Optical Power Meter Offset Setting



Long press "" button to enter the offset setting interface, short press

"" button to switch the wavelength, short press "" and "

" button to adjust the set offset, and the setting range is [-5, +5],

then short press "" button to confirm the offset setting and exit.

VFL/LED Light



- Short press "  " button to switch the VFL status: on/flashing/off.

The "  " icon will display the status synchronously.

- Short press "  " button to switch the LED flashlight status: on/off.

The "  " icon will display the status synchronously.

Network Cable Test - Cable Sequence (Module)





Unplug the network cable test module, short press " " button to enable the network cable sequence test function, and the "◀ 1...8" icon will be displayed synchronously.

Connect both ends of the network cable to the Optical Power Meter and its module respectively according to the diagram. You can judge whether the network cable is qualified based on the device UI and module indicator light status.

The flashing "◀" indicates that the network cable is plugged into the RJ45 test socket on the left.

Network Cable Test - Cable Sequence (LAN Cable Tester)





Short press " " button to enable the network cable sequence test

function, and the " ◀  " icon will display the status synchronously.

Connect both ends of the network cable to the Optical Power Meter and LAN Cable Tester respectively according to the diagram. Judge whether the network cable is qualified by observing the indicator light status.

Network Cable Test - Cable Crimping





Short press " " button twice to enable the network cable crimping

test function, and the "  " icon will display the status synchronously.

Connect the network cable connector to the RJ45 test socket on the left side of the Optical Power Meter. Check the Optical Power Meter UI and indicator

light-up state to see if the cable is qualified. When "  " lights up, indicates a failed crimp test, and the indicator light for the wire core number

that failed to crimp flashes. When "  " lights up, indicates that the crimping test is passed, with indicator light off

The flashing "◀" indicates that the network cable is plugged into the RJ45 test socket on the left.

Network Cable Test -Cable Tracing Setting of Optical Power Meter
(Analog)



It must be used with the LAN Cable Tester mode. Short press "

button three times to enable the cable tracing function (analog). The "



" icon will display the status synchronously and the " " LED will flash continuously.

Connect the network cable connector to the RJ45 test socket on the right side of the Optical Power Meter. At this time, the cable tracing setting of the Optical Power Meter is completed and then start to set the LAN Cable Tester. The flashing "▶" indicates that the network cable is plugged into the RJ45 test socket on the right.

Network Cable Test -Cable Tracing Setting of LAN Cable Tester (Analog)



Red backlight ON:

in analog signal receiving mode;

Green backlight ON:

in digital signal receiving mode.

Rotate the LAN Cable Tester knob clockwise to open it. Short press "



" button to enable the cable tracing function (analog), and the LAN

Cable Tester will beep and the red backlight of the button will light up.

As the detector approaches the test cable, the LAN Cable Tester will beep regularly and the light ring on it will flash. The adjustment knob on the LAN Cable Tester is used to adjust the sensitivity. (Clockwise to the end for maximum sensitivity)

Notes: When tracing for a cable in the network, due to the network switch (the transmitter transmits the signal and transmits it to other network cable ports through the internal circuit of the switch), several network cables close to the target network cable may have audio signals. In this case, you can try to rotate the sensitivity knob of LAN Cable Tester counterclockwise to reduce the receiving sensitivity to find the target network cable.

Notes: The modes of Optical Power Meter and LAN Cable Tester must be consistent, otherwise no signal will be received.

Network Cable Test -Cable Tracing Setting of Optical Power Meter (Digital)



It must be used with the LAN Cable Tester mode. Short press "



button four times to enable the cable tracing function (digital). The "



icon will display the status synchronously and the "  " LED will flash continuously.

Connect the network cable connector to the RJ45 test socket on the right side of the Optical Power Meter. At this time, the cable tracing setting of the Optical Power Meter is completed and then start to set the LAN Cable Tester. The flashing "▶" indicates that the network cable is plugged into the RJ45 test socket on the right.

Network Cable Test -Cable Tracing Setting of LAN Cable Tester (Digital)



Red backlight ON:
in analog signal receiving mode;
Green backlight ON:
in digital signal receiving mode.



Rotate the LAN Cable Tester knob clockwise to open it. Short press "



" button to enable the cable tracing function (digital), and the LAN

Cable Tester will beep and the green backlight of the button will light up.

As the detector approaches the test cable, the LAN Cable Tester will beep regularly and the light ring on it will flash. The adjustment knob on the LAN Cable Tester is used to adjust the sensitivity. (Clockwise to the end for maximum sensitivity)

Notes: When tracing for a cable in the network, due to the network switch (the transmitter transmits the signal and transmits it to other network cable ports through the internal circuit of the switch), several network cables close to the target network cable may have audio signals. In this case, you can try to rotate the sensitivity knob of LAN Cable Tester counterclockwise to reduce the receiving sensitivity to find the target network cable.

Notes: The modes of Optical Power Meter and LAN Cable Tester must be consistent, otherwise no signal will be received.

LAN Cable Tester- NCV Function

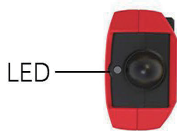


Rotate the LAN Cable Tester knob clockwise to open it. Short press

"  " button to enable the NCV mode; when the detected voltage is greater than the threshold voltage of 90V, the LAN Cable Tester will emit a "beeping" sound and the light ring on the probe will be flashing.

Notes: Proximity to external interference sources (such as ungrounded chargers, etc.) may trigger non-contact voltage detection. Even if there is no indication, voltage may still be present. Do not determine if there is voltage on the cables only through the non-contact voltage detectors. Detection may be affected by factors such as socket design, insulation thickness and types.

LAN Cable Tester- LED Light



LED

Rotate the LAN Cable Tester knob clockwise to open it.
Short press "  " button to enable the LED lighting function

Data Communication



PC communication: Use a Type-C data cable to connect the Optical Power Meter to the PC. Install PC software to operate the data communication, and

the "  " icon flashes to indicate that communication is in progress.

Software download link: <https://meters.uni-trend.com/>

Search for UT698-30KIT/UT698-15KIT in the search bar, and you will see the PC software installation package. Download and install to use as you needed.

Specification

Model	UT698-15KIT	UT698-30KIT
Optical Power Meter Specifications and Functions		
Detector Type	InGaAs	
Wavelength Response Range	700~1700 nm	
Power Meter Interface	2.5mm Universal connector	
Measurement Wavelength	850nm/980nm/1270nm/1300nm/1310nm/1490nm/ 1550nm/1577nm/1625nm/1650nm.	
Measurement Range	-50~+30dBm	
Accuracy*	(1550nm, 1310nm, 1490nm, 1625nm) ± 0.4 dB, (850nm, 980nm, 1300nm, 1270nm, 1577nm, 1650nm) ± 1 dB	
Display Unit	dB, dBm, mW, μ W, nW.	
Frequency Identification	270Hz/330Hz/1kHz/2kHz.	
Data Storage	500 set	
Wavelength Memory	√	

User Self-Calibration	√	
Relative Value Measurement	√	
Screen Backlight	√	
Auto Power Off	Optional	
Low Battery	Battery state	
Charging Interface	Type-C interface	
Battery	Lithium polymer battery 3.7V/450mAh	
Working Temperature	-10~50℃	
Ambient Humidity	<90%RH	
Size	114*65*29mm	
Weight	About 120g	
Red Light Functions		
Red Light Source Interface	2.5mm Universal connector	
Output Power	15mW	30mW
Red Light Wavelength	650±20nm	
Output Mode	CW/2Hz Glint	

Cable Crimping Function	
Crimping Detection	RJ45 8pin: >10cm
Network Cable Sequence Function	
Applicable Network	UTP/STP network cables
Network Cable Interface	RJ45 (8P8C+G)
Test Type	Network cable sequence
Test Distance	600m
Audio Cable Tracing Function	
Cable Tracing Function	Analog & Digital mode
Detection Distance	600m
LAN Cable Tester	
Power On/Off	Knob operation
Function Selection	Silicone button X3
LAN Cable Tester Signal	Analog/Digital
Sensitivity	Knob adjustment
Test Interface	RJ45× 1

Auxiliary Light	LED×1
Cable Sequence Indicator	LED ×9
Status Indicator	LED× 3
Headphone Jack	Φ3.5mm×1
Charging Interface	Type-C interface
Battery	Lithium polymer battery 3.7V 450mAh
Size	180*45*26
Weight	About 100g
Non-contact Voltage Detection Function	
Non-contact Voltage Detection	AC 90V-1000V
Indicator	LED×1(ring)
Flashlight Function	
Auxiliary Light	LED×1

*Test conditions: 23°C±2°C, 40%-60%RH, using standard test cables.

Accuracy range: -40dBm~+23dBm, other references are as follows:

±0.8dB: +23dBm~+26dBm, -45dBm~-40dBm@1550nm

+3.0dB: +26dBm~+30dBm, -50dBm~-45dBm@1550nm

** Test distance is affected by environmental conditions and visual sensitivity.

General Maintenance

The fiber optic adapter should be kept clean and avoided from contact with hard objects. Please store in a dry and ventilated area to avoid moisture. If not used for a long time, it should be charged once every 3 months to 50%-80% of its full capacity.

Troubleshooting

Troubles	Causes	Solutions
Cannot power on	Battery depleted	Charge the battery
Power off immediately after power-on	Low battery power	Charge the battery
No operation is effective after power-on	Device program error	Re-power on the device
Large measurement error	Fiber optic interface is dirty	Clean the fiber optic interface

Product Set

Optical Power Meter	1
LAN Cable Tester	1
Gift Box	1
Type-C Charging Cable	1
Headphone	1
RJ45 Patch Cord	1
RJ45 Alligator Clip Patch Cord	1
Cloth Bag	1
User Manual	1

The manual is subject to change without prior notice!

Due to different batches, the materials and details of actual products may be slightly different from the graphic information, please refer to the actual product received. Experimental data provided on the page is from internal laboratory of UNI-T, but it should not be a reference for customers to place orders. Any questions, please contact the customer service, thanks!

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