Integrated Optical Power Meter

01 Product Overview

The optical power meter red light all-in-one machine is a test instrument integrating the functions of optical power meter, red light source, LED lighting and network cable test. It is a new product independently developed by the company according to the market and customer needs. The product combines the characteristics of domestic and foreign optical test instruments, with friendly operation interface, dynamic and lively appearance, flexible function settings, and provides users with more convenient and fast operation experience. The ultra wide wavelength range, ultra wide power test range, accurate measurement accuracy and self-contained self calibration function make the user's work more perfect.

02 interface description

Power interface: tpye-c interface 5V

VFLinterface: 650nm red light source interface

LED lamp

OPM interface: optical power meter interface

Net port: at the bottom of the instrument

Warning: the VLS interface should not install or terminate the optical fiber when the light source is active. Do not peep directly into the load signal fiber to protect your eyes at all times

03 key description

(1) On/off key

Press the on/off key until the LCD is displayed, and then it can be started; Press and hold this key after power on to shut down the machine. Short press this key to turn on and off the automatic shutdown function.

The automatic shutdown function is enabled by default.

(2) VFL key

Briefly press this key to turn on or off the red light source function. Briefly press once to send continuous red light, then press to send 1Hz red light, and then press to turn off red light. This cycle.

Press and hold this key to enter the network cable test mode. Press again to exit the network cable test mode.

(3) Zero key

Press this key to automatically zero the optical power meter.

(4) Light key

Short press this key to turn the LCD backlight on or off. When the backlight is turned on, the backlight on symbol will be displayed in the upper right corner of the LCD.

Long press this key to turn on the LED lamp, and then long press it again to turn it off.

(5) DB key

The relative measurement of optical power value is carried out at the set wavelength. The optical power meter defaults to the absolute measurement of the optical power value. Press this key to conduct relative measurement of optical power value; Pressing this key again will restore the absolute measurement of the optical power value.

（6） λ **key**

Wavelength selection key. Press this key to select different wavelengths. The newly selected wavelength value will be displayed in the LCD wavelength area.

(7) Key combination

Press the zero and light keys simultaneously to perform the user calibration mode.

Press the zero and DB keys simultaneously to exit the user calibration mode.

Press the zero and VFL keys at the same time to restore the factory configuration.

For the specific operation of user calibration mode, see the following instructions.

04 instructions for use

4.1 startup / shutdown

Power on: press and hold the on/off key on the surface panel until the LCD displays.

Power off: press the on/off key on the lower board under the power on state until the LCD does not display.

4.2 absolute optical power measurement

Turn on the optical power meter.

Set the measurement wavelength. adopt λ Key to select the measurement wavelength. The default setting is 1550nm. Access the measured light, and the screen displays the current measured value, including the linear and nonlinear values of absolute power.

4.3 relative optical power measurement

Turn on the optical power meter.

Set the measurement wavelength.

In the absolute optical power measurement mode, connect

the measurement light and measure the current power value. Press the db/ref key, the current optical power value becomes the current reference value (in DBM), and the current absolute power value and the current relative optical power value are displayed at this time.

Connect another measuring light and display the absolute optical power value and relative optical power value of the current measuring light.

4.4 special functions

4.4.1 calibration mode

Optical Power Meter has two operating modes, operating mode and user calibration mode. Always enter the working mode at ordinary times.

Press the zero and light keys at the same time to enter the calibration mode. Press the zero and DB keys at the same time to exit the calibration mode and enter the normal working mode.

function	Key
Add 0.05	VFL
Decrease by 0.05	dB
Switching wavelength	λ
Restore factory settings	Zero + VFL

Note: if there is deviation or operation error in the user's own calibration, press the zero and VFL keys at the same time to restore the power meter to the factory state.

4.4.2 10 minute automatic shutdown function

Short press the on/off key to turn the function on or off. When the automatic shutdown function is turned on, the LCD displays the automatic shutdown flag. If there is no key

operation for 10 minutes, it will automatically shut down.

4.4.3 backlight on / off function

Briefly press light to turn the backlight on or off. When the backlight is turned on, the screen lights up and the backlight on flag is displayed.

4.4.4 5 minute automatic backlight off function

Briefly press light to turn the backlight on or off. When the backlight is turned on, the screen lights up and the backlight on flag is displayed. If there is no key operation for 5 minutes, the backlight will be turned off automatically.

4.4.5 red light source function

Briefly press the VFL key, gk-10x will emit continuous red light. Short press the VFL key again to send out 1Hz flashing red light. Short press VFL again to turn off the red light. This cycle.

When the optical power meter emits red light, the words 650nm are displayed in the upper wavelength area of the liquid crystal. In case of 1Hz red light, the word 650nm also flashes.

4.4.6 lighting function

Long press the light key to turn on or off the LED lighting function.

4.4.7 network cable test function

Long press the VFL key to enter the network cable test mode for line sequence test and line finding test. RJ45 is displayed on the lower part of the LCD. After connecting the optical power meter and the remote module through the network cable, the eight indicator lights on the optical power meter and the remote module will be on in turn.

Press VFL again to exit the network cable test mode.

05 maintenance

Always keep the end face of the sensor clean and free of grease and pollution; Do not use unclean and non-standard adapter connectors; Do not insert the end face with poor polishing surface, otherwise the end face of the sensor will be damaged and the performance of the whole system will be greatly reduced.

Once the optical power meter is not used, the dust cap shall be immediately covered to protect the end face from cleaning and prevent measurement errors caused by long-term exposure to dust in the air.

Carefully plug and unplug the optical adapter connector to avoid scratching the port.

Clean the sensor surface regularly. When cleaning the sensor surface, please use a special cleaning face tag to gently wipe along the circumference.

If it is not used for a long time, please take out the battery to prevent the battery from being affected by moisture and affecting its measurement.