

# USER MANUAL



**Trivia DS3026**  
*Optical Power Meter*

## **SAFETY AND EQUIPMENT**

### **SAFETY**

**POWER SUPPLY**, The DS3026 operates with the help of two 1.2V rechargeable Ni-MH batteries (optional). To charge the batteries, you must remove the batteries from the DS3026, and charge the batteries by an external charger.

#### *Caution*

**Pay attention to the pole of the battery when you install the battery into the DS3026 or the charger. Install the battery according to the pole indicator.**

### **LASER RADIATION.**

The DS3026 doesn't emit laser radiation, when making measurements optical systems, avoid eye exposure to open-ended fibers or optical connectors because they may be connected to laser transmitters.

**Do Not Operate in Explosive Atmospheres.**

**Do Not Remove Covers or Panels.**

**OTHERS.** Please keep the connector clean, don't let the rubber cover and connector open for a long time.

### **EQUIPMENT**

The DS3026 comes with the following:

1. DS3026 Optical Power Meter.
2. Carrying Case. (PK510173026)
3. Replaceable FC□SC□ST□ALL connector.
4. Operation Manual.
5. Rubber Lag.

## INTRODUCING THE DS3026

### INTRODUCTION

Now you own DS3026 optical power meter. This meter is designed to provide you high performance for reduced cost.

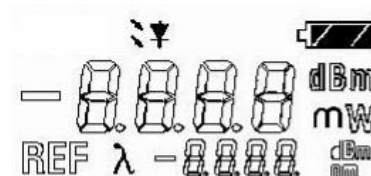
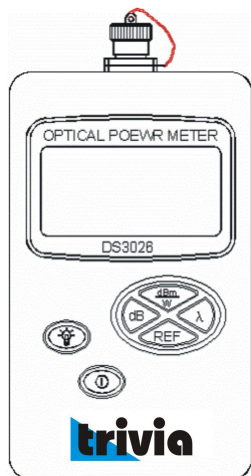
The wavelength selection is 780, 850, 980, 1280, 1300, 1310, 1490, 1550, 1680nm, the absolute and reference measurement is enabled. The test operation can be made with only 4 function buttons on front panel.

The LCD on the front panel provides clear readout, including:







- \*Optical power level unit (dBm or watts)
- \*Wavelength value
- \*Low power indicator
- \*Numerical readout of measurement

You must have observed the dainty appearance and the lightweight of the meter. The weight is only 166g, but don't ignore it only by the appearance, it can work for 24 hours with you only by the internal Ni-MH battery. Now you could operate it.

### Appearance Display



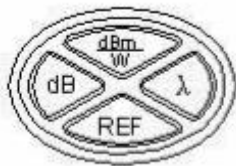
### KEYPAD DESCRIPTIONS

-  Toggles between  
 780□850□980□1280□  
 1300□1310□1490□1550  
 and 1680nm
-  Confirm the level unit  
 in absolute measurement
-  Confirm the new reference Level for reference  
 measurement 7
-  Access the reference  
 measurement
-  Backlight button
-  Power on/off 8

**USING THE DS3026**

**INTRODUCTION**

The best way to learn about the DS3026 is to use it. In section 3 we discuss the individual measurement available with the DS3026. The unit supports a number of functions that are accessed via buttons on the keypad. The function buttons on the DS3026 are shown as follows:




**SELECT WAVELENGTH**

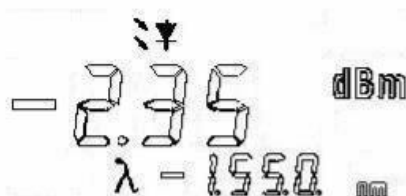
The optical power on 780, 850, 980, 1280, 1300, 1310, 1490, 1550, 1680nm. The unit can measure. To select your desired wavelength by pressing the button



The button  toggles between 780□850□980□1280□1300□1310□1490□1550 and 1680nm


**ABSOLUTE MEAUREMENTS**

To do an absolute measurement, the wavelength must be selected at first, then press the  to enter the absolute measurement mode. Uncap the detector port and connect the test fiber, the absolute optical power level is displayed on the screen.





The  button toggles between watts and dBm.

**REFERENCE MEAUREMENTS**

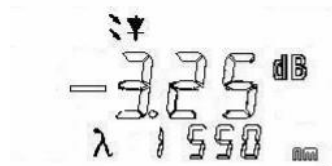
1. Power on the unit and select the wavelength at first. Enter the absolute measurement mode and make the level to be displayed in dBm by pressing  button.

2. Connect the optical source with the DS3026, the display shows optical power output in dBm.

3. Press the  button to store the output as the reference level.


4. Press the  button to access the reference measurements□the display should be 0.0dB.

5. Remove the reference optical source, and connect the test fiber, the reference optical power measurement is displayed on the screen in dB.




**DETERMINING FIBER LOSS**

Fiber loss can be tested by reference measurement.

1. Connect the optical source with the unit by a test jumper.
2. Power on the DS3026, make the display to be in dBm.
3. Turn on the optical source.
4. Set the reference level by press  button.
5. Remove the test jumper. Connect the tested fiber between the optical source and DS3026.

**Fiber tested < ----- >Optical Source**

6. Press  button to enter the reference measurement.

7. The fiber loss is shown on the screen.

**APPENDIX A**  
**“SPECIFICATIONS”**

**SPECIFICATIONS**

Calibrated Wavelengths	780, 850, 980, 1280, 1300, 1310, 1490, 1550, 1680nm
Input Range	-43dBm to +27dBm
Basic Accuracy	±2.3% (±0.1dB) @ -20dBm, @ 22.5 C ±2.5 C
Full Range Accuracy	±6% (±0.26dB)

**MISCELLANEOUS**

Dimensions	120mm×70mm×29mm
Weight	Less than 200g (add Lag)
Operating Temperature	-10 C to 50 C
Powering	2 AA Ni-MH Replaceable battery
Battery life	24 hours max with Backlight off

**Standard Accessories**

B.1100401R2	2 AA Ni-MH batteries
Replaceable FC SC ST	
PK510173026	DS3026 soft carrying case
Rubber Lag	

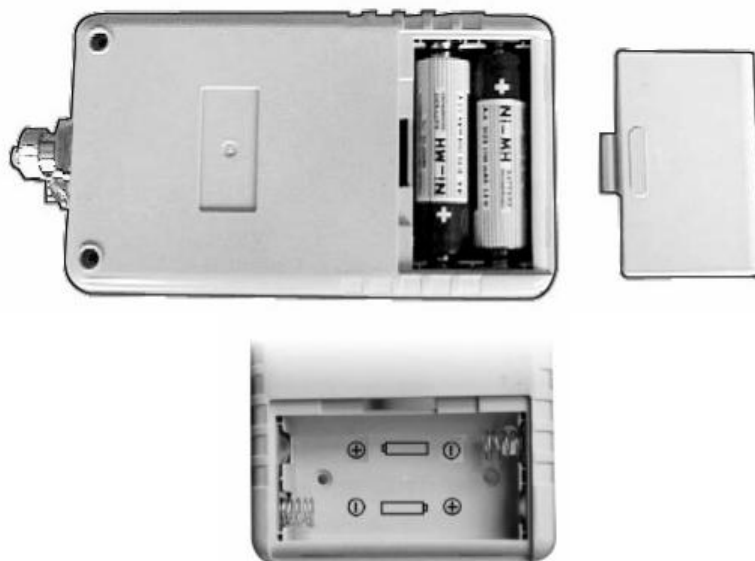
## APPENDIX B

### “POWER MANAGEMENT AND BATTERY”

#### Battery Location and Installation

The DS3026 battery is located on the back of the unit. To remove or replace the battery, pull the cover of battery cabin downward, and lift the batteries.

To install the batteries, place the batteries into the cabin according to the pole indicator, insert the cover of battery cabin into the groove and pull up until it clicks into place.




#### Caution

1. The batteries are NOT interchangeable. Use only the battery specified for the DS3026.
2. Don't expose battery to fire or in tense heat, nor open or mutilate the battery. Avoid contact with electrolyte, which is corrosive and may damage eyes, skin and clothing.
3. Install the batteries according to the pole indicator.

#### Battery Tips

The DS3026 is shipped from the factory is only for first use the instrument. You should not recharge the battery.

To maximize battery life, the unit shuts off automatically if no keypad activity for 5 minutes. To disable the auto off

function, Power on the unit with pressing the  button until the boot process is completed.

The low-battery tip appears in the upper right corner of the display, when the voltage of the battery drops below 2.28V, the unit can only last about 5 minutes.

The blink of the battery tip remind you that the voltage of the battery drops below 2.18 V, and the unit will automatically shut off after 3 minutes.

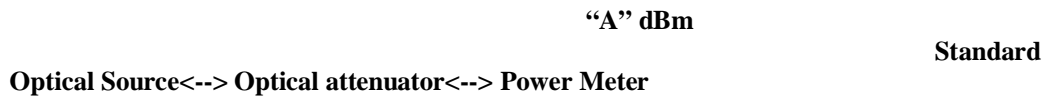
**APPENDIX C**  
**“SETTING UP MEASURE COMPENSATION”**

**INTRODUCTION**

Occasional improper operation may cause some tiny error in measuring. To get the most accurate measuring result, DS3026 offers a "compensation" mode. Improper operation in the "compensation" mode may make a testing error, or cause some system errors. The compensation must be set by a organization agreed by us. To set the compensation, a stable optical source, adjustable optical attenuator and standard optical power meter are required. We suggests the HP 8153A.





**Compensation**

Connect the standard device with the DS3026 as following:



Power on the optical source and optical attenuator, and make the readout of the output of optical attenuator to be – 20.03dBm if 780 ,980 ,1280 ,1300 , 1310 , 1490□1680nm (-20.11dBm if 1550nm), connect the DS3026 with optical attenuator as following:

**Optical Source<--> Optical attenuator<--> DS3026**

Power on DS3026 with Button  , press  Button  to select 780, 850, 980, 1280, 1300, 1310, 1490, 1550 or 1680nm. Press button  to storage the compensation value.

After completing the compensation, the unit will measure according to the new compensation data.