Improved!

Wider wavelength range
800 to 1660 nm
(Register up to 8 custom wavelengths adjustable in 5nm units)

HIOKI

OPTICAL POWER METER 3661-20
LASER LIGHT SOURCE 3662-20, 3663-20

Optical/Telecom Measurement

Reliable Testing of Optical Power Loss

CE

3661-20 includes *Memory* & *USB 1.1* Interface

ISO 9001
JMI-0216

ISO14001
JQA-E-90091

INTERNET HIOKI Website
www.hioki.com

HIOKI company overview, new products, environmental considerations and other information are available on our website.

Quickly collect data and process it later on a computer

Keep the connector safe from dust and mechanical damage with sturdy cover.

Attach supplied strap here for total convenience and portability.

Features of 3661-20

❑ Simple and intuitive operation

Large LCD shows measurement results and memory data at a glance Ergonomic key layout

❑ Large Memory

*Store 1000 sets of data for each registered wavelength
*Register up to 8 custom wavelengths adjustable in 5nm units

❑ Effective data processing

USB interface and supplied application software allows easy data management on a computer

Optical Loss measurement

After obtaining an optical power value to be used as reference, the measurement result is compared to this reference and the loss is automatically shown on the display.

❑ Step 1

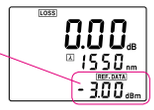
Connect light source to **3661-20** with short reference cable (about 2 m).

❑ Step 2

Select wavelength to be measured according to light source.

❑ Step 3

Switch to POWER display to measure optical power received from light source. Store this as reference value.

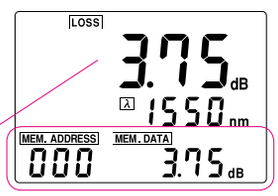


❑ Step 4

Connect light source and **3661-20** to both ends of cable to be measured.

❑ Step 5

Switch to the LOSS display to measure power loss.
Store the results in memory.



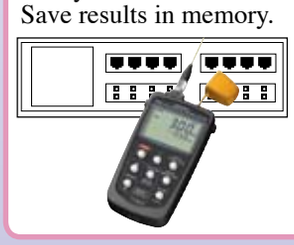
Top view of 3661-20

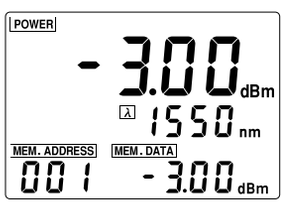
Attach connector cover here to prevent dust from accumulating on the connector.

Mount optional FC or SC connector here.

Optical Power measurement

Easily measure absolute value of input optical power. Save results in memory.





3662-20: 1550 nm 3663-20: 1310 nm Two types of laser light sources

Features of 3662-20 3663-20

❑ Compact size for easy handling

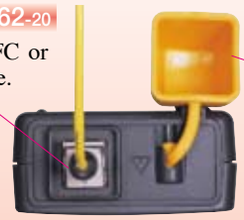
Dimensions: approx. 76 (W) × 159 (H, including cover) × 35 (D) mm
Mass: approx. 180 g (without batteries)

❑ Continuous or modulated light output

Continuous wave (CW) output or 3 types of modulated light output (270 Hz, 1 kHz, 2 kHz) can be selected.

Top view of 3662-20

Mount optional FC or SC connector here.

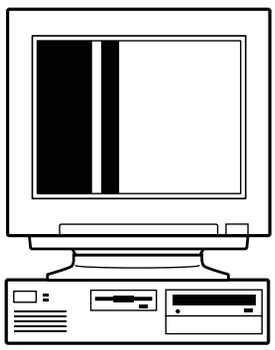


Attach connector cover here to prevent dust from accumulating on the connector.

Transfer up to 1000 data for each wavelength

To PC

USB connector with dust cover

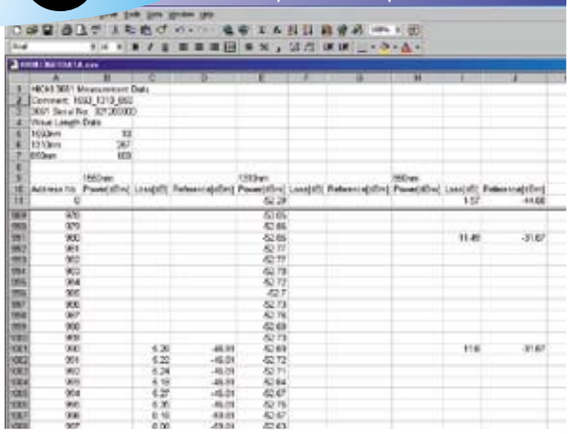


Use supplied USB cable

Saved data collected with the **3661-20** in the field can be downloaded to a computer via the USB interface. The data are in CSV format, suitable for further processing with spreadsheet software.

Free PC Software

Example of data imported into Excel



Software Specifications

● Operating environment: Windows 98, Me, 2000, and XP. CPU, RAM and display requirements follow the specifications of the respective operating system. At least 10 Mbytes of free hard disk space are required. ● Function: Download measurement data stored in memory to a computer via USB cable connection. ● File format: CSV ● Interface standard: USB Ver. 1.1 or later

Related products

Network Construction with One Single Instrument

❑ **Wiremap** (Detect Split Pairs with Wiring Check)
❑ **Cable Length** (Get NVP-Enhanced Measurement Accuracy)
❑ **Direction** (Identify Up to 21 Cable Destinations)

LAN CABLE HiTESTER 3665-20

❑ 3661-20 OPTICAL POWER METER Specifications

Specifications apply to temperature range 23 °C ±5 °C, **HIOKI** reference wavelength 1310 nm and 1550 nm*, power -10 dBm, CW, single mode fiber, FC master connector, PC finish

Measurement functions	: Optical power measurement (dBm) Measure absolute value of input optical power Optical loss measurement (dB) Automatically compare measured power with previously input reference value to calculate and display loss
Calibration wavelength	: 850 nm, 1310 nm, 1550 nm
Measurable wavelength	: 800 to 1660 nm (Register up to 8 custom wavelengths adjustable in 5nm units) 8 default wavelengths preset at 850, 1300, 1310, 1470, 1490, 1550 1625, and 1650 nm
Range	: –60 dBm to +9 dBm (auto range)
Accuracy(1310 /1550 nm)	: ±0.22 dB (±5 %) at –10 dBm
Resolution	: 0.01 dBm (optical power), 0.01 dB (optical loss)
Rated max.	: +10 dBm
Connector	: FC, SC (using optional connector adapter)
Fiber type	: Single mode, multi mode (core dia. 62.5 μm max. NA: 0.275 max.)
Light receiver	: InGaAs (dia. 1 mm)
Display update rate	: Approx. 3 times/s (approx. 350 ms)
Memory	: Max. 1000 data per wavelength
Interface	: USB (Ver. 1.1) Dedicated PC application software allows transfer of measurement data from the **3661-20** memory to a computer
Functions	: Auto power save (after about 10 minutes of inactivity; defeatable) Settings backup (settings are automatically stored at power-off) Battery check (symbol appears when voltage drops below approx. 4 V)
Applicable standards	: Safety: EN61010-1 Pollution degree 2 EMC: EN61326 +A1+A2+A3
Operation temp.	: 0 ºC to 40 ºC, 80 %rh or less, no condensation
Storage temp.	: -10 ºC to 50 ºC, 80 %rh or less, no condensation
Power supply	: LR6(AA) alkaline battery×4
Max. rated power	: 0.5 VA
Operating time	: Approx. 40 hours (continuous use)
Dimensions and mass	: Approx. 85 W ×192 H (including 36 mm cover) × 35 D mm, Approx. 300g (without batteries) (Approx. 3.35″(W)7.56″ (H)1.38″ (D), Approx. 10.6 oz.)

❑ 3662-20, 3663-20 LASER LIGHT SOURCE Specifications

Specifications apply to temperature range 23 °C ±5 °C, single mode fiber, FC master connector, PC finish, at output end of 2m cable

Light-emitting element	: Semiconductor laser diode
Output connector	: FC, SC (using optional connector adapter)
Fiber type	: Single mode
Output mode	: Continuous wave (CW) or modulated light (270 Hz, 1 kHz, 2 kHz)
Output wavelength	: 1310 ±20 nm (**3663-20**) 1550 ±20 nm (**3662-20**)
Spectrum width	: 5 nm max.
Output level	: –6 ±2 dBm
Output level stability	: Within ±0.1 dB (temperature constant, 5 minutes) Within 1.0 dB p-p (ambient temperature 0 to 40 ºC, 8 hours)
Functions	: Battery check (indicator flashes when battery voltage drops)
Applicable standards	: Safety: EN61010-1 Pollution degree 2 EMC: EN61326+A1+A2+A3 Laser: IEC 60825 -1, Class 1 Laser Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No.50, dated July 26,2001.
Operation temp.	: 0 ºC to 40 ºC, 80 %rh or less, no condensation
Storage temp.	: -10 ºC to 50 ºC, 80 %rh or less, no condensation
Power supply	: LR6(AA) alkaline battery×2
Max. rated power	: 0.6 VA
Operating time	: Approx. 20 hours (**3662-20**, continuous CW output) Approx. 36 hours (**3663-20**, continuous CW output)
Dimensions and mass	: Approx. 76 W ×159 H (including 36 mm cover) × 35 D mm, Approx. 180g (without batteries) (Approx. 3.00″(W)6.26″ (H)1.38″ (D), Approx. 6.35 oz.)

*** HIOKI reference wavelength**

The calibration wavelength is a value inherent to the light source used for adjustment and calibration purposes. Normally, the sensitivity of a light receiver will be wavelength dependent, and there will also be individual tolerances. The output of the laser light source used for adjustment and calibration purposes will have the inherent wavelength of the source. For reasons related to continued equipment maintenance, it is not possible to specify a constant value for this wavelength.
In order to avoid ambiguity when stating measurement accuracy, we therefore use the expression "HIOKI reference wavelength".

OPTICAL POWER METER 3661-20

Includes Free PC Software application **DOWNLOAD UTILITY** CD-R, USB cable (1m), **CARRYING CASE 3853** (for **3661-20** main unit), Strap

For optical fiber cable measurement with the **3661-20**, an optional connector adapter must be selected.

LASER LIGHT SOURCE 3662-20 (1550 nm)
LASER LIGHT SOURCE 3663-20 (1310 nm)

Includes hand strap, carrying case (for **3662-20**, **3663-20** main unit) with both models

The **3662-20** and **3663-20** are Class 1 Laser products conforming to IEC 60825-1 CLASS 1 LASER PRODUCT

For optical fiber cable measurement with the **3662-20 and 3663-20**, an optional connector adapter must be selected.

3661-20 options

FC CONNECTOR ADAPTER 9731

SC CONNECTOR ADAPTER 9732

3662-20, 3663-20 options

FC CONNECTOR ADAPTER 9733

SC CONNECTOR ADAPTER 9734

3661-20, 3662-20, 3663-20 common options

CARRYING CASE 9730
(Holds **3661-20**, **3662-20** and **3663-20**)

FC-FC OPTICAL FIBER CABLE 9735
SC-SC OPTICAL FIBER CABLE 9736
SC-FC OPTICAL FIBER CABLE 9737
(1.3 μm-band single-mode optical fiber cable, 2 m)

OPTICAL CONNECTOR CLEANER 9738

SPARE CLEANER 9739
(30 m × 6 rolls set)

HIOKI
HIOKI E.E. CORPORATION

HEAD OFFICE :
81 Koizumi, Ueda, Nagano, 386-1192, Japan
TEL +81-268-28-0562 / FAX +81-268-28-0568
E-mail: os-com@hioki.co.jp

HIOKI USA CORPORATION :
6 Corporate Drive, Cranbury, NJ 08512 USA
TEL +1-609-409-9109 / FAX +1-609-409-9108
E-mail: hioki@hiokiusa.com

Shanghai Representative Office :
1904 Shanghai Times Square Office
93 Huaihai Zhong Road
Shanghai, 200021, P.R.China
TEL +86-21-6391-0090/ 0092
FAX +86-21-6391-0360
info@hioki.cn

DISTRIBUTED BY

3661E3-72B-00U Printed in Japan