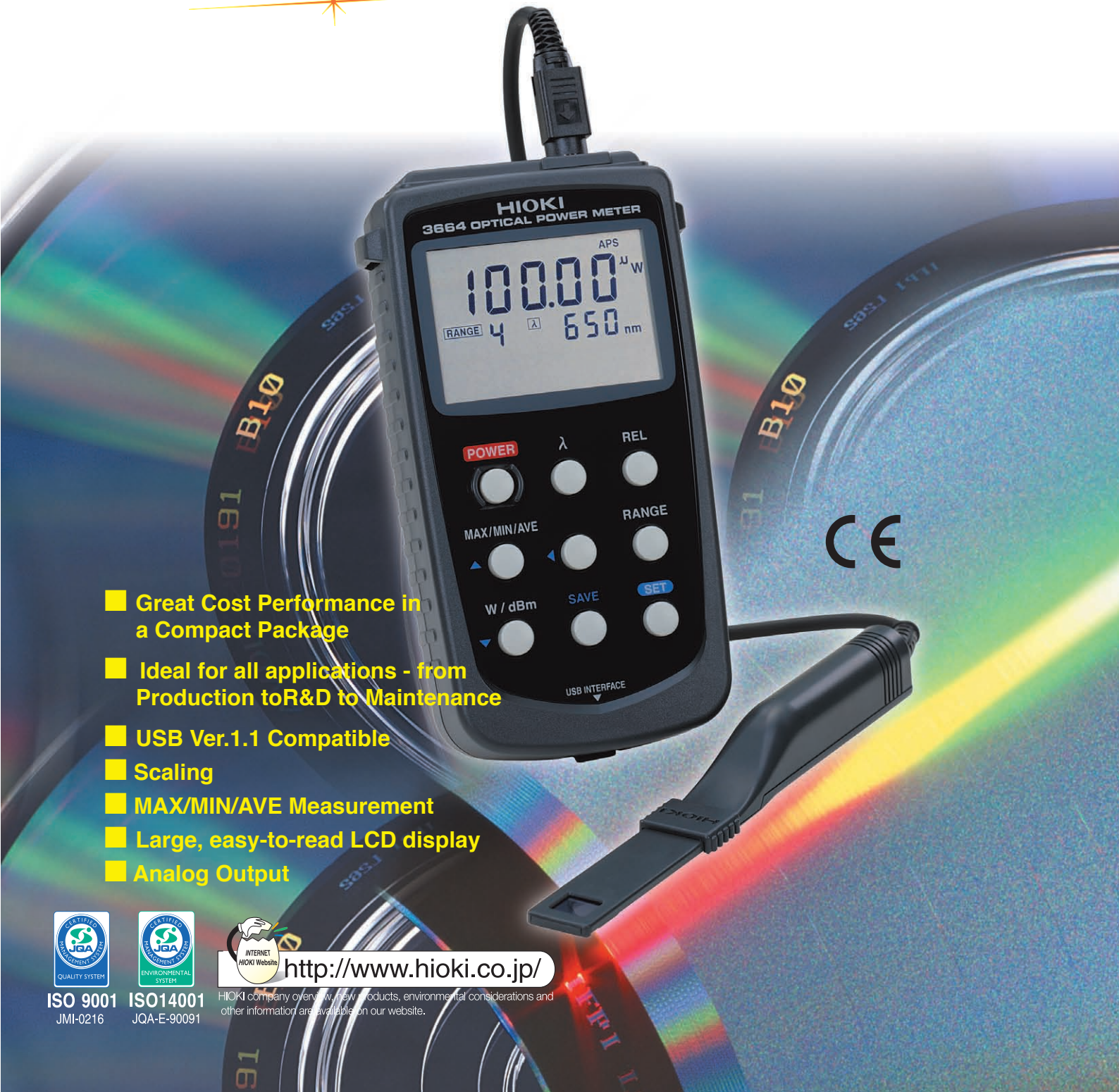
HIOKI

New

3664 OPTICAL POWER METER

Optical/Telecom Measurement

Control the Quality of Your Optical Power Sources



- Great Cost Performance in a Compact Package
- Ideal for all applications - from Production toR&D to Maintenance
- USB Ver.1.1 Compatible
- Scaling
- MAX/MIN/AVE Measurement
- Large, easy-to-read LCD display
- Analog Output

ISO 9001 JMI-0216

ISO14001 JQA-E-90091

INTERNET HIOKI Website http://www.hioki.co.jp/

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

Catering to a Broad Spectrum of Optical Pickup Measurement Applications

The **3664 Optical Power Meter** serves the dual purposes of not only as a convenient tool for the R&D and field maintenance of devices that incorporate laser light sources, but also as the primary instrument for measuring the quality of the optical pickup that is the core of today's high tech equipment such as DVD recorders, CD drives, copiers, laser printers, etc., during their production.
The built-in compensation feature, indispensable for manufacturing applications, allows you to set the standard value based on a measured value at the touch of a button, and equate the value to all subsequent measurements falling within the accuracy range.

Powerful Features

Superior cost performance

Guaranteed accuracy of ±5%, ideal for the production and testing of optical pickup devices(in combination with the **9742** Optical Sensor)
Scaling functionality and USB compatibility all for one reasonable price.

Analog output

Built-in analog output terminal useful for testing variance.

2 Power settings

Compatible to both DC power (AA alkaline battery) and AC power (with AC adapter).Choose a power method to suit your application.

Wavelength setting resolution up to 1 nm

Set precise wavelengths ranging from 320 nm~1100 nm.
When used in conjunction with the 9742 Optical Sensor, store up to 6 custom wavelengths in the 3664's internal memory, in addition to the default 633/635/650/780 nm settings.

MAX/MIN/AVE measurement

Display maximum, minimum, and averages, as well as make relative measurements. (Both W/dBm available.)

Switch Display

One-touch toggle between linear (W) and log (dBm).
Toggle the results during relative measurement, or while MAX/MIN/AVE display is shown.

Scaling

Adjust for sensitivity at the wavelength level, and easily integrate the 3664 into an inspection standard device.

Large, easy-to-read LCD display

All the data you need is displayed on a large screen. Measured values, measured wavelength, relative reference value, range, measurement mode, etc. are all available at a glance.

Relative measurement

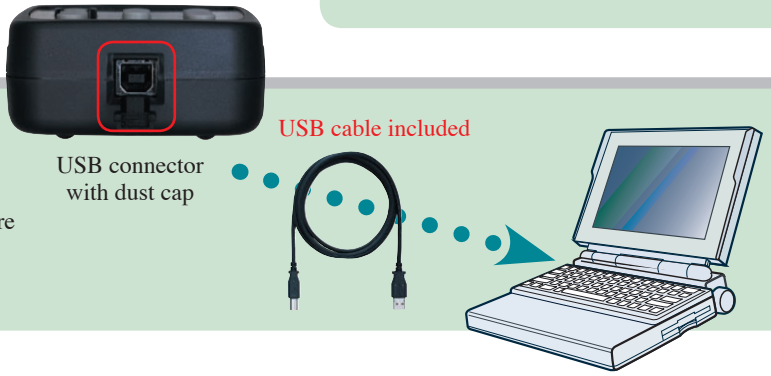
Display measurements as relative values, i.e., the difference from a set reference value. Load reference values from a measured value or define according to your requirements. (Both W/dBm available.)

Hold the Range with a Single Touch

Bypass the Auto-Range feature to temporarily hold the 3664 at the desired range for analog output at the touch of a button.

Upload data through the USB interface

Program your PC to download captured data, configure and even control the 3664 through the USB interface. (USB driver software included)



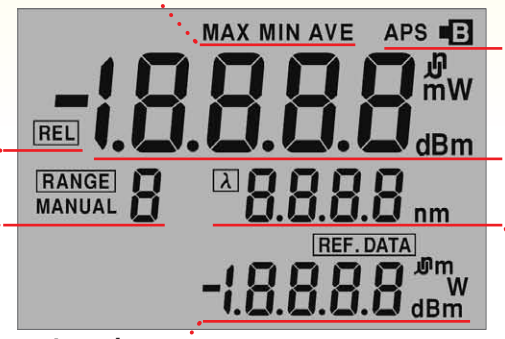
From Production to R&D to Maintenance

Maximum/Minimum/Average display
(Averaging count: 2 to 100, moving average)
Measured MAX/MIN/AVE can also be shown for relative measurements.

Battery Low Warning
Auto power-save feature
(During battery-powered operation, the 3664 automatically shuts off after 10 minutes of inactivity.)

Screen (actual size)

Relative measurement display



Large, easy-to-read measurements and unit notation

Measurement range display
"MANUAL" is displayed during manual operation

Set wavelength display
Up to 10 wavelength memory presets can be configured, including the defaults for each optical sensor

Relative measurement mode: reference value displayed

■ 3664 OPTICAL POWER METER Specifications

Accuracy: 23°±5°C (73°±9°F), less than 80% rh
One year accuracy guarantee

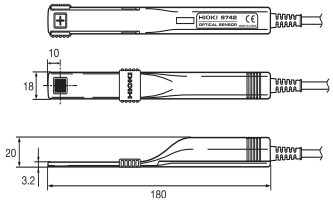
Optical power measurement	: Units W/dBm
Range	: Auto (manual settings available)
Accuracy	: ±0.7% (±5% when used with optional light sensor)
Calibration wavelength	: Resolution of 1 nm, automatic calibration of sensor, up to 10 wavelength presets available (including defaults for each sensor)
Scaling	: Configurable for each wavelength
Optical loss measurement	: Displays a measured value compared with a reference value (Displayed value = measurement − reference) * Reference value can be based on a measurement, or input manually * Settings range: 0.001 nW to 1.9999 W (−90.00 dBm to 33.00 dBm)
Display	: 4 ½ digits, up to 19999. Display resolution: 0.01 dBm/0.01 dB
Measurement display	: Units: nW/μW/mW/dBm/dB
Wavelength display	: 4 digits, unit: nm
Display refresh rate	: Approx. 330 ms
MAX/MIN display	: Displays MAX/MIN during measurement
AVE display	: Moving average, average count configurable from 2 to 100
Analog Output	: Approx. 1 V at sensor correction input
Output resistance	: 50 Ω
Output connector	: ø3.5 mini jack
Interface	: USB Ver1.1 Output of measurement data, configuration and control supported
Included features	: Auto power save, configuration backup, battery check
Applicable standards	: Safety standard: EN61010-1:2001 Pollution degree 2 EMC:EN61326:1997+A1:1998+A2:2001 EM61000-3-2:2000 EM61000-3-3:1995+A1:2001
Power	: LR6(AA) Alkaline battery×4, AC adapter (9445-02/9445-03)
Max. rated power	: 1.6 VA
Operating time	: Approx. 60 hours (when using battery, continuous use with **9742** optical sensor as correction input)
Operating conditions	: 0°C to -40°C (32°F to 104°F), up to 80% rh (no condensation)
Storage conditions	: -10°C to 50°C (14°F to 122°F), up to 80% rh (no condensation)
Operating environment	: Indoor, up to elevation of 2000 meters (6562 feet)
Dimensions and weight	:Approx. 85W×160H×35Dmm(3.35W×6.30H×1.38 D inches) (excluding protrusions), Approx. 270g(9.5 oz.) (without batteries)

■ 9742, 9742-10 OPTICAL SENSOR Specifications

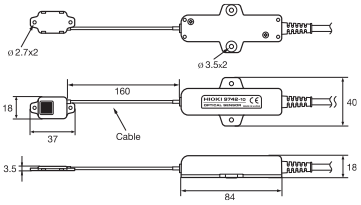
Accuracy: 23°±5°C (73°±9°F), less than 80% rh
One year accuracy guarantee

Measured wavelength	: 320 to 1100 nm
Measured power	: −59 dBm to +17 dBm (correction wavelength)
Maximum rated value	: 50 mW (+17 dBm) (under direct lighting)
Receiving element	: Si Photo diode
Receptor size	: Approx. 9.6mm × 9.6mm (0.38" × 0.38")
Accuracy	: ±4.3% (±5% when used with **3664** POWER METER) **[Correction conditions]** correction wavelength 633 nm, correction power 100 μW, when ø approx. 2mm (0.08") parallel beam strikes perpendicular to center of optical sensor, CW light
Wavelength configuration defaults	: 633 nm, 635 nm, 650 nm, 780 nm
Operating conditions	: 0°C to -40°C (32°F to 104°F), up to 80% rh (no condensation)
Storage conditions	: -10°C to 50°C (14°F to 122°F), up to 80% rh (no condensation)
Operating environment	: Indoor, elevation up to 2000 meters (6562 ft)
Dimensions and weight	: **9742**: Approx. 18W × 180H × 20D mm (0.71 W × 7.09H × 0.79 D inches) (excluding protrusions), Approx. 100g (3.5 oz.), cable length: Approx. 2m (6.56 ft) **9742-10**: Receiving unit: Approx. 18W × 37H × 3.5Dmm (0.71 W × 1.46H × 0.14 D inches) (excluding cable unit, cover), main unit:Approx. 40W × 84H × 18D mm(1.57 W×3.31 H× 0.71 D inch)(Cable unit, excluding protrusions), Approx. 100g(3.5 oz.), receiver-body cable: Approx. 160mm(6.30"), cable length: Approx. 2m (6.56 ft)

9742 OPTICAL SENSOR exterior view



9742-10 OPTICAL SENSOR exterior view
(for reference, can be secured with screws)



■ Option Specifications

9742, 9742-10 OPTICAL SENSOR

Optical sensors for the 3664

Optical sensor is calibrated using a high-resolution wavelength helium neon laser (633 nm, 100 μW).

9742

9742-10
(detachable model)

Refer to the optical sensor specifications for further details.

9246 CARRYING CASE

Handy for travel and storage

(Holds Models 3664, 9742 Optical Sensor and accessories)

Dimensions/Weight:

Approx. 330W×230H70Dmm (12.99 W×9.06 H×2.76 D inches), Approx. 500g(17.6 oz.)

■ Options

9742 OPTICAL SENSOR
9742-10 OPTICAL SENSOR
9246 CARRYING CASE

3664 OPTICAL POWER METER

Accessories : 9445-02 AC ADAPTER (UL) (1) or 9445-03 AC ADAPTER (CEE) (1), 9094 OUTPUT CORD (1)
USB CABLE (1), USB Driver CD-R (1), Strap (1), Batteries (AA×4)

Accessories

9445-02 /-03 AC ADAPTER

9445-02

9445-02 (UL) or
9445-03 (CEE)

DC 9 V, 1 A
(AC 100 V to
240 V, 50/60 Hz)

USB CABLE

Cord length 1m (3.28 ft)

9094 OUTPUT CORD

Analog output
Cord length 1.5m (4.92 ft)

The **3664 POWER METER** must be used in conjunction with either the 9742 or 9742-10 OPTICAL SENSOR, sold separately.

HIOKI Product Line-up for Optical and Telecommunications Testing

For checking fiber optic cables

3661-20 OPTICAL POWER METER

- Optical Power Loss (dBm)
  Measure optical power (dB)
  (connector adapter sold separately)
- Internal memory
  Send data to PC via USB using bundled software

Connector cover included

3662-20, 3663-20 LASER LIGHT SOURCE

3662-20

3662-20 (1550 nm)
3663-20 (1310 nm)

3663-20

- Switch between continuous light (CW) and modulated light
  (Optional connector adapter required for measurement)

For checking LAN cables

3660 LAN CABLE HiTESTER

- Wire map check feature
  for testing wiring during installation
- Cable length check for detecting shorts
- Direction check for checking each individual cable
  (optional **9337** required)

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All information correct as of Aug. 4, 2005. All specifications are subject to change without notice.
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