

Specifications

TB200 Optical Power Meter Mainframe: 735201

●Environmental Conditions

Item	Environmental Condition
Operation-guaranteed temperature/humidity conditions	Body: 5 to +40°C (ambient temperature), 20 to 80% (no condensation)
Storage temperature/humidity	-20 to +60°C (ambient temperature), 20 to 80% (no condensation)

●Electrical Specifications

Item	Specification
Display	7-segment, 4-digit, w/ backlight
Display resolution	0.01 dB (When W unit is selected, floating point 4 digits past decimal point)
Unit display	Absolute value: dBm, mW, μW, nW Incremental value: dB
Wavelength setting range	400 to 850 nm
Wavelength sensitivity compensation increment	1 nm
Range selection	AUTO/HOLD
NA compensation range	0.500 to 2.000 (0.001 increments)
Optical power display range	1 μW (-30 dBm) to 100 mW (+20 dBm)
Measurement interval	Approx. 100 msec
Backlight	Lights when backlight key is touched, and goes out when key is touched again.
Analog output	0 to 2 V connector: UM connector (made by Hirose Electric)
Interface	USB (type B)
Sensor head	Model: 735221 (Model name of sensor head becomes 735201 when -CA1 or -CA3 integrated calibration is selected. However, its performance is the same.)
Power supply	AC adapter (rated input voltage: 100 to 240 V) 7 VA AAA alkali dry cell (operation time: approx. 24 hours)
Accessories	User's Manual, AC adapter

●List of Functions

Function	Brief Description
Optical power level measurement function	The optical power level received by the photo-receiving sensor is displayed on the display.
Range setting function	The mode can be switched to AUTO (range is automatically switched according to the received light level) and HOLD (range is held at a specified range). Zero is automatically set when the power is turned ON. This frees the user from the need to set zero.
Auto zero set function	The wavelength sensitivity can be compensated within the range 400 to 850 nm (in 1 nm increments). Matching the wavelength to the wavelength of the measured light source increases measurement accuracy.
Incremental value measurement function	Displays the incremental value from the reference value taking the measured received light level as the reference value. (unit: dB)
Absolute value measurement unit selection function	Display in dBm or W units can be switched. When the W unit is selected, mW/μW/nW is automatically selected according to the optical power and displayed. A fixed value in mW units also can be displayed.
Averaging function	Measured values are displayed after being averaged internally. The averaging count is fixed, and the average value is the result of 20 averaging operations. The average result is obtained by the moving average at each measurement interval.
NA compensation function	Error caused by the influence of the angled incidence characteristics of the sensor is compensated for when high NA is measured. Compensation values must, however, be selected and entered manually from the NA Compensation Tables (provided).
Backlight function	Turning the backlight ON allows the user to view display details even in the dark.
Resume function	The previous setting information is backed up. (only when the meter was turned OFF normally)
Analog output function	Analog voltages corresponding to the measured values are output for each range.
MAX hold function	The maximum value during a measurement is displayed.
USB communications function	Settings can be changed and measured values acquired over the USB interface. (When this function is in use, control is not possible using the meter's keys.)

Sensor Head for TB200: 735221

●Environmental Conditions

Item	Environmental Condition
Operation-guaranteed temperature/humidity	0 to +60°C (ambient temperature), 20 to 80% (no condensation)
Storage temperature/humidity	-20 to +60°C (ambient temperature), 20 to 80% (no condensation)

●Electrical/Optical Characteristics

Item	Specification
Wavelength range	400 to 850 nm
Light-receiving element	Si-PD
Received light power range	1 μW (-30 dBm) to 100 mW (+20 dBm) Note 1)
Max. light receiving level	+20 dBm (100 mW) Note 1)
Max. power density	5 mW/mm ² Note 1)
Uncertainty at reference conditions	±4% Note 2)
Input type	Spatial light
Accessories	TB200 Utility CD Note 3)

●Accessories

Accessory	Description
TB200 Utility CD	USB driver for Windows 2000, XP with Sample Soft Ware API (Application Program Interface) Calibration data Calibration data upload tool

Note 1) Compensation values for this sensor head are provided in the TB200 Utility CD. These performance values are for when this data is uploaded to the TB200 Optical Power Meter for use.
 Note 2) Condition: λ=405 nm
 Note 3) Reference conditions:
 (1) Reference wavelength: λ=405 nm (Add 0.5% when the wavelength is in the range of 400 to 420 nm.)
 (2) Reference power: 1 mW
 (3) Reference temperature: 23 °C ±3°C
 (4) Reference beam shape: Distribution: Gaussian distribution, Radiated NA: 0.2, diffused light (50GI fiber output)
 (5) Spectral width: 1 nm or less
 (6) Light receiving position: Mechanical center
 (7) Wavelength setting error: Within ±0.5 nm
 (8) Not including secular changes of measuring equipment
 (9) Uncertainty inclusion coefficient: k = 2
 * Uncertainty when only sensor head is sold. For details on uncertainty when the integrated calibration option is applied, refer to the "Remarks" column of the Model and Suffix Code table.

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Model and Suffix Code

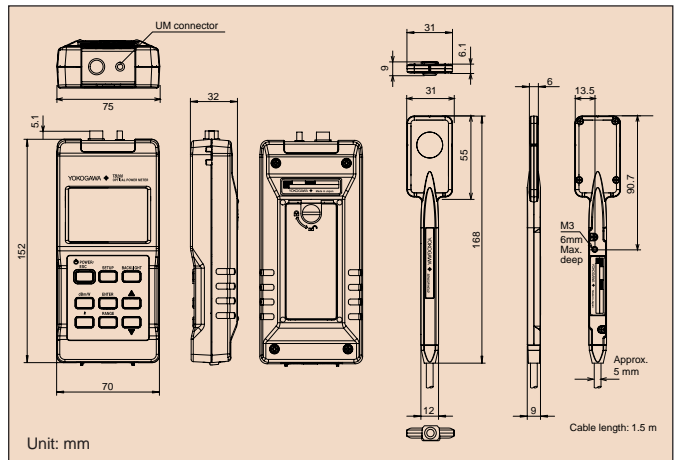
Name	Model	Basic Specification	Option Code	Description
TB200 Optical Power Meter	735201			AC adapter JIS standard type (2-pin)
				AC adapter UL/CSA standard type (UL2P)
				AC adapter VDE standard type (CEE-C2)
				AC adapter AS standard type (AS2P)
				AC adapter BS standard type (BS2P) square
				Without sensor head (specified when only the body is ordered)
				With sensor head (405 nm, 1 wavelength calibration) Uncertainty under reference conditions: ±2.5%
Sensor head for TB200	735221			With sensor head (405/660/785 nm, 3 wavelength calibration) Uncertainty under reference conditions (405 nm): ±2.5% Uncertainty under reference conditions (660 nm): ±3.0% Uncertainty under reference conditions (785 nm): ±3.0%
				/PR Protector (with stand)
				Model when ordering only the sensor head

Note) When selecting the basic specification -CA1 and -CA3 integrated calibration option, the model name of the sensor head provided with the body is "735201," the same as the body. Though the model name is different from the name "735221" listed for when the sensor head only is sold separately, its functions are the same.

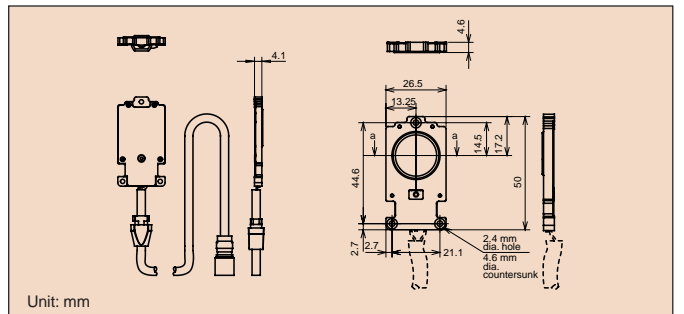
●Options

Part Name	Model	Description
Protector	SU2002A	Protector (with stand)
Soft carrying case	SU2006A	

External Dimensions



(Reference) External dimensions when sensor head is disassembled



Related Models

TA220 Digital Jitter Meter

Compatible with Blu-ray Disc standard

- Equalizer for Blu-ray Disc, PLL mounted
- Measurement of Data to Clock jitter and pulse width jitter
- Inhibit function, block sampling function
- Provided with Ethernet and GP-IB communications as standard

CAUTION
 To ensure correct and safe use of this product, refer to the "User's Manual."

Subject to change without notice.
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