User's Manual

Model 735221 SENSOR HEAD

Thank you for purchasing the 735221sensor head. This sensor head can be used together with TB200 Optical Power Meter.
To ensure correct use, please read this manual and the TB200 Optical Power Meter User's Manual.

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YOKOGAWA

IM 735221-01E
2nd Edition

1. Checking the Contents of the Package

Check the following before use. If some of the contents are not correct or missing or if there is physical damage, contact the dealer from which you purchased them.

Sensor head(with Sensor protective cap)
Software(TB200 Utility CD)

2. Applicable Products

This sensor head can be used with the following products.

TB 200 Optical Power Meter

3. Connecting the TB200 Optical Power Meter

Connect the sensor head connector to the sensor connector terminal on the TB200 Optical Power Meter Align the connector tab with the groove, then push in. The connector head cannot be connected if the tab is not properly aligned.
To remove the sensor head, hold the connector and pull.

caution

1) Only turn ON the power if the sensor head is attached.
2) Never insert or remove the sensor head while the power is ON.

Sensor head connection diagram

3. Precautions during Use of the Sensor Head

1) Incidence of excessive or highly concentrated light outside of the optical power measuring range can damage the sensor element.
2) Do not peer into the ends of the optical fiber, the beams as they travel through the air, the optical connector, or other parts connected to the light source. Doing so can result in injury to the eyes from lasers. Take appropriate caution when handling.
3) The sensor head contains optical components that are easily scratched. Take care not to scratch or crack any part of the sensor head.
4) When not using the sensor head attach the cap to protect the sensor from dirt, grime, and other foreign particles.
5) To prevent damage when attaching or removing the sensor protective cap, take care not to rub the surface of the sensor against the cap.
6) Do not connect anything to the sensor head connector except the TB200 Optical Power Meter. Damage can result.
7) If the surface of the sensor is soiled with dirt or grime, clean the end with specialized optical connector cleaner or a dust-resistant cloth.

5. Uploading Sensor Specific Data

In order to satisfy sensor head operating characteristics, sensor specific data is uploaded to the TB200 Optical Power Meter. This data is included in the TB200 Utility CD that comes with the sensor head.
Upload the data by connecting your PC and TB200 using the USB cable.
For the upload procedure, please read section 2.3, "Uploading Sensor Specific Data" in the TB200 Optical Power Meter User's Manual.

6. Specifications

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)

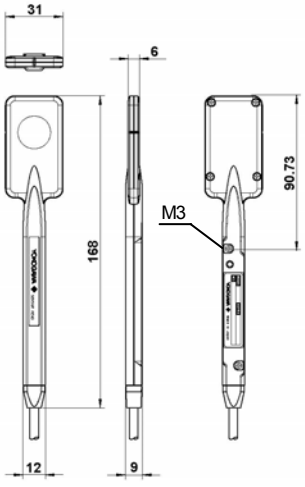
Electrical/Optical Characteristics

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 Sensor protective cap

Note 1 Condition: λ= 405 nm
Note 2 Reference conditions:
1) Reference temperature: 23 °C ±3 °C
2) Reference wavelength: λ= 405 nm (Add 0.5% when the wavelength is in the range of 400 to 420 nm.)
3) Reference power: 1 mW
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 in the TB200 Optical Power Meter User's Manual.

Note 3 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.

7. External Dimensions



Units: mm

Sensor head's external dimensions