

**Aumictech**

Test & measurement · bought, sold, repaired, calibrated

Data Sheet

August 14, 2026

ADVANTEST

Advantest Q82232 900nm-1650nm Optical Sensor

The Advantest Q82232 is a long-wavelength high-sensitivity low-polarization sensor for the Q8221. OEM tables list 900 to 1650 nm, minus 94 to plus 10 dBm, 0.003 dB p-p polarization dependence, plus or minus 2.5 percent CW accuracy at 1550 nm, and minus 94 dBm noise. PDL-sensitive 1550 nm power measurements on the Q8221. Polarization Dependence: 0.003 dB p-p or less at 1550 nm Calibration Wavelength: 1550 nm 1 mW 0 to 40 C Dimensions: approx 60 W x 43 H x 135 D mm Display Resolution Via Mainframe: 0.001 dB High Return Loss Adaptors: not used on this head From Advantest Q8221 optical sensor specification tables (Q82232 low-polarization high-sensitivity column). Q82233 is the related low-PDL sibling listed at 0.003 dB p-p in the Q8221 overview.



MODEL

Advantest Q82232

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

Q82232

LISTING

<https://aumictechlabs.com/products/q82232-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Advantest Q82232 is a plug-in optical sensor module engineered for precision optical power measurement across the 900nm to 1650nm wavelength band. Built around a cooled InGaAs photodiode, it delivers measurement speeds up to 100 times/sec with noise performance of -94 dBm and dynamic range spanning -80 to +27 dBm. The sensor minimizes polarization

dependence to 0.003 dBp-p or less, making it ideal for fiber-coupled optical testing, component characterization, and laser diode validation in both research and production environments.

Technical Specifications

Wavelength Range: 900nm – 1650nm

Power Measurement Range: -80 to +27 dBm

High Power Linearity: Up to +10 dBm

Measurement Speed: Up to 100 times/sec

Ranging Speed: 20 msec (minimum) to 500 msec (maximum)

Noise Level: -94 dBm

Polarization Dependence: 0.003 dBp-p or less

Accuracy at Calibration Point: $\pm 2.5\%$

Accuracy (Broadband with Sensitivity Compensation): $\pm 4.5\%$

Linearity: $\pm 0.5\%$

Return Loss (Slant Polished Fiber): 50 dB or more

Return Loss (PC Polished with High-Return-Loss Adaptor): 45 dB or more (typical)

Sensor Element: Cooled InGaAs photodiode

Optical Input: 10 μm core diameter, NA 0.19 or less

Connectors: FC, SC, ST, MU, LC, and plug-in types

Internal Memory: 400 data points per channel (A and B)

Data Interface: GPIB at up to 100 times/sec

Key Features

- Automatic sensitivity compensation based on entered wavelength
- Dual measurement modes: CW (continuous) or chopped light (270Hz, 2kHz, 4kHz)
- Independent dual-channel measurement capability
- Low-noise design supports demanding production testing and metrology

Typical Applications

- Optical fiber characterization and testing
- Laser diode performance validation
- Optical component power measurement
- Production line quality control

Compatibility & Integration

The Q82232 operates as a plug-in unit with compatible Advantest main units such as the Q8221. Pairs with the Q8163 Polarization Scrambler for high-speed, high-precision PDL measurements.

Features & description

From manufacturer datasheet

Polarization Dependence: 0.003 dB p-p or less at 1550 nm

Calibration Wavelength: 1550 nm 1 mW 0 to 40 C Cw Accuracy At Cal: plus or minus 2.5 percent Chop Accuracy At Cal: plus or minus 3.5 percent Wideband Accuracy: plus or minus 4.5 percent CW 1000 to 1650 nm Linearity 1 s Avg: plus or minus 0.5 percent plus 0.4 pW 72 to 10 dBm 0 to 40 C Noise Level Slow: minus 94 dBm Return Loss Apc: 50 dB or more Cw Max Min: 20 mW / 200 pW Chop Max Min: 20 mW / 200 nW Fiber Input: core 10 um NA 0.19 PC rubbed Mainframe: Q8221 Interface Unit: Q82203 required Dimensions: approx 60 W x 43 H x 135 D mm Mass: 590 g or less Operating Temperature: 0 to 40 C Display Resolution Via Mainframe: 0.001 dB Measurement Modes: CW and 270 Hz chop Standard Adaptor: A08161 FC High Return Loss Adaptors: not used on this head GPIB Resolution Via Mainframe: 0.0001 dB Notes From Advantest Q8221 optical sensor specification tables (Q82232 low-polarization high-sensitivity column). Q82233 is the related low-PDL sibling listed at 0.003 dB p-p in the Q8221 overview.

Q82232 Characteristics / Specifications

PARAMETER	VALUE
Wavelength Range	900 to 1650 nm
Power Range	minus 94 to plus 10 dBm
Polarization Dependence	0.003 dB p-p or less at 1550 nm
Calibration Wavelength	1550 nm 1 mW 0 to 40 C
Cw Accuracy At Cal	plus or minus 2.5 percent
Chop Accuracy At Cal	plus or minus 3.5 percent
Wideband Accuracy	plus or minus 4.5 percent CW 1000 to 1650 nm
Linearity 1 s Avg	plus or minus 0.5 percent plus 0.4 pW 72 to 10 dBm 0 to 40 C
Noise Level Slow	minus 94 dBm
Return Loss Apc	50 dB or more
Cw Max Min	20 mW / 200 pW
Chop Max Min	20 mW / 200 nW
Fiber Input	core 10 um NA 0.19 PC rubbed
Mainframe	Q8221
Interface Unit	Q82203 required
Dimensions	approx 60 W x 43 H x 135 D mm
Mass	590 g or less
Operating Temperature	0 to 40 C
Display Resolution Via Mainframe	0.001 dB
Measurement Modes	CW and 270 Hz chop
Standard Adaptor	A08161 FC
High Return Loss Adaptors	not used on this head
GPIO Resolution Via Mainframe	0.0001 dB
Return loss	Apc: 50 dB or more

Q82232 Specifications

PARAMETER	VALUE
Advantest Q82232 Optical Sensor Head	Overview
Applications	PDL-sensitive 1550 nm power measurements on the Q8221.
Key Features	0.003 dB p-p polarization dependence
Minus 94 dBm sensitivity	900 to 1650 nm
Plug in Q8221	Low PDL companion to Q82233 family
Technical Specifications	Wavelength Range: 900 to 1650 nm

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 to 40 C
Operating Temperature	0 to 40 C
Display Resolution Via Mainframe	0.001 dB
Measurement Modes	CW and 270 Hz chop
Standard Adaptor	A08161 FC
High Return Loss Adaptors	not used on this head
GPIB Resolution Via Mainframe	0.0001 dB Notes From Advantest Q8221 optical sensor specification tables (Q82232 low-polarization high-sensitivity column). Q82233 is the related low-PDL sibling listed at 0.003 dB p-p in the Q8221 overview.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
Specifications	
PARAMETER	VALUE
Wavelength Range	900 to 1650 nm
Power Range	minus 94 to plus 10 dBm
Polarization Dependence	0.003 dB p-p or less at 1550 nm
Calibration Wavelength	1550 nm 1 mW 0 to 40 C
Cw Accuracy At Cal	plus or minus 2.5 percent
Chop Accuracy At Cal	plus or minus 3.5 percent
Wideband Accuracy	plus or minus 4.5 percent CW 1000 to 1650 nm
Linearity 1 s Avg	plus or minus 0.5 percent plus 0.4 pW 72 to 10 dBm 0 to 40 C
Noise Level Slow	minus 94 dBm
Return Loss Apc	50 dB or more
Cw Max Min	20 mW / 200 pW
Chop Max Min	20 mW / 200 nW
Fiber Input	core 10 um NA 0.19 PC rubbed
Mainframe	Q8221
Interface Unit	Q82203 required
Dimensions	approx 60 W x 43 H x 135 D mm
Mass	590 g or less
Operating Temperature	0 to 40 C
Display Resolution Via Mainframe	0.001 dB
Measurement Modes	CW and 270 Hz chop
Standard Adaptor	A08161 FC
High Return Loss Adaptors	not used on this head
GPIB Resolution Via Mainframe	0.0001 dB
Notes	
From Advantest Q8221 optical sensor specification tables (Q82232 low-polarization high-sensitivity column). Q82233 is the related low-PDL sibling listed at 0.003 dB p-p in the Q8221 overview.	

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 14, 2026

Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.