

**Aumictech**

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 14, 2026

ADVANTEST

Advantest Q82214 8" Optical Sensor Head

The Advantest Q82214 is a short-wavelength Si 8 mm general-purpose sensor for the Q8221. OEM tables list 400 to 1100 nm, minus 80 to plus 17 dBm, plus or minus 3.0 percent CW accuracy at 780 nm, and 8 mm optical input diameter for free-space or large-core beams. Visible and 780 nm optical power including large-area beams on the Q8221 mainframe. Sensor Element: Si 8 mm optical input diameter 8 mm Calibration Wavelength: 780 nm 1 mW 0 to 40 C Dimensions: approx 60 W x 43 H x 110 D mm Fiber Core Class: 100 um NA 0.3 with appropriate adaptor Display Resolution Via Mainframe: 0.001 dB From Advantest Q8221 optical sensor specification tables (Q82214 short-wavelength general-purpose column).



MODEL

Advantest Q82214

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

Q82214

LISTING

<https://aumictechlabs.com/products/q82214-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Advantest Q82214 is an optical sensor head for precision optical power measurement across the visible and near-infrared spectrum. It delivers accurate, low-noise signal capture for optical component testing, power metering, and spectrum analysis applications. The sensor head integrates with the Advantest Q8221 mainframe to provide multimode measurement capabilities, data storage, and flexible signal conditioning. Technical Specifications Wavelength Range: 400 to 1100 nm Measurement Power Range: -80 to +17 dBm Receiver Aperture: 8 mm diameter Optical Fiber Compatibility: 10 µm core diameter, NA ≤ 0.19 Connector Options: FC, SC, ST, MU, LC (adapters not included) Physical Dimensions: 10 × 8 × 8 in Weight: 5 lbs Key Features

Measurement Modes: CW or chopped light at 270 Hz, 2 kHz, or 4 kHz Sampling Speed: Up to 100 measurements per second Ranging Speed: 20 to 500 msec Data Functions: Maximum hold, running average (2–256 samples), A/B and B/A ratio calculation, constant multiplication (W display), dBm offset capability On-Board Storage: 400 measurement data points per channel (A and B); GPIB-readable Level Meter Display: 11-dot bargraph indication Standard Accessories: Interface connection cable, light shading cap Typical Applications Optical component characterization, fiber-coupled power measurement, optical spectrum monitoring, and laboratory-grade optical signal analysis where wavelength range coverage from 400 to 1100 nm is required. Compatibility & Integration The Q82214 operates exclusively with the Advantest Q8221 mainframe. Fiber connector adapters are available separately to accommodate facility infrastructure; the sensor head ships without a pre-attached connector adapter.

Q82214 Characteristics / Specifications

PARAMETER	VALUE
Wavelength Range	400 to 1100 nm
Power Range	minus 80 to plus 17 dBm
Sensor Element	Si 8 mm optical input diameter 8 mm
Calibration Wavelength	780 nm 1 mW 0 to 40 C
Cw Accuracy At Cal	plus or minus 3.0 percent
Chop Accuracy At Cal	plus or minus 4.0 percent
Wideband Accuracy	plus or minus 5.0 percent CW 480 to 900 nm 1 mW 23 plus or minus 3 C
Linearity 1 s Avg	plus or minus 0.5 percent plus 10 pW 54 to 17 dBm 23 plus or minus 3 C
Noise Level Slow	minus 80 dBm
Noise Fs	minus 66 dBm without averaging 100/s
Return Loss High RI Adaptor	60 dB or more
Cw Max Min	200 mW / 20 nW
Chop Max Min	200 mW / 20 nW
Mainframe	Q8221
Interface Unit	Q82202 or Q82203 required
Dimensions	approx 60 W x 43 H x 110 D mm
Mass	270 g or less
Fiber Core Class	100 um NA 0.3 with appropriate adaptor
Operating Temperature	0 to 40 C
Display Resolution Via Mainframe	0.001 dB
Measurement Modes	CW and 270 Hz chop
Max Optical Input Diameter	8.5 mm
Distance To Input Surface	3.1 mm
Return loss	High RI Adaptor: 60 dB or more

Q82214 Specifications

PARAMETER	VALUE
Advantest Q82214 Optical Sensor Head	Overview
Applications	Visible and 780 nm optical power including large-area beams on the Q8221 mainframe.
Key Features	Si 8 mm input
Minus 80 dBm class noise	Q82202/Q82203 interface
Technical Specifications	Wavelength Range: 400 to 1100 nm
Notes	From Advantest Q8221 optical sensor specification tables (Q82214 short-wavelength general-purpose column).

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
Max Optical Input Diameter	8.5 mm
Distance To Input Surface	3.1 mm Notes From Advantest Q8221 optical sensor specification tables (Q82214 short-wavelength general-purpose column).

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	400 to 1100 nm
Power Range	minus 80 to plus 17 dBm
Sensor Element	Si 8 mm optical input diameter 8 mm
Calibration Wavelength	780 nm 1 mW 0 to 40 C
Cw Accuracy At Cal	plus or minus 3.0 percent
Chop Accuracy At Cal	plus or minus 4.0 percent
Wideband Accuracy	plus or minus 5.0 percent CW 480 to 900 nm 1 mW 23 plus or minus 3 C
Linearity 1 s Avg	plus or minus 0.5 percent plus 10 pW 54 to 17 dBm 23 plus or minus 3 C
Noise Level Slow	minus 80 dBm
Noise Fs3	minus 66 dBm without averaging 100/s
Return Loss High RI Adaptor	60 dB or more
Cw Max Min	200 mW / 20 nW
Chop Max Min	200 mW / 20 nW
Mainframe	Q8221
Interface Unit	Q82202 or Q82203 required
Dimensions	approx 60 W x 43 H x 110 D mm
Mass	270 g or less
Fiber Core Class	100 um NA 0.3 with appropriate adaptor
Operating Temperature	0 to 40 C
Display Resolution Via Mainframe	0.001 dB
Measurement Modes	CW and 270 Hz chop
Max Optical Input Diameter	8.5 mm
Distance To Input Surface	3.1 mm
Notes	
From Advantest Q8221 optical sensor specification tables (Q82214 short-wavelength general-purpose column).	

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.