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Data Sheet

August 14, 2026

ADVANTEST

Advantest Q82215 – Optical Sensor Head

The Advantest Q82215 is a long-wavelength Ge 5 mm general-purpose sensor for the Q8221. OEM tables list 800 to 1750 nm, minus 60 to plus 10 dBm, plus or minus 3.0 percent CW accuracy at 1300 nm, and 0.03 dB p-p typical polarization dependence at 1550 nm. 1310/1550 nm optical power with a 5 mm Ge detector on the Q8221. Calibration Wavelength: 1300 nm 1 mW 0 to 40 C W Accuracy At Cal: plus or minus 3.0 percent Dimensions: approx 60 W x 43 H x 110 D mm Display Resolution Via Mainframe: 0.001 dB Optional Calibration: OPT82215+25 1550 nm From Advantest Q8221 optical sensor specification tables (Q82215 long-wavelength general-purpose column).



MODEL

Advantest Q82215

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

Q82215

LISTING

<https://aumictechlabs.com/products/q82215-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Advantest Q82215 Optical Sensor Head is a precision germanium photodiode module engineered for high-accuracy optical power measurement in fiber optic systems. It delivers sub-microwatt sensitivity across the 800 nm to 1750 nm band, with measurement accuracy of 6% and exceptional noise performance at -94 dBm. The single-channel design accommodates FC, MU, SC, and ST connectors, enabling direct integration with compatible Advantest optical power meters for telecommunications, R&D, and manufacturing test environments requiring deterministic optical sensing. Technical Specifications Sensor Type: Germanium (Ge) photodiode Wavelength Range: 800 nm to 1750 nm Measurement Range: 0.001 μ W to 0.01 W Noise Level: -94 dBm

(maximum sensitivity) Measurement Accuracy: 6% Calibration Wavelength: 1550 nm Polarization Dependence: Low Connector Types: FC, MU, SC, ST Operating Temperature: 0 to +40°C, RH ≤85% Storage Temperature: -25 to +70°C Dimensions: 10 × 8 × 8 in Weight: 5 lbsKey Features High sensitivity reaching -94 dBm noise floor for sub-microwatt power detection Broad spectral response from 800 nm to 1750 nm covering near-infrared and short-wavelength infrared regions Low polarization dependence ensures measurement consistency independent of fiber orientation Factory calibration at 1550 nm standard telecom wavelength Multiple connector options (FC, MU, SC, ST) accommodate diverse fiber jumper configurations Compact module form factor with proprietary interface for streamlined system integrationTypical Applications Optical power and backreflection characterization in single-mode and multimode fiber networks Component testing in telecom infrastructure development and qualification Research-grade optical measurements requiring sensitivity below -90 dBm Manufacturing burn-in and acceptance testing of fiber-coupled optical systemsCompatibility & Integration The Q82215 integrates directly with the Advantest Q8221 optical power meter. Related sensor head options include the Q82214 and Q82216 modules, permitting wavelength-optimized sensor selection within a unified measurement platform.

Features & description

From manufacturer datasheet

Polarization Dependence: 0.03 dB p-p typical at 1550 nm

Return Loss High RI Adaptor: 60 dB or more Cw Max Min: 20 mW / 2000 nW Chop Max Min: 20 mW / 2000 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 Max Optical Input Diameter: 5 mm Operating Temperature: 0 to 40 C Display Resolution Via Mainframe: 0.001 dB Measurement Modes: CW and 270 Hz chop Optional Calibration: OPT82215+25 1550 nm Distance To Input Surface: 3.1 mm Notes From Advantest Q8221 optical sensor specification tables (Q82215 long-wavelength general-purpose column).

Q82215 Characteristics / Specifications

PARAMETER	VALUE
Wavelength Range	800 to 1750 nm
Power Range	minus 60 to plus 10 dBm
Sensor Element	Ge 5 mm
Calibration Wavelength	1300 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 950 to 1600 nm 1 mW 23 plus or minus 3 C
Linearity 1 s Avg	plus or minus 0.5 percent plus 1 nW 37 to 10 dBm 23 plus or minus 3 C
Noise Level Slow	minus 60 dBm
Polarization Dependence	0.03 dB p-p typical at 1550 nm
Return Loss High RI Adaptor	60 dB or more
Cw Max Min	20 mW / 2000 nW
Chop Max Min	20 mW / 2000 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
Max Optical Input Diameter	5 mm
Operating Temperature	0 to 40 C
Display Resolution Via Mainframe	0.001 dB
Measurement Modes	CW and 270 Hz chop
Distance To Input Surface	3.1 mm
Return loss	High RI Adaptor: 60 dB or more

Q82215 Specifications

PARAMETER	VALUE
Advantest Q82215 Optical Sensor Head	Overview
Applications	1310/1550 nm optical power with a 5 mm Ge detector on the Q8221.
Key Features	Ge 5 mm detector
Q82202/Q82203 interface	Optional 1550 nm calibration
Technical Specifications	Wavelength Range: 800 to 1750 nm
Notes	From Advantest Q8221 optical sensor specification tables (Q82215 long-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
Distance To Input Surface	3.1 mm Notes From Advantest Q8221 optical sensor specification tables (Q82215 long-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	800 to 1750 nm
Power Range	minus 60 to plus 10 dBm
Sensor Element	Ge 5 mm
Calibration Wavelength	1300 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 950 to 1600 nm 1 mW 23 plus or minus 3 C
Linearity 1 s Avg	plus or minus 0.5 percent plus 1 nW 37 to 10 dBm 23 plus or minus 3 C
Noise Level Slow	minus 60 dBm
Polarization Dependence	0.03 dB p-p typical at 1550 nm
Return Loss High RI Adaptor	60 dB or more
Cw Max Min	20 mW / 2000 nW
Chop Max Min	20 mW / 2000 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
Max Optical Input Diameter	5 mm
Operating Temperature	0 to 40 C
Display Resolution Via Mainframe	0.001 dB
Measurement Modes	CW and 270 Hz chop
Optional Calibration: OPT82215+25 1550 nm	
Distance To Input Surface: 3.1 mm	
Notes	
From Advantest Q8221 optical sensor specification tables (Q82215 long-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

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NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.