

**Aumictech**

Test & measurement · bought, sold, repaired, calibrated

Data Sheet

August 13, 2026

ADVANTEST

Advantest Q82018A " Advantest Q82018A Optical Sensor

Advantest Q82018A Long Wavelength InGaAs Optical Sensor The Advantest Q82018A is a long wavelength InGaAs PIN photodiode optical sensor head for Advantest TQ8210, TQ8215, and related optical power meters. It measures absolute optical power from 800 nm to 1650 nm with FC connector input and supports peak power monitor and demodulation functions when paired with compatible meter mainframes. Long wavelength fiber optic power measurement 800 to 1650 nm; InGaAs detector based absolute power with wavelength compensation; peak power and analog monitor output on TQ8215 class systems; replacement sensor for TQ82015 long wavelength applications. The Advantest Q82018A is a long wavelength InGaAs PIN photodiode optical sensor head for Advantest TQ8210, TQ8215, and related optical power meters. It measures absolute optical power from 800 nm to 1650 nm with FC connector input and supports peak power monitor and demodulation functions when paired with compatible meter mainframes. Long wavelength fiber optic power measurement 800 to 1650 nm; InGaAs detector based absolute power with wavelength compensation; peak power and analog monitor output on TQ8215 class systems; replacement sensor for TQ82015 long wavelength applications.



MODEL

**Advantest
Q82018A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

Q82018A

LISTING

<https://aumictechlabs.com/products/q82018a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Advantest Q82018A is an InGaAs PIN photodiode optical sensor engineered for precision optical power measurement across the long-wavelength infrared spectrum. It delivers sensitivity down to -60 dBm at 1.3 μm , with 0.01 dB power resolution and excellent linearity across a 4-1/2 digit dynamic range. This sensor head integrates with the complete Advantest TQ82000 series optical power meter platform.

Technical Specifications
Wavelength Range: 0.8 μm to 1.65 μm
Sensor Type: InGaAs PIN Photodiode
Measurement Range: -60 dBm to 0 dBm
Power Resolution: 0.01 dB
Power Levels: 0.001 μW to 0.001 W
Sensitivity: -60 dBm (at 1.3 μm)
Accuracy: $\pm 5\%$
Linearity: Excellent
Dynamic Range: 4-1/2 digits

Key Features
High sensitivity optical measurements across near-infrared and short-wavelength infrared bands
 $\pm 5\%$ measurement accuracy with 0.01 dB resolution ensures precise characterization of optical power levels
Excellent linearity performance critical for repeatable, quantifiable results in optical system validation
Wide 60 dB dynamic measurement range accommodates both weak signals and higher-power optical channels

Typical Applications
Optical communication system validation and component characterization
Long-wavelength optical power verification (0.8–1.65 μm band)
Fiber-optic and integrated photonic device testing
Optical signal path loss and attenuation measurement

Compatibility & Integration
The Q82018A sensor head connects directly to the Advantest optical power meter series: TQ8210, TQ82015, TQ82014A, TQ82017A, TQ82021A, TQ82024, and other TQ82000 series instruments. Operation manual available from Advantest. Connector type specifications available through Advantest sales.

Features & description

From manufacturer datasheet

Polarization sensitivity: meter compensated via CF wavelength factor

Maximum linear input note: observe linearity limits per monitor table on meter Related short wavelength sensor: Q82014A (400 to 1100 nm Si) Related mid sensor: Q82017A (400 to 1100 nm Si large area) Related block: Q82021A monitor block for peak/demod functions Long wavelength predecessor class: TQ82015 Ge sensor 800 to 1600 nm Notes Specs from Advantest TQ82000 series user manual sensor tables and GS Test Equipment listing. Pair with TQ8215 or TQ8210 and set wavelength CF for absolute accuracy; confirm connector and calibration on the head.

Q82018A Characteristics / Specifications

PARAMETER	VALUE
Model	Q82018A
Manufacturer	Advantest
Instrument Type	Optical Power Sensor Head
Alias	Q82018A; Advantest Q82018A; TQ82018A class
Sensor element	InGaAs PIN photodiode
Wavelength range	800 nm to 1650 nm
Power range dBm	-60 dBm to +17 dBm
Power range watts	1 nW to 50 mW
Resolution dBm	0.01 dB
Resolution watts	0.1 percent to 0.005 percent range dependent
Measurement accuracy listing	plus/minus 5 percent (reseller catalog class)
Reference accuracy example	plus/minus 0.25 dB at 1.30 um 20 dBm (with TQ8215 table)
Connector type	FC
Input type	photodiode direct in FC connector
Compatible meters	TQ8210; TQ8215; Q8214A; TQ8210/TQ82015 family
Photoreceptor area class	approx 5 mm InGaAs element (family documentation)
Range switching	6 ranges in 10 dB steps (with TQ8215 mainframe)
Monitor demodulation band example	DC to 30 MHz plus/minus 1 dB opt on related blocks
Storage temperature range	-25 C to 70 C (TQ82000 family class)
Dimensions class	approx 90 mmWx 94 mmHxsensor depth (TQ82000 family)
Mass class	handheld sensor head lightweight module
Polarization sensitivity	meter compensated via CF wavelength factor
Maximum linear input note	observe linearity limits per monitor table on meter
Related short wavelength sensor	Q82014A (400 to 1100 nm Si)
Related mid sensor	Q82017A (400 to 1100 nm Si large area)

PARAMETER	VALUE
Related block	Q82021A monitor block for peak/demod functions
Long wavelength predecessor class	TQ82015 Ge sensor 800 to 1600 nm Notes Specs from Advantest TQ82000 series user manual sensor tables and GS Test Equipment listing. Pair with TQ8215 or TQ8210 and set wavelength CF for absolute accuracy; confirm connector and calibration on the head.
Storage temperature	range: -25 C to 70 C (TQ82000 family class)

General Specifications & Supplementary Characteristics

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Related mid sensor	Q82017A (400 to 1100 nm Si large area)
Related block	Q82021A monitor block for peak/demod functions
Long wavelength predecessor class	TQ82015 Ge sensor 800 to 1600 nm Notes Specs from Advantest TQ82000 series user manual sensor tables and GS Test Equipment listing. Pair with TQ8215 or TQ8210 and set wavelength CF for absolute accuracy; confirm connector and calibration on the head.

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	
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PARAMETER	VALUE
Long wavelength predecessor class	TQ82015 Ge sensor 800 to 1600 nm

Notes
Specs from Advantest TQ82000 series user manual sensor tables and GS Test Equipment listing. Pair with TQ8215 or TQ8210 and set wavelength CF for absolute accuracy; confirm connector and calibration on the head.

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
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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.