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**Data Sheet**

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ADVANTEST

# Advantest Q8383 Optical Spectrum Analyzer Wavelength, 550 to 1750 nm

Advantest Q8383 Optical Spectrum Analyzer 550 to 1750 nm The Advantest Q8383 is a benchtop OSA covering 550 to 1750 nm. OEM product description lists 10 pm wavelength resolution and 20 pm wavelength accuracy in the 1.55 um band with 55 dB class dynamic range, minus 92 to plus 20 dBm level span, plus or minus 0.4 dB measurement accuracy class, and 0.8 s sweep class. Wideband optical source and component spectra from visible through Lband including SMF and MMF inputs. 20 pm class wavelength accuracy in 1.55 um band The Advantest Q8383 is a benchtop OSA covering 550 to 1750 nm. OEM product description lists 10 pm wavelength resolution and 20 pm wavelength accuracy in the 1.55 um band with 55 dB class dynamic range, minus 92 to plus 20 dBm level span, plus or minus 0.4 dB measurement accuracy class, and 0.8 s sweep class. Wideband optical source and component spectra from visible through Lband including SMF and MMF inputs. 20 pm class wavelength accuracy in 1.55 um band Wavelength Resolution Class 1.55 um Band: 10 pm



|                                 |                                                                                                                  |
|---------------------------------|------------------------------------------------------------------------------------------------------------------|
| MODEL<br><b>Advantest Q8383</b> | CALIBRATION<br><b>Available on request</b>                                                                       |
| CONDITION<br><b>Used</b>        | STATUS<br><b>In stock</b>                                                                                        |
| RFQ / SKU<br><b>Q8383</b>       | LISTING<br><a href="https://aumictechlabs.com/products/q8383-2/">https://aumictechlabs.com/products/q8383-2/</a> |

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

## This unit

The Advantest Q8383 Optical Spectrum Analyzer delivers precise optical signal characterization across the 550 nm to 1750 nm wavelength range. This benchtop instrument combines high

dynamic range, fast sweep capability, and advanced analysis functions to serve telecommunications, fiber optics, and component testing environments. With input signal handling from -92 dBm to +20 dBm and wavelength resolution adjustable from 0.1 nm to 5 nm, It has the measurement flexibility required for WDM systems, optical amplifier noise figure analysis, and detailed spectral characterization.

**Technical Specifications**

Wavelength Range: 550 nm to 1750 nm  
Wavelength Resolution: 0.1 nm (minimum) to 5 nm (maximum)  
Input Power Range: -92 dBm to +20 dBm  
Dynamic Range: 55 dB maximum  
Measurement Accuracy:  $\pm 0.4$  dB  
Sweep Time: 0.8 s  
Optical Pulse Measurement: Minimum 10 ns pulse width (30  $\mu$ s or longer recommended)  
Power Supply: AC 100–120 V / 220–240 V, 50/60 Hz;  $\leq 200$  VA consumption  
Operating Temperature: +10°C to +40°C  
Physical: 424 mm (W)  $\times$  221 mm (H)  $\times$  500 mm (D); 29 kg or less

**Key Features**

Auto peak search, auto peak center, and auto reference level adjustment  
Spectrum width and notch width analysis for signal characterization  
Multi-trace display (up to 32 traces) with superimpose and cursor measurements  
Dual upper/lower display with wavelength/frequency axis scaling  
WDM signal analysis and optical amplifier noise figure measurement  
Internal RAM storage ( $\geq 15$  screens at 501 samples, battery-backed)  
3.5-inch floppy disk drive (1.44 MB) for data logging  
Wavelength and level offset correction with built-in or external calibration source  
External TTL synchronization input for pulse and transient measurements  
Optical Interface Accepts FC (standard), ST, and SC connectors (user replaceable)  
Internal 9.5/125  $\mu$ m single-mode adapting fiber  
Reflective attenuation  $\geq 35$  dB  
Compatible with multimode and single-mode fibers  
Integration IEEE 488-1978 GPIB remote control interface. VGA video output (15-pin female) and D-SUB 25-pin printer interface (ESC/P, ESC/P-R, PCL formats). CE marked to 89/336/EEC and 73/23/EEC directives.

## Q8383 Characteristics / Specifications

| PARAMETER                                | VALUE                                                      |
|------------------------------------------|------------------------------------------------------------|
| Model                                    | Q8383                                                      |
| Form Factor                              | benchtop                                                   |
| Minimum Wavelength                       | 550 nm                                                     |
| Maximum Wavelength                       | 1750 nm                                                    |
| Wavelength Resolution Class 1.55 um Band | 10 pm                                                      |
| Wavelength Accuracy Class 1.55 um Band   | 20 pm                                                      |
| Minimum Wavelength Resolution Listed     | 0.1 nm                                                     |
| Maximum Wavelength Resolution Listed     | 5 nm                                                       |
| Minimum Input Level                      | minus 92 dBm                                               |
| Maximum Input Level                      | 20 dBm                                                     |
| Maximum Dynamic Range                    | 55 dB                                                      |
| Measurement Accuracy Class               | 0.4 dB                                                     |
| Sweep Time Class                         | 0.8 s                                                      |
| Fiber Type                               | multimode and singlemode                                   |
| Connector Type Main Signal               | FC                                                         |
| Instrument Type                          | optical spectrum analyzer                                  |
| Wavelength Span                          | 550 to 1750 nm                                             |
| Level Span                               | minus 92 to plus 20 dBm                                    |
| Monochromator Class                      | high dynamic range high resolution Advantest monochromator |
| Band Emphasis                            | 1.55 um DWDM evaluation                                    |
| Use                                      | LD and optical component wavelength characteristics        |
| Series Family                            | Advantest Q838x OSA                                        |
| Calibration                              | periodic OSA wavelength and level calibration              |
| Wavelength resolution                    | Class 1.55 um Band: 10 pm                                  |

# Q8383 Specifications

| PARAMETER                                                | VALUE                   |
|----------------------------------------------------------|-------------------------|
| Advantest Q8383 Optical Spectrum Analyzer 550 to 1750 nm | Overview                |
| Key Features                                             | 550 to 1750 nm coverage |
| Technical Specifications                                 | Model: Q8383            |

# 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                                                      |
| Model                                                                                                   | Q8383                                                      |
| Form Factor                                                                                             | benchtop                                                   |
| Minimum Wavelength                                                                                      | 550 nm                                                     |
| Maximum Wavelength                                                                                      | 1750 nm                                                    |
| Wavelength Resolution Class 1.55 um Band                                                                | 10 pm                                                      |
| Wavelength Accuracy Class 1.55 um Band                                                                  | 20 pm                                                      |
| Minimum Wavelength Resolution Listed                                                                    | 0.1 nm                                                     |
| Maximum Wavelength Resolution Listed                                                                    | 5 nm                                                       |
| Minimum Input Level                                                                                     | minus 92 dBm                                               |
| Maximum Input Level                                                                                     | 20 dBm                                                     |
| Maximum Dynamic Range                                                                                   | 55 dB                                                      |
| Measurement Accuracy Class                                                                              | 0.4 dB                                                     |
| Sweep Time Class                                                                                        | 0.8 s                                                      |
| Fiber Type                                                                                              | multimode and singlemode                                   |
| Connector Type Main Signal                                                                              | FC                                                         |
| Instrument Type                                                                                         | optical spectrum analyzer                                  |
| Wavelength Span                                                                                         | 550 to 1750 nm                                             |
| Level Span                                                                                              | minus 92 to plus 20 dBm                                    |
| Monochromator Class                                                                                     | high dynamic range high resolution Advantest monochromator |
| Band Emphasis                                                                                           | 1.55 um DWDM evaluation                                    |
| Use                                                                                                     | LD and optical component wavelength characteristics        |
| Series Family                                                                                           | Advantest Q838x OSA                                        |
| Calibration                                                                                             | periodic OSA wavelength and level calibration              |
| Notes                                                                                                   |                                                            |
| From Advantest Q8383 product description (10 pm / 20 pm in 1.55 um band) and listed min/max wavelength, |                                                            |

level, dynamic range, accuracy, and sweep rows. Full resolution/accuracy tables remain on the Q8383 datasheet.

### Available from Aumictech

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

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

#### Aumictech

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NIST-traceable calibration · SAM registered ·  
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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.