



The world's most trusted OSAs

Optical Spectrum Analyzer Selection Guide



Precision Making

Bulletin OSA-02EN



Selection guide

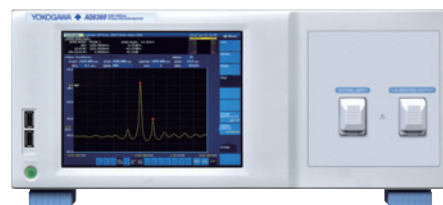
Yokogawa offers diffraction grating based optical spectrum analyzers with high-speed and high-performance that meets the measurement needs of a wide range of R&D and industrial manufacturing applications. An extensive product lineup covers a wide wavelength range from visible to mid-wavelength infrared (350 to 5500 nm). This document will help you choose the best model for your measurement needs.



AQ6380, AQ6370E, AQ6373E,
AQ6374E, AQ6375E, AQ6376E and AQ6377E



AQ6361



AQ6360

Specifications and features

Wavelength band/Feature/Model			Wavelength range (nm)	Wavelength resolution (nm)		Wavelength accuracy (nm)				
				Max.	Min.	VIS 0.6 μm	Optical comm.			Full range
VIS	High resolution	AQ6373E	350  1200	10	0.01 ^{*1} (350 to 600 nm) 0.02	±0.05				±0.2
VIS Optical comm.	Wide band	AQ6374E	350  1750	10	0.05	±0.05	±0.2	±0.05	±0.2	±0.2
Optical comm.	Top performance	AQ6380	1200  1650	2	0.005		±0.05	±0.005	±0.01	±0.05
	High performance	AQ6370E	600  1700	2	0.02		±0.1	±0.008 typ.	±0.015 typ.	±0.1
	High-speed Space-saving	AQ6361	1200  1700	2	0.03		±0.1	±0.02	±0.02	±0.1
	Cost-effective	AQ6360	1200  1650	2	0.1		±0.1	±0.02	±0.04	±0.1
SWIR	2 μm	AQ6375E	1000  2500 ^{*2}	2	0.05		±0.5	±0.05	±0.1	±0.5
MWIR	3 μm	AQ6376E	1500  3400	2	0.1			±0.5	±0.5	±0.5
	5 μm	AQ6377E	1900  5500	5	0.2					±0.5

Note: The AQ6370E and AQ6361 are high-performance models.

*1: High resolution model

*2: Wavelength extended model

Applications

Optical communications

- Emission spectrum evaluation of optical transceivers, LD chips, and LD modules
- OSNR measurement of WDM transmission signals
- Optical Amplifier testing
- Wavelength-dependent loss characterization of optical fiber

VIS

- Characterization of light sources used in biomedical and consumer products
- Color analysis of visible LED

SWIR MWIR

- Characterization of cascade lasers used in Laser Absorption Spectroscopy
- Characterization of broadband light such as optical frequency combs and supercontinuum light sources
- Spectral measurement of nonlinear lasers such as optical parametric oscillators

VIS: Visible, SWIR: Short-wavelength infrared, MWIR: Mid-wavelength infrared



Close-in dynamic range (dB)						Level sensitivity (dBm)				Applicable fiber			Purge feature	Higher-order diffracted light suppression
Resolution minimum		Resolution 0.02 nm		Resolution 0.1 nm		VIS ≤ 1 μm	Optical comm. 1.3-1.6 μm	SWIR ≤ 2.2 μm	SWIR/MWIR ≥ 2.2 μm	SM	GI	Large core		
60 (±0.5 nm)		60 (±0.5 nm)				−80 typ. (500 to 1000 nm) −60 typ. (400 to 500 nm)				<div></div>	<div></div>	<div></div>		<div></div>
60 (±1.0 nm)						−70 (400 to 900 nm)	−80			<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
45 (±0.05 nm)	60 (±0.1 nm)	55 (±0.1 nm)	65 (±0.2 nm)	55 typ. (±0.2 nm)	67 typ. (±0.4 nm)		−85			<div></div>			<div></div>	<div></div>
50 typ. (±0.1 nm)	60 typ. (±0.2 nm)	50 typ. (±0.1 nm)	60 typ. (±0.2 nm)	50 typ. (±0.2 nm)	67 typ. (±0.4 nm)	−60 (600 to 1000 nm)	−90			<div></div>	<div></div>	<div></div>		
37 (±0.1 nm)	50 (±0.2 nm)			40 (±0.2 nm)	55 (±0.4 nm)		−80			<div></div>	<div></div>	<div></div>		
40 (±0.2 nm)	55 (±0.4 nm)			40 (±0.2 nm)	55 (±0.4 nm)		−80			<div></div>	<div></div>			
45 (±0.4 nm)	55 (±0.8 nm)						−62	−67 (1500 to 1800 nm) −70 (1800 to 2200 nm)	−67 (2200 to 2400 nm)	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
45 (±1.0 nm)	55 (±2.0 nm)							−65 (1500 to 2200 nm)	−55 (2200 to 3200 nm)	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
50 typ. (±5.0 nm)								−40 typ. (1900 to 2200 nm)	−50 typ. (2200 to 2900 nm) −60 typ. (2900 to 4500 nm)	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>

● : Available

Related products

AQ6150 Series Optical Wavelength Meters

The AQ6150B and AQ6151B Optical Wavelength Meters are fast, accurate and cost-effective instruments for carrying out measurements in the telecommunications wavelength range from 900 to 1700 nm.



AQ23811A Source Measure Unit (SMU)

The AQ23811A modular SMU is ideal for measuring various semiconductor devices with low to medium currents. It can generate DC and pulses from a minimum of 50 μ s and can be expanded up to 18 channels with a 9-slot frame.



AQ2200 Series Multi-Application Test System (MATS)

The AQ2200 series is an ideal test platform for measuring and evaluating a variety of optical devices and transmission systems.

Various measurement modules can be mounted in any combination on a single frame.

Frame and module lineup:

Products	Descriptions
Frame controllers	3 slots type, 9 slots type
Light source modules	High output level stability light sources, Grid TLS
Sensor modules	High power type, Large-diameter sensor head, dual sensor type
Optical attenuator modules	Standard type, with monitor output, with built-in monitor power meter
Optical switch modules	1×2, 2×2, 1×4, 1×8, and 1×16 channels
Modules for Optical Transceiver	—



*For more information about the features and specifications of the each product, please refer to the brochure (AQ6380-01EN, AQ6370SR-20EN, AQ6361-01EN, AQ6360-01EN).

Yokogawa's Approach to Preserving the Global Environment

- Yokogawa's electrical products are developed and produced in facilities that have received ISO14001 approval.
- In order to protect the global environment, Yokogawa's electrical products are designed in accordance with Yokogawa's Environmentally Friendly Product Design Guidelines and Product Design Assessment Criteria.

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