Test&Measurement

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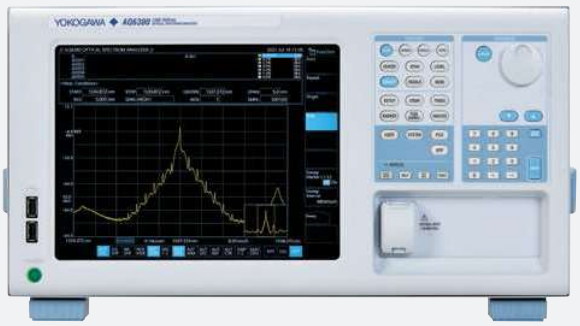

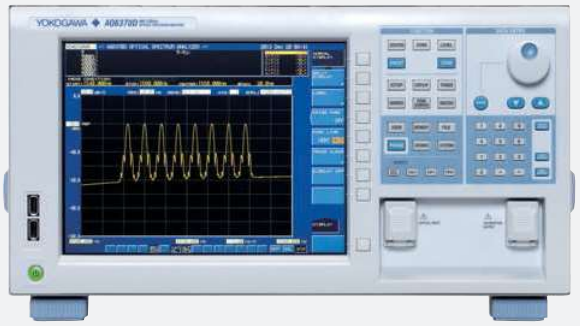

The world's most trusted OSAs

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.

AQ6375E, AQ6376E and AQ6380

AQ6370D, AQ6373B, AQ6374 and AQ6377

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
							1.31 µm	1.55 µm	1.6 µm	
VIS	High resolution	**AQ6373B**	350 – 1200	10	0.01 (400 to 470 nm) 0.02	±0.05				±0.2
VIS Optical comm.	Wide band	**AQ6374**	350 – 1750	10	0.05	±0.05	±0.2	±0.05	±0.2	±0.2
Optical comm.	High performance	**AQ6370D**	600 – 1700	2	0.02		±0.1	±0.01	±0.02	±0.1
	Highest performance	**AQ6380**	1200 – 1650	2	0.005		±0.05	±0.005	±0.01	±0.05
	High speed & Space saving	**AQ6360**	1200 – 1650	2	0.1		±0.1	±0.02	±0.04	±0.1
SWIR	2 µm	**AQ6375E**	1200 [1000] – 2400 [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	**AQ6377**	1900 – 5500	5	0.2					±0.5

*1: Purge feature for th AQ6360 are available on request. *2: The values in parentheses are for 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)				●	●	●		●
60 (±1.0 nm)						−70 (400 to 900 nm)	−80			●	●	●	●	●
45 (±0.1 nm)	58 (±0.2 nm)	45 (±0.1 nm)	58 (±0.2 nm)	50 typ. (±0.2 nm)	67 typ. (±0.4 nm)	−60 (600 to 1000 nm)	−90			●	●	●		
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			●			●	●
40 (±0.2 nm)	55 (±0.4 nm)			40 (±0.2 nm)	55 (±0.4 nm)		−80			●	●		*1	
45 (±0.4 nm)	55 (±0.8 nm)						−62	−67 (1500 to 1800 nm) −70 (1800 to 2200 nm)	−67 (2200 to 2400 nm)	●	●	●	●	●
45 (±1.0 nm)	55 (±2.0 nm)							−65 (1500 to 2200 nm)	−55 (2200 to 3200 nm)	●	●	●	●	●
50 typ. (±5.0 nm)								−40 typ. (1900 to 2200 nm)	−50 typ. (2200 to 2900 nm) −60 typ. (2900 to 4500 nm)	●	●	●	●	●

● : 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.

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, 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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https://tmi.yokogawa.com/

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