

YOKOGAWA

AQ6370C

The Yokogawa AQ6370C is a high-performance optical spectrum analyzer (OSA) designed for the 600 to 1700 nm wavelength range. Well-suited for both research and development and manufacturing environments, it is available in standard (AQ6370C-10) and high-performance (AQ6370C-20) editions. Featuring an advanced monochromator with a stray-light suppression ratio that enables a dynamic range of up to 78 dB, the AQ6370C supports both single-mode and multimode optical fibers through a unique free-space optical input.

SPECIFICATIONS

General

Interfaces	GP-IB, RS-232, Ethernet (10/100Base-T), 4 × USB (Type A)
Display	10.4-inch color LCD with SVGA (800 × 600) resolution

Physical

Power Supply	100 to 240 V AC, 50/60 Hz, maximum power consumption approx. 100 VA
Operating Temperature	5 to 35 °C
Dimensions (W×H×D)	426 × 221 × 459 mm
Weight	19.0 kg

Wavelength Specifications

Wavelength Range	600 to 1700 nm
Wavelength Accuracy (Standard Model AQ6370C-10)	±0.02 nm (1520 to 1580 nm)
Wavelength Accuracy (High-Performance Model AQ6370C-20)	±0.01 nm (1520 to 1580 nm)
Wavelength Linearity	±0.01 nm (1520 to 1580 nm) / ±0.02 nm (1580 to 1620 nm)
Wavelength Repeatability	±0.005 nm (1 min)
Wavelength Span Range	0.1 nm to 1100 nm, and 0 nm (coarse)

Optical Power and Amplitude

Dynamic Range (at ± 0.2 nm from peak)	70 dB (AQ6370C-10) / 73 dB (AQ6370C-20)
Dynamic Range (at ± 0.4 nm from peak)	78 dB typical (AQ6370C-20)
Power Measurement Range (Sensitivity)	-90 to +20 dBm
Maximum Input Power	+20 dBm
Power Level Accuracy	± 0.4 dB (at 1310/1550 nm, -20 dBm input)
Power Flatness	± 0.1 dB (1520 to 1580 nm)
Polarization Dependency (PDL)	± 0.05 dB (at 1310/1550 nm)
Level Linearity	± 0.05 dB (-50 to +10 dBm)
Optical Return Loss	30 dB or more (with flat connector)
Level Sensitivity Categories	7 user-selectable categories
Level Sensitivity (1000 to 1300 nm)	-80 dBm

Resolution and Bandwidth

Resolution Bandwidth Settings (FWHM)	0.02, 0.05, 0.1, 0.2, 0.5, 1.0, 2.0 nm
Minimum Resolution Bandwidth	0.02 nm

Measurement Speed and Sweep

Sweep Time (Minimum / 100nm Span)	0.2 s (100 nm span)
Sampling Points per Sweep	50,001 data sampling points

Optical Interfaces

Optical Input Connector Type	Free space input (supports various optical connector adapters)
Compatible Fiber Types	Single-mode (SM) and Multimode (MM) fibers

Analysis and Application Software

Number of Traces	7 individual traces
Spectral Analysis Functions	13 built-in spectral analysis functions (WDM, LED, Spectral Width, Filter, FP-LD, DFB-LD, etc.)
Trace Calculations	Calculation between traces (e.g. subtraction)
Trace Hold Modes	Max/Min hold
Macro Programming	Supported (automatic execution of program recorded via key strokes and parameter selections)
All-at-Once Trace Filing	Supported (saves all 7 traces simultaneously in one file)

External Connectivity and Control

Internal Storage Capacity	512 Mbyte (sufficient for >20,000 traces)
External Storage Compatibility	USB removable flash memory and external hard disk drives
Remote Control Command Set	SCPI compatible and AQ6317 emulation mode
Software Driver Support	LabVIEW driver available
USB Peripheral Support	USB mouse, keyboard, and storage device interfaces

Environmental and Regulatory

Calibration Interval	1 year (recommended)
Operating Humidity Range	20 to 80% RH (no condensation)
Storage Temperature Range	-10 to 50 °C
Warm-up Time	approx. 1 hour

Performance

Safe Maximum Input Power	+20 dBm (total input power)
Level Sensitivity (1300 to 1620 nm)	-90 dBm (sensitivity setting: HIGH3)
Level Sensitivity (1620 to 1700 nm)	-85 dBm (sensitivity setting: HIGH3)
Dynamic Range at ± 0.1 nm (High-Performance Model)	50 dB (at 0.02 nm resolution, high dynamic mode ON)

Inputs & Outputs

Trigger Input Terminal	BNC connector, TTL level
Trigger Output Terminal	BNC connector, TTL level
Analog Output Terminal	BNC connector, 0 to 5 V (approx.)
External Monitor Output	VGA D-Sub 15-pin (female)
Analog Output Voltage	0 to 5 V
External Display Output	VGA (D-Sub 15-pin)
GP-IB Specification	IEEE 488.1 / 488.2 compliant
Ethernet Interface	10BASE-T/100BASE-TX (RJ-45)
USB Interfaces	Type A (USB 2.0) x 4, Type B (USB 1.1) x 1

Environmental

Maximum Operating Altitude	2000 m
----------------------------	--------

Safety & Compliance

Laser Safety Class	Class 1 (IEC 60825-1:2007)
--------------------	----------------------------

Wavelength

Wavelength Display Resolution	0.001 nm
Resolution Bandwidth Accuracy	$\pm 10\%$ (0.05 to 2.0 nm settings, 1520 to 1580 nm)

Level

Level Display Resolution	0.01 dB
--------------------------	---------

Sweep / Trigger

Trigger Input Level	TTL level
Trigger Output Level	TTL level

Power

Power Consumption	150 VA or less
-------------------	----------------

TECHNOLOGY

Optical Spectrum Analyzer (Monochromator-based)

APPLICATIONS

Spectral measurements of active/passive optical components, optical transceivers, and DWDM transmission equipment

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.