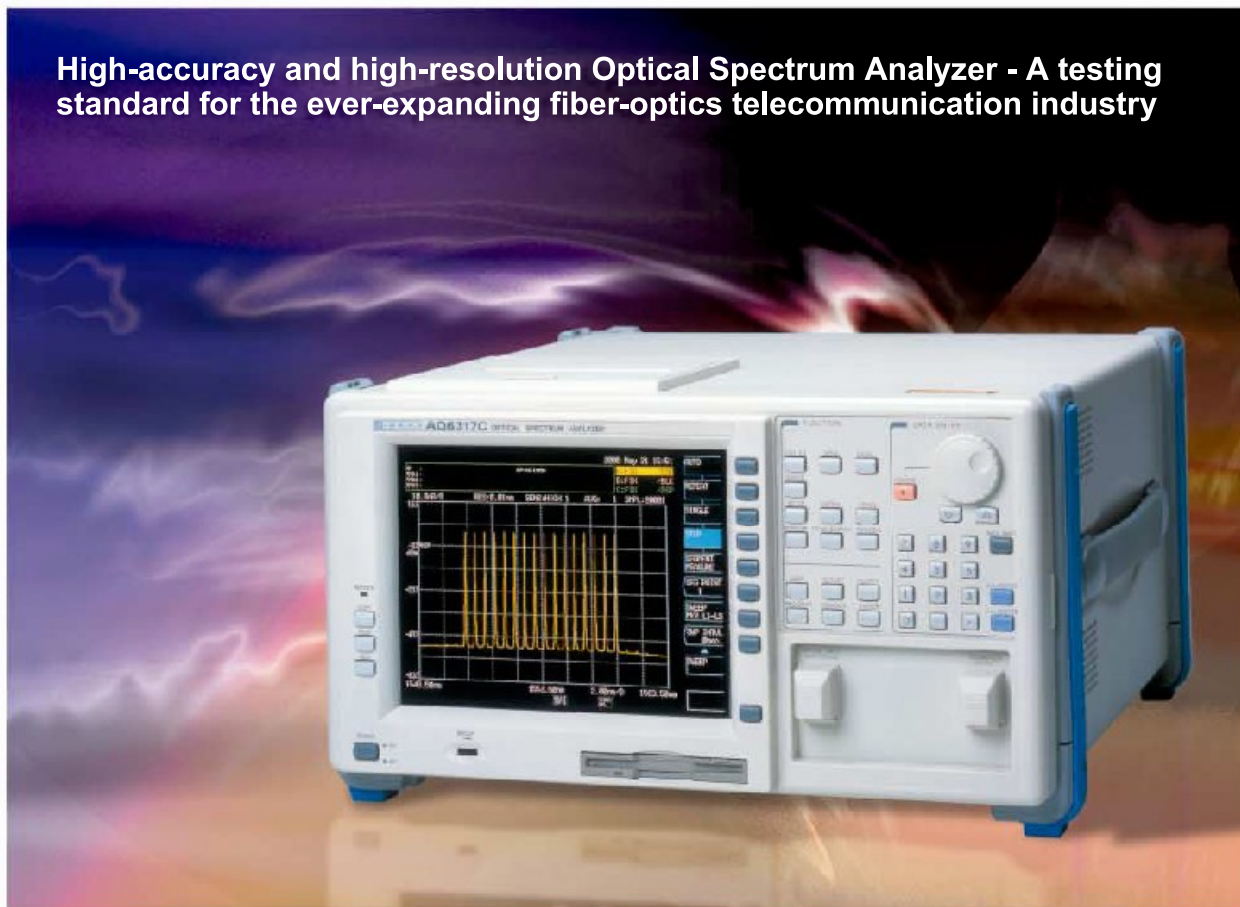


# Optical Spectrum Analyzer AQ6317C

High-accuracy and high-resolution Optical Spectrum Analyzer - A testing standard for the ever-expanding fiber-optics telecommunication industry



## General

With the growing market for giga-bit Ethernet and CWDM technologies in the Metro network systems, the wavelength band in optical communication is expanding rapidly. Meanwhile, new technology in optical amplifier such as Semiconductor amplifier, Raman amplifier and TDFA have also been introduced and deployed in these networks. Ando has foreseen this technological trend and has unveiled the latest AQ6317C Optical Spectrum Analyzer - Reference equipment for the next generation networks.

With its high accuracy in the entire wavelength range (600-1750 nm), the new AQ6317C Optical Spectrum Analyzer sets a testing standard for measuring complex optical communication networks. Its fast measurement speed and comprehensive analysis functions will allow maximum yield for R&D, for quality control process and for production environment.

## Features

- **High wavelength accuracy**  
+/-0.1 nm wavelength accuracy (full range: 600-1750 nm)  
+/-0.02 to +/-0.04 nm at 1450 to 1620 nm (S+C+L band)
- **High wavelength linearity**  
+/-0.01 nm (C-band) and +/-0.02 nm (S and L-band)
- **High wavelength resolution**  
Maximum wavelength resolution: 15 pm.
- **Wide dynamic range**  
Over 70 dB at peak +/-0.4 nm  
Over 60 dB at peak +/-0.2 nm.
- **Faster measurement speed**  
Two times faster than the previous model at highest sensitivity mode.
- **Variety of functions**  
New functions are available such as template check function for "Go/No Go" testing, external Gas cell calibration function in addition to WDM analysis function and programming function. Also in NF analysis of optical amplifier, curve fit function and SSE suppress function are added for the most demanding multichannel NF analysis.

# Optical Spectrum Analyzer AQ6317C

## Specifications

Applicable fibers	SM, GI (50/125 μm)	
Measurement wavelength range 1)	600 to 1750 nm	
Wavelength accuracy 1,3)	±0.02 nm (1520 to 1580 nm, after calibration with built-in reference light source) ±0.04 nm (1450 to 1520 nm, 1580 to 1620 nm, after calibration with built-in reference light source) ±0.1 nm (600 to 1750 nm, after calibration with built-in reference light source)	
Wavelength linearity 1,3)	±0.01 nm (1520 to 1580 nm) ±0.02 nm (1450 to 1520 nm, 1580 to 1620 nm)	
Wavelength repeatability 1,3)	±0.005 nm (1 min)	
Wavelength resolution 1,3)	Max. resolution: 0.015 nm or better (1520 to 1620 nm, resolution: 0.01 nm) Resolution setting: 0.01, 0.02, 0.05, 0.1, 0.2, 0.5, 1.0, 2.0 nm	
Resolution accuracy 1,3)	±5% (1300 to 1650 nm, resolution: 0.05 nm or higher, resolution correction: ON)	
Measurement level range 2,3)	-90 to +20 dBm (1200 to 1650 nm, SENS: HIGH 3) -80 to +20 dBm (1000 to 1200 nm, SENS: HIGH 3) -60 to +20 dBm (600 to 1000 nm, SENS: HIGH 3)	
Level accuracy 2,3,4)	±0.3 dB (1310/1550 nm, input level: -30 dBm, SENS: HIGH 1 to 3)	
Level linearity 2,3)	±0.05 dB (input: -50 to +10 dBm, SENS: HIGH 1 to 3)	
Level flatness 2,3)	±0.1 dB (1520 to 1580 nm), ±0.2 dB (1450 to 1520 nm, 1580 to 1620 nm)	
Polarization dependency 2,3)	±0.05 dB (1550/1600 nm), ±0.05 dB typ. (1310 nm)	
Dynamic range 3)	60 dB (1523 nm, peak ±0.2 nm, resolution: 0.01 nm) 70 dB (1523 nm, peak ±0.4 nm, resolution: 0.01 nm) 45 dB (1523 nm, peak ±0.2 nm, resolution: 0.1 nm)	
Sweep time	Approx. 500 ms (SPAN: 100 nm or less, SENS: NORM HOLD, AVR: 1, SMPL: 501, resolution correction: OFF) Approx. 0.5 min (SPAN: 100 nm or less, SENS: HIGH 2, AVR: 1, SMPL: 501, no signal)	
Functions	Automatic measurement	Program function (20 programs, 200 steps), Long-term measurement function
	Setting of measuring conditions	Span setting: 0 to 1200 nm Measuring sensitivity setting: NORMAL HOLD/AUTO, MID, HIGH 1/2/3 Number of averaging setting: 1 to 1000 times Sample number setting: 11 to 20001, AUTO Automatic setting function of measuring conditions  Sweep-between-marker function 0 nm sweep function Pulse light measurement function Air/vacuum wavelength measurement function TLS synchronized measurement function Template function

### Notes

- 1) Horizontal scale: wavelength display mode
- 2) Vertical scale: absolute power display mode, resolution: 0.05 nm or higher, resolution correction: OFF
- 3) At 15 to 30°C, with 10/125 μm single mode fiber, after 2 hours of warm-up, after optical alignment
- 4) When 10/125 μm single mode fiber (B1.1 type defined on IEC60793-2, PC polished, mode field diameter: 9.5 μm, NA: 0.104 to 0.107) is used.
- 5) Except protector

Functions	Trace display	Level scale setting: 0.1 to 10 dB/div, linear Simultaneous display of 3 independent traces Max. /min. hold display Roll averaging display Calculation-between-traces display Normalized display Curve-fit display 3D display Split display Power density display, % display, dB/km display Frequency display of horizontal axis scale
	Data analysis	WDM waveform analysis (wavelength/Level/ SNR list display), optical fiber amplifier analysis (gain/NF, Single/Multi channels) PMD analysis, Optical filter analysis, DFB-LD analysis, FP-LD analysis, LED analysis, SMSR analysis  Peak search, bottom search, spectral width search, notch width search, delta marker (max. 256), line marker (analysis range specification)  Graph display of long-term measurement result
	Others	Self-wavelength calibration function (using built-in reference light source)
Memory	Built-in FDD	3.5-inch 2HD
	Internal memory	32 traces, 20 programs
	File format	trace file, program file, measuring condition file, text file (trace, analysis data, etc.), graphics file (BMP, TIFF)
Data output	Printer	Built-in high speed thermal printer
Interface	Remote control	GP-IB (2 ports) TLS control interfaces (TTL)
	Others	Sweep trigger input (TTL) Sample enable input (TTL) Sample trigger input (TTL) Analog output (0 to 5 V) Video output (VGA)
Display		9.4-inch color LCD (resolution: 640 x 480 dots)
Optical connector		FC (Standard)
Power requirement		AC 100 to 120 V (±10%) / 200 to 240 V (±10%), 50/60 Hz, approx. 200 VA, Overvoltage category: II
Environmental conditions		Operating temperature: 5 to 40°C Storage temperature: -10 to +50°C Humidity: 80 % RH or less (no condensation) Contamination level: 2 Maximum altitude: 2000 m
Dimensions and mass 5)		Approx. 425 (W) x 222 (H) x 450 (D) mm Approx. 30 kg
Accessories		Power cord: 1, printer paper roll: 2, floppy disc: 2, instruction manual: 1

Specifications are subject to change without notice.

## Ando Electric Co., Ltd.

3-484, Tsukagoshi, Saiwai-ku, Kawasaki, Kanagawa, 212-8519 Japan Phone: +81(0)44 549 7300 Fax: +81(0)44 549 7450

## Ando Corporation

20420 Century Boulevard Germantown, MD 20874, U.S.A. Phone: +1 301 916 0409 Fax: +1 301 916 1498  
SAN JOSE OFFICE: 2021 N. Capitol Avenue, San Jose, CA 95132, U.S.A. Phone: +1 408 941 0100 Fax: +1 408 941 0103

## Ando Europe B.V.

"Vijverdam", Dalsteindreef 57, 1112XC Diemen, The Netherlands Phone: +31(0)20 698 1441 Fax: +31(0)20 699 8938  
NIEDERLASSUNG DEUTSCHLAND: Nymphenburger Straße 119 B, D-80636 München, Germany Phone: +49(0)89 143 8150 Fax: +49(0)89 143 81555

## Ando Electric Singapore Pte. Ltd.

19 Kim Keat Road #05-03, Fu Tsu Building, Singapore 328804 Phone: +65 251 1391 Fax: +65 251 1987

## Ando Shanghai Trading Co., Ltd.

Room 202, Citic Pent-OX Business Building, No.1081 Pudong Ave. Shanghai, China 200135 Phone: +86(0)21 5821 6240 Fax: +86(0)21 5821 9254

Please visit our website for more information: [www.ando.com](http://www.ando.com)

KT-1955-1 YGA230  
Printed in Japan