



Test & Measurement

## Precision Making

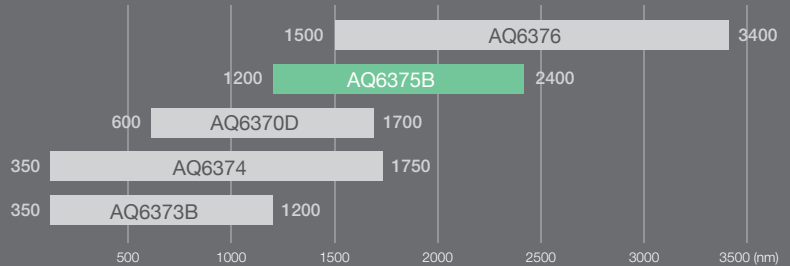


Optical Spectrum Analyser - AQ6375B

The AQ6375B is the first bench-top optical spectrum analyser covering the long wavelengths over 2  $\mu\text{m}$ .

One stand-alone instrument is able to take measurements faster and with greater accuracy than conventional systems, with full analysis conveniently built-in.

## AQ6375B The OSA for applications in exNIR + SWIR regions



### World class optical performance and unique characteristics

#### Built-in air purge system

To reduce drastically the influence of water vapour absorptions on the measurement.

#### 6 wavelength resolution settings: from 2 nm down to 50 pm

To enable the user to choose the best value according to the characteristics of the device or system under test.

#### 7 level sensitivity settings: from -50 dBm down to -70 dBm

To set the instrument according to the test application and measurement speed requirements. Taking advantage of the very high sensitivity, low power optical signals can be measured accurately and quickly, without any need to use averaging over many measurements.

#### A very wide measurement power range: 90 dB

The high quality photodetector and the smart design of the gain circuitry enable the AQ6375B to measure both very weak and very strong signals with great accuracy, without being damaged.

#### High close-in dynamic range: 55 dB

Thanks to the sharp spectral characteristics of the AQ6375B monochromator, signals in close proximity can be clearly separated and accurately measured.

#### High wavelength accuracy: up to $\pm 0.05$ nm

Easily maintained thanks to the built-in calibration function and wavelength reference source.

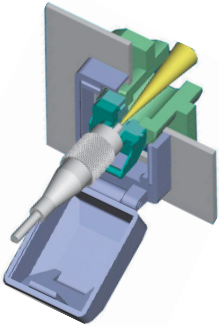
#### Fast measurement: only 0.5 sec for standard 100 nm span

With sensitivity set to NORM\_AUTO (-60 dBm).

#### Horizontal scale also in Wave Number ( $\text{cm}^{-1}$ )

In addition to the scales in wavelength (nm) and frequency (THz), on the AQ6375B, the user can select the Wave Number measurement unit which is commonly used in non-telecom applications of photonic studies.

## Free space optical input

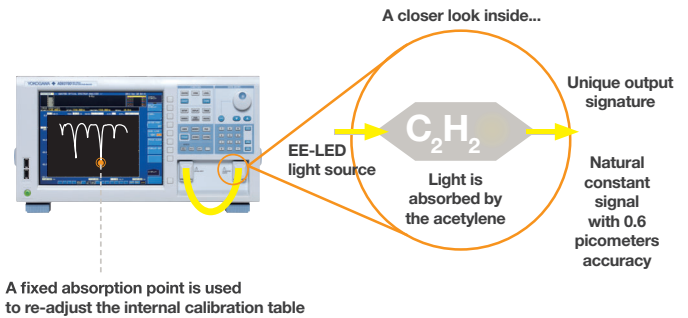


The optical input structure designed for the AQ6370 Series is the most effective to guarantee high coupling efficiency, measurements repeatability and zero maintenance.

The free space optical input is, in fact:

- Dual purpose:* accepts both SM and MM fibres without the high insertion loss due to the mismatch between MM and SM fibres
- Versatile:* accepts both /PC and /APC connectors
- Worry-free:* no internal fibre can be scratched by inaccurate coupling of fibres
- Maintenance-free:* no internal fibre can get dirty

## Built-in calibration source



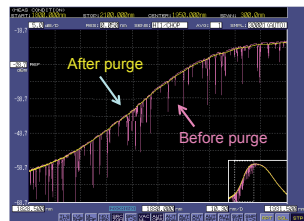
Vibration, shock and changes in ambient temperature affect the measurement accuracy of high precision instruments. We want our OSAs to be able to always deliver the precise measurements they were designed for, therefore our instruments are equipped with a light source for calibration. The calibration process is fully automatic and only takes 2 minutes to complete. It includes:

- The Optical Alignment function, which automatically aligns the optical path in the monochromator to assure the level accuracy;
- The Wavelength Calibration function, which automatically calibrates the spectrum analyser with the reference source to ensure the wavelength accuracy.

## Built-in air purge system



Purge gas ports (input and output)



Effect of purging (dry-air, 1 hour) water vapor absorptions around 1900 nm

By continuously supplying an air-purging gas, such as nitrogen, to the monochromator through the connectors on the back panel, the AQ6375B can drastically reduce the influence of water vapour absorptions, thus providing more reliable and accurate measurements than even before.

## 12 Built-in analysis functions

- WDM (OSNR)
- Optical Fibre Amplifier
- DFB-LD
- FP-LD (VCSEL)
- LED
- Spectral Width
- Notch Width
- SMSR
- PMD
- Optical Power
- Optical Filter
- Go/No-Go Judgment

## The AQ6370 OSA Series delivers:

**Reliability** – The most trusted OSAs in the world thanks to their unmatched measurement accuracy, robustness and proven quality.

**Performance** – Best in class, state of the art and high-precision instruments that keep pace with the ever changing and fast evolving optical technology.

**Expertise** – For more than 30 years our R&D and product specialist teams have been listening to the needs of OSA users to continuously provide them with innovative and effective solutions for their measuring challenges.