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Yokogawa Test & Measurement Corporation Releases the AQ6150B and AQ6151B Optical Wavelength Meters

–Coverage of different wavelength ranges and high-speed measurement for improved measurement efficiency–

Yokogawa Test & Measurement Corporation announces that it has developed the AQ6150B and AQ6151B optical wavelength meters and will release them on November 30. Thanks to their superior speed and accuracy, these new AQ6150 series instruments offer greatly improved measurement efficiency.

Development Background

The rapid spread of the Internet, smartphones, terrestrial digital broadcasting, and other communications services and devices requires the transmission of vast volumes of data at ever-increasing speeds. This is accelerating the expansion of core networks (backbone) and metro networks (local area) as well as the construction of data centers. In line with these trends, the production of optical transmission systems and various optical devices that make up these systems is being ramped up, spurring the market demand for precise yet efficient optical wavelength meters. In addition, fixed wavelength optical sources are being replaced by tunable optical sources as they become more compact and affordable. Therefore, precise optical wavelength meters that can accurately measure signals of various wavelengths are required.

The AQ6150B and AQ6151B optical wavelength meters are successors to the AQ6150 and the AQ6151, which were released to the market in 2012. With their top-class speed and accuracy, these new optical wavelength meters will enable a great improvement in measurement efficiency.

Product Features

1. Top-class speed and accuracy

The AQ6150B and AQ6151B are both among the fastest optical wavelength meters on the market today. They are able to measure, analyze, and transfer data in under 0.2 seconds, which is two times faster than the AQ6150 and the AQ6151. This will greatly improve throughput in applications such as the manufacturing of

tunable optical sources, where several hundred measurements must be made for the adjustment and inspection of each device. The AQ6150B achieves a wavelength accuracy of ± 0.7 ppm, the AQ6151B ± 0.2 ppm. Both models are able to simultaneously measure up to 1,024 different wavelengths, best in the industry.

2. Wavelength ranges suited for a variety of needs

For both the AQ6150B and AQ6151B, there is a standard range type (1270 to 1650 nm), an extended range type (1200 to 1700 nm) for use in CWDM^{*1} transmission device manufacturing, and a wide range type (900 to 1700 nm) for use in the manufacturing of pump laser diodes for optical amplification. This lineup meets a variety of customer needs.

3. Inexpensive single-wavelength type / reduced lifecycle cost

The automatic inspection of laser wafers and laser semiconductor chips, which emit light with a single wavelength, is done at high speeds using a single wavelength. For such applications, the AQ6150B and AQ6151B also have a single-wavelength type that costs less than the multi-wavelength types. The total cost of ownership for all types of the two models is reduced thanks to the use of a long-life built-in reference optical source^{*2} and the provision of a low-cost replacement service.

Specifications

	AQ6150B			AQ6151B		
Type	Standard	Extended	Wide	Standard	Extended	Wide
Wavelength range	1270 to 1650 nm	1200 to 1700 nm	900 to 1700 nm	1270 to 1650 nm	1200 to 1700 nm	900 to 1700 nm
Wavelength accuracy	± 0.7 ppm			± 0.2 ppm		
Maximum number of wavelengths	Multi-wavelength type: 1,024 Single wavelength type: 1					
Measurement time	Less than 0.2 seconds (single measurement)					

Major Target Markets

- Manufacturers of optical devices and modules such as laser diodes and optical transceivers
- Manufacturers of optical transmission devices

Applications

- Measurement of wavelengths for optical devices such as DFB lasers^{*3}, tunable lasers, and Fabry-Perot

lasers; measurement of wavelengths for optical transceivers

- Measurement of output wavelengths for WDM transmission equipment

*1 A method of combining multiple signals on laser beams at various wavelengths for transmission along fiber optic cables

*2 Emits light with a very stable optical wavelength and is used as a reference for measurements performed using an optical wavelength meter. A source is usually replaced every few years, although this will vary depending on use.

*3 Semiconductor lasers with a long coherence length that are suitable for long-distance transmissions

About Yokogawa

Founded in 1915, Yokogawa engages in broad-ranging activities in the areas of measurement, control, and information. The industrial automation business provides vital products, services, and solutions to a diverse range of process industries including oil, chemicals, natural gas, power, iron and steel, and pulp and paper. With the life innovation business the company aims to radically improve productivity across the pharmaceutical and food industry value chains. The test & measurement, aviation, and other businesses continue to provide essential instruments and equipment with industry-leading precision and reliability. Yokogawa co-innovates with its customers through a global network of 113 companies spanning 61 countries, generating US\$3.8 billion in sales in FY2017. For more information, please visit www.yokogawa.com.

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