

AQ7280 OTDR Optical Time Domain Reflectometer

The optical time domain reflectometer (OTDR) injects light pulses into one end of an optical fiber, analyzes the intensity of their reflection along a time axis, and thus measures the distance and loss in the optical fiber and detects the locations of connections and the loss at connections. This device is widely used by telecommunications carriers and communications construction companies for construction and maintenance of fiber-optic lines.

The AQ7280 is a high-end OTDR provided with a modular structure allowing one OTDR unit and one module containing an optical power meter and visible light source (OPM/VLS module) to be mounted on the mainframe, and provided with a touchscreen for multi-touch operations.

MAJOR FEATURES

■ Intuitive and excellent operability

The AQ7280 is equipped with a best-in-class 8.4-inch capacitive touchscreen. This touchscreen supports multi-touch input allowing users to reposition and resize objects on the screen by touching multiple points simultaneously, offering intuitive operation like information devices such as a smartphone.

An operation key using a rotary encoder is also incorporated; this was highly evaluated in the preceding model. Users can use either the touchscreen or operation key depending on their working conditions.

■ A wealth of models for various measurement needs

One OTDR unit and one OPM/VLS module can be selectively mounted on the mainframe including the operation panel, allowing flexible configuration.

Because users can replace the OTDR unit and OPM/VLS module by themselves, they can flexibly respond to changes in test procedure and new measurement needs associated with evolution in optical communication technology.

Nine models are available as the OTDR unit, including a model achieving industry-leading dynamic range of 50 dB for long-distance measurements, and a model that can measure up to four different wavelengths. As for the OPM/VLS module, five models are available.

■ Best-in-class performance and new functions

Owing to the original power-saving design and large-capacity lithium-ion batteries, the AQ7280 can operate for 15 hours with no AC power supply under usual usage, and 10-hour continuous measurement is possible. All day, users don't need to worry about running out of the battery power even at sites where no AC power is supplied.

The AQ7280 starts within 10 seconds after its power being turned on, and so users can start measurement just after arriving at sites.

Best-in-class resolution of minimum 2 cm offers accurate measurement as never before.



Measurement conditions, measured waves, measurement results, etc. can be selected from among waveforms currently displayed and measurement data recorded to output a report in PDF.

Measurement results such as failure points along an optical fiber network can be displayed with an icon for easy understanding. The AQ7280 also has a function to monitor problems with low reproducibility rarely found in fiber-optic lines.

MAJOR SPECIFICATIONS

Mainframe

Display	8.4-inch color TFT LCD Multi-touch capacitive touchscreen
Dimensions	287 mm (W) × 210 mm (H) × 80 mm (D)
Mass	Approx. 2.2 kg
Battery runtime	15 hours (Telcordia GR-196-CORE Issue 2) 10 hours (continuous measurement)

OTDR unit

Models	Wavelength (nm)	Dynamic range (typ.)
AQ7282A	1310/1550	38/36 dB
AQ7283A	1310/1550	42/40 dB
AQ7284A	1310/1550	46/45 dB
AQ7285A	1310/1550	50/50 dB
AQ7283F	1310/1550,1650	42/40, 40 dB
AQ7283H	1310/1550/1625	42/40/39 dB
AQ7284H	1310/1550/1625	46/45/44 dB
AQ7283K	1310/1490/1550/1625	42/38/40/40 dB
AQ7282M	850/1300	25/27 dB

OPM/VLS module

Models	Power range (dBm)	Uncertainty	Optical output wavelength (nm)	Optical output power (dBm)
AQ2780	+10 to -70	±5%	—	—
AQ2781	+27 to -50	±5%	—	—
AQ2780V	+10 to -70	±5%	650 ± 20	-3 or more
AQ2781V	+27 to -50	±5%	650 ± 20	-3 or more
AQ4780	—	—	650 ± 20	-3 or more

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