

Common Specifications

Horizontal Axis Parameters

Sampling resolution	5 cm, 10 cm, 20 cm, 50 cm, 1 m, 2 m, 4 m, 8 m, 16 m, 32 m
Readout resolution	1 cm (Min.)
Number of sampled data	Up to 50,000 points
Group refractive index	1.30000 to 1.79999 (in 0.00001 steps)
Unit of distance	km, kf or miles
Distance measurement accuracy	Sum of the following 3 errors Offset error: ±1 m Scale error: Measurement distance × 2 × 10 ⁻⁵ Sampling error: ±1 sampling resolution

Vertical Axis Parameters

Vertical axis scale	0.2 dB/div, 0.5 dB/div, 1 dB/div, 2 dB/div, 5 dB/div, 7.5 dB/div
Readout resolution	0.001 dB (Min.)
Loss measurement accuracy*	±0.05 dB/dB

*When the measuring loss is 1 dB or less, the accuracy is within ±0.05 dB.

OTDR Measurement Function

Distance measurement	Displays up to eight digits of the relative one-way direction between two arbitrary points on the trace.
Loss measurement	Displays one-way loss in steps of 0.001 dB to a maximum of 5 digits. Displays the one-way loss, loss per unit length, and splice loss between any arbitrary points on the trace.
Return loss measurement	Measures return loss and total return loss of a fiber cable or between two arbitrary points on the trace.

OTDR Analysis Functions

Analysis functions	Multi trace analysis, 2 way trace analysis, differential trace analysis, section analysis
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Internal Memory

Memory capacity	1000 waveforms or more Can store measured waveforms and measurement conditions
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Display

Display	8.4-inch color TFT LCD, semi-transparent
Total number of displayed pixels*	640 (horizontal) × 480 (vertical) pixels

*The LCD may contain some pixels that are always ON or OFF (0.002% or fewer of all displayed pixels including RGB), but this is not indicative of a general malfunction.

External Interface

USB	USB1.1 Type A and Type B, one each Type A: For external memory or external printer Type B: For connecting to an external PC for remote control or access to the OTDR's internal memory.
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File Formats

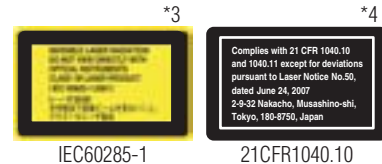
File formats	Read: SOR, TRD, TRB, SET (AQ7270/75) Write: SOR (Telcordia), SET, CSV, BMP, JPG, PNG
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General Specifications

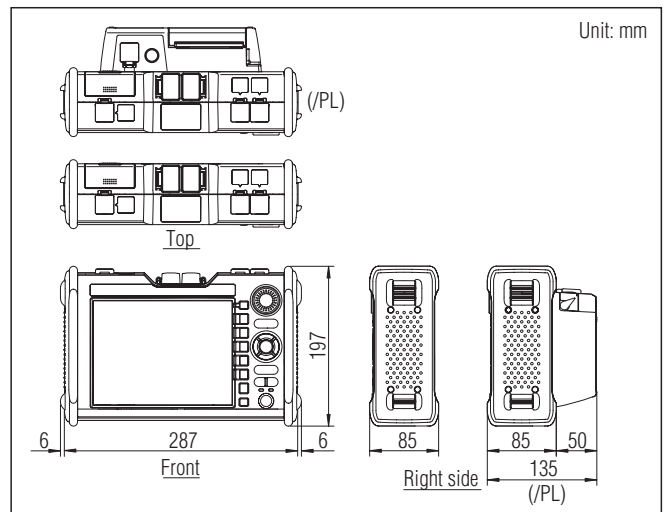
Operating environment	Temperature 0 to 45°C (0 to 35°C when charging the battery) Humidity 85% RH or less (no condensation)
Storage temperature	-20 to 60°C
Battery	Operation time 6 hours *1 Recharge time 5 hours *2
Rated power voltage	100 to 240 VAC
Rated supply frequency	50 to 60 Hz
Power consumption	Max 70 W (when charging battery and printing with optional printer)
Dimensions	(W) 287 × (H) 197 × (D) 85 mm (excluding projections or options)
Weight	Approx. 2.8 kg (excluding options)
Laser safety standards	Class 1 M (IEC 60825-1:1993 + A2:2001)*3 21CFR1040.10*4
Safety standard	EN61010-1
Emission	EN61326 Class A
Immunity	EN61326 Annex A

*1 Measurement for 30 seconds in every 10 minutes without any options and in power save mode (Auto Power OFF 1 minute)

*2: Ambient temperature of 23°C, power OFF



External Dimensions



Specifications by Model

Model	735032	735033	735037*12	735040
Wavelength	1310/1550±25 nm	1310/1550±25 nm	1310/1550±25 nm 1650±5 nm *1, ±10 nm *2	850/1300±30nm
Applicable fiber	SM (ITU-T G.652)			GI (50/125, 62.5/125 μm)
Distance range	500 m, 1 km, 2 km, 5 km, 10 km, 20 km, 50 km, 100 km, 200 km, 300 km, 400 km			500 m, 1 km, 2 km, 5 km, 10 km, 20 km, 50 km, 100 km
Pulse width *3	3 ns, 10 ns, 20 ns, 50 ns, 100 ns, 200 ns, 500 ns, 1 μs, 2 μs, 5 μs, 10 μs, 20 μs			10 ns, 20 ns, 50 ns, 100 ns, 200 ns, 500 ns, 1 μs, 2 μs, 5 μs *7
Dynamic range	34/32 dB *4	40/38 dB *4	40/38/30 dB *4	40/38 dB *4
Event dead zone *11	0.8m *5	0.8m *5	0.8m *5	0.8m *5
Attenuation dead zone *6,11	7/8 m (typ)	7/8 m (typ)	7/8/12 m (typ)	7/8 m (typ)
				7/10 m (typ) *10

*1 At a point -20 dB from the pulse light output peak value (measured 30 minutes or more after power-on at an ambient temperature of 23°C)

*2 At a point -60 dB from the pulse light output peak value (measured 30 minutes or more after power-on at an ambient temperature of 23°C)

*3 Pulse width setting range depends on the distance range.

*4 SNR: 1, pulse width: 20 μs, distance range: 200 km, sampling resolution: 8 m, measurement time: 3 minutes. When built-in dummy fiber and angled-PC connector are used, each dynamic range decreases by 0.5 dB.

*5 Pulse width of 3 ns, return loss of 45 dB or more at a point 1.5 dB below the peak value (not saturated)

*6 Pulse width of 10 ns and return loss of 45 dB or more at a point where the backscatter level is within ±0.5 dB of the

normal value

*7 Pulse width of 2 or 5 μs when the measured wavelength is 1300 nm.

*8 SNR = 1 at pulse width of 500 ns (850 nm) and 1 μs (1300 nm), sampling resolution of 8 m, and measurement time of 3 minutes

*9 Pulse width of 10 ns and return loss of 45 dB or more at a point 1.5 dB below the peak value (not saturated)

*10 GI (62.5/125 μm) is measured.

*11 At group reflective index 1.5

*12 Pulse light output power at 1650 nm, 15 dBm or less.

Note: Specifications without any special remarks are assured at 23°C±2°C

Factory Installed Optional Specifications

Stabilized Light Source Function (/SLS option)

Optical connector	Shared with the OTDR (at the same port)
Center wavelength	OTDR's center wavelengths
Light output level	-5 dBm or more (at 23°C±2°C)
Output level stability (Constant temperature for 5 minutes)	±0.1 dB (±0.15 dB for 1650 nm)
Modulation frequency	CW, 270 Hz

* Unavailable for the 735040

Built-in Printer/LAN Function (/PL option)

Printing method	Thermal line-dot
Dot density	576 dots/line
Paper width	80 mm
Operating environment	Temperature 0 to 40°C Humidity 10 to 80% RH (no condensation)
Storage temperature	-20 to 60°C
LAN function	10BASE-T/100BASE-TX (RJ-45) x1

Optical Fiber Identification Light Source Function (/LS option)

Optical connector	Shared with the OTDR (1310/1550 nm port only)
Center wavelength	OTDR's center wavelengths
Light output level	-5 dBm or more (at 23°C±2°C)
Output level time stability	±1 dB (for 5 minutes at constant temperature)
Modulation frequency	CW, 270 Hz

* Only available for the 735040 SM

Model and Suffix Code

AQ7275 OTDR

Model	Option availability							Remark
	Optical power monitor	Stabilized light source	Identification light source	Visible light source	Printer/LAN *1	Dummy fiber	Shoulder belt	
735032	√	√	—	√	√	√	√	1 port, SM1310/1550 nm
735033	√	√	—	√	√	√	√	1 port, SM1310/1550 nm, high DR
735037	√	√	—	—	√	√	√	2 ports, SM1310/1550/1650 nm
735040	√ *2	—	√ *2	—	√	—	√	2 ports, MM850/1300 nm, SM1310/1550 nm

*1: The large capacity battery cannot be used in conjunction with the built-in printer/LAN function.

*2: MMF is not supported.

√: Available.

	Suffix Codes	Description
Optical Connector	-SCC	SC type connector
	-FCC	FC type connector
	-NON	No universal adapter
	-USC	Universal adapter (SC)
	-UFC	Universal adapter (FC)
	-ASC	Angled-PC connector (SC) *1
Language	-HE	English
	-HC	Chinese/English
	-HK	Korean/English
	-HR	Russian/English
Power Cord	-D	UL/CSA standard
	-F	VDE standard
	-R	AS standard
	-Q	BS/Singapore standard
	-H	GB standard, Complied with CCC
	-P	Korean standard
Options	/PM	Optical power monitor
	/SLS	Stabilized light source
	/LS	Optical fiber identification light source
	/VLS	Visible light source
	/PL	Built-in printer, LAN
	/DF	Dummy fiber (SMF)
	/SB	Shoulder belt

*1: An angled-PC connector cannot be used in the MM port of the 735040. -USC needs to be attached.

Example: 735033-USC-HE-D/PM/SLS

AQ7275 OTDR 1310/1550nm, high dynamic range, with SC universal adapter, English version, with a UL/CSA standard power cord, with optical power monitor function and with stabilized light source function.

Standard Accessories

Power cord, AC adapter, battery pack, hand belt, user's manual (CD-ROM), operation guide

Visible Light Source (/VLS option)

Optical connector	Port is not shared with the OTDR
Center wavelength	650 nm ± 20 nm
Light output level	Peak value -3 dBm or more
Modulation frequency	2 Hz
Laser safety standard	Class 3R

* Unavailable for the 735037 and 735040



Power Monitor Function (/PM option)

Optical connector	Shared with the OTDR (at the same port)
Measurement range*1	-50 to -5 dBm
Measurement accuracy*2	± 0.5 dB

*1 CW light, wavelength 1310 nm, absolute maximum input level 0 dBm (1 mW)

*2 CW light, wavelength 1310 nm, -10 dBm for input, 23°C±2°C

Dummy Fiber (/DF option)

Optical fiber	SM (ITU-T G.652)
Optical fiber length	Approx. 100 m

* Dynamic range declines by 0.5 dB as a result of the addition of the fiber option.

* Unavailable for the 735040

Accessories (Sold Separately)

Name	Model	Specifications
Soft carrying case	739860	
Battery pack	739880	
Universal adapter (SC)	SU2005A-SCC	SC type
Universal adapter (FC)	SU2005A-FCC	FC type
Printer roll paper	A90102P	80 mm x 25 m
Shoulder belt	B8070CY	
AC adapter	739870-D	UL/CSA standard
	739870-F	VDE standard
	739870-R	AS standard
	739870-Q	BS/Singapore standard
	739870-H	GB standard, Complied with CCC
	739870-P	Korean standard
External large capacity battery	—	The large capacity battery cannot be used in conjunction with the built-in printer/LAN function

Application Software

Model	Suffix Codes	Specifications
735070		AQ7932 Emulation Software (Ver3.0 or later)
	-EN	English