

M700 Compact Single-mode OTDR



Features

- 38 / 36 dB dynamic range @ 1310 / 1550 nm
- Integrated Optical Power Meter (OPM) and Visual Fault Locator (VFL, 650 nm)
- LSA Measurements and manual events in Expert mode
- Pass/Fail Event and Link Thresholds settings
- OTDR results saved as industry standard (GR-196) .SOR files
- OPM stores results and displays up to three wavelengths simultaneously
- Large, high bright, sunlight readable, transreflective touchscreen
- Tool-free, switchable adapters (SC/FC/LC)
- Integrated fibre launch ring holder
- 2 USB host ports
- USB drive and Windows® compatible software included

The Noyes M700 from Fujikura Europe Ltd is a compact, full featured, single-mode OTDR that includes an integrated Visual Fault Locator (VFL), an Optical Power Meter (OPM) displaying up to three wavelengths simultaneously, and a large transreflective touch screen display suitable for both indoor and outdoor operation.

The M700 OTDR supports Real-Time, Full-Auto, and Expert (manual) modes, precision event analysis, dual-wavelength testing, rich file naming, and an intuitive job set-up functionality. In addition to OTDR event analysis, pass/fail acceptance values, and marginal warning, specific values can be set to alert the test operator of failing or marginal events. Using one of the Least Squares Approximation (LSA) loss methods, events may be added or deleted manually.

Thousands of OTDR and OPM test results can be stored internally or on the supplied USB drive, and are transferable via a USB cable or drive to a computer for viewing, printing and analyzing with supplied Windows® compatible software. Saved OPM loss values for a cable in one or two directions can be displayed in a table on the M700 for evaluation and comparison.

With short dead zones, a dynamic range of 38 dB, and greater than 8-hour battery life during continuous testing, the M700 is perfect for testing optical fibres in service provider metro areas.

Ordering Information

MODEL	DESCRIPTION	TEST PORT ADAPTERS
M700-11-0901PR	1310/1550 nm single-mode OTDR	SC, FC, and LC *

* ST test port adapter is available (order separately).
 Standard accessories include are USB Flash drive, PC software for OTDR trace analysis and OPM Loss reporting, AC adapter, user guide, soft carry case, 1.25 and 2.5mm universal adapters for VFL and OPM, SC, FC and LC adapters for the OTDR (ST available, purchased separately).

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Specifications

OTDR SPECIFICATIONS	
Emitter Type	Laser
Safety Class	Class 1 FDA 21 CFR 1040.0 & 1040.11
Center Wavelengths	1310/1550 nm
Dynamic Range (SNR = 1)	38 / 36 dB (1310/1550 nm)
Event Dead Zone ¹	0.9 m
Attenuation Dead Zone ²	5.5 m
Pulse Widths	5, 10, 30, 100, 300 ns, 1, 3, 10, 20 µs
Range Settings	250 m to 256 km
Distance Sampling Points	max. 64,000 points
Data Point Spacing	0.125 m (range 2 km) 0.25 m (range = 4 km) 0.5 m (range = 8 km) Range/# of data points (range 16 km)
Group Index of Refraction (GIR)	1.4000 to 1.6000
Distance Uncertainty (m) ³	± (1 + 0.0005% x distance + data point spacing)
Trace File Format	Bellcore GR-196 Version 1.1
Trace File Storage Media	Internal flash memory USB flash drive Downloadable from OTDR directly to PC
Trace File Storage Capacity	Internal 1000 fibres
Data Transfer to PC	USB
OTDR Modes	Full Auto, Real Time, Expert
Tool Free adapters	Modular cleanable SC/ST/FC/LC

1. Typical distance between the two points 1.5 dB down each side of a reflective spike caused by a -45 dB event using 5 ns pulse width.
2. Typical distance from event location to point where trace is within 0.5 dB of backscatter caused by a -45 dB event using 5 ns pulse width.
3. Does not include GIR uncertainty.

VISUAL FAULT LOCATOR SPECIFICATIONS	
Emitter Type	Laser
Safety Class	Class II FDA 21 CFR 1040.10 & 1040.11; IEC 825-1:1993, EN60825-1:1994
Wavelength	650 nm
Output Power (nominal)	0.8 mw

POWER METER SPECIFICATIONS	
Calibrated Wavelengths	850, 980, 1310, 1490, 1550, 1625 nm (displays up to 3 simultaneously)
Detector Type	Filtered InGaAs detector
Measurement Range (dBm)	+26 to -50 dBm
Accuracy ⁴	±0.25
Measurement Units	dB, dBm, mW
Wavelength ID ⁵	Yes
Set Reference	Yes
Data Storage	Yes
Tone Detection	270 Hz, 330 Hz, 1 kHz, 2 kHz

GENERAL SPECIFICATIONS	
Size	27.4 x 19.3 x 7.1 cm (10.8 x 7.6 x 2.8 in)
Weight	2.3 kg (5 lb)
Operating Temperature	-10 to +50°C, 0 to 90% RH (non-condensing)
Storage Temperature	-20 to +60°C, 0 to 90% RH (non-condensing)
Power	Rechargeable Li-Ion or AC power adapter
Battery Life ⁶	> 8 hours continuous OTDR testing
Recharge Time ⁷	4 hours
Display	6.5 inch (16.51 cm), colour, transfective

4. Accuracy measured at 25°C and -10 dBm per N.I.S.T. standards.
5. Automatic wavelength identification and switching when used with Noyes Wave ID Series Light Sources.
6. Typical, depending on display brightness.
7. Typical, from fully discharged to fully charged state, unit may be operating.
All specifications are subject to change.
All specifications valid at 25°C unless otherwise specified.
External battery charger available.

OTDR Fibre Accessories

MODEL NUMBER	DESCRIPTION
FR1-SM-1KM-SC-FC	Fibre Ring SM SC/FC 1000m
FR1-SM-1KM-SC-LC	Fibre Ring SM SC/LC 1000m
FR1-SM-1KM-ASC-SC	Fibre Ring SM SC-APC/SC-UPC 1000m
8500-20-0900	Wet Cleaning Kit for SC/FC/ST/LC Connectors