

MAX-945-NAV-M2042

Compliant with MIL-STD-2042



FASTEST

Navy approved optical loss test set (OLTS) and optical return loss meter (ORLM).

SPEC SHEET

KEY FEATURES

Unmatched FasTesT™ performances: 100 % automated bidirectional test at two wavelengths under 5 seconds

On-board assistant and diagnosis to eliminate reference errors and negative loss

Bright, 7-inch high resolution touchscreen display—the biggest in the market

Optical return loss (ORL) meter

Compliant with Standard MIL-STD-2042

62.5 um multimode port with specific CPR/HOMP launch condition for MIL-STD-2042

Singlemode port with single-ended ORL functionality

Available optional automated fiber inspection probe (FIP) for end face connector inspection and analysis

RELATED PRODUCTS



Fiber inspector probe
FIP-400B (WiFi or USB)

EXFO

All specifications valid at 23 °C ± 1 °C and 1550 nm, on batteries and after 15 minutes of warm up, unless otherwise specified.

POWER METER SPECIFICATIONS ^a

Detector type	InGaAs
Uncertainty ^b	± 5 % (+5 dBm to -50 dBm)
Measurement range (dBm)	5 to -75
Calibrated wavelengths (nm)	850, 1270, 1290, 1300, 1310, 1330, 1350, 1370, 1383, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610, 1625, 1650
Linearity (dB) ^c	< ± 0.05 (+5 dBm to -60 dBm)
Tone detection (Hz)	270/330/1000/2000

SOURCE SPECIFICATIONS ^a

	Multimode	Singlemode
Wavelength (nm)	850 ± 30 1300 ± 30	1310 ± 25 1550 ± 25
Spectral width (nm) ^d	< 170	< 5 nm
Output power (dBm)	> -21 ^f	> -10
Output power stability (dB) ^e	4 hrs : ≤ ± 0.1 15 min : ≤ ± 0.025	4 hrs : ≤ ± 0.1 dB 15 min : ≤ ± 0.05 dB
Output power vs temperature (dB)	≤ ± 0.25 ^g ≤ ± 0.5 ^h	≤ ± 0.25 ^g ≤ ± 0.75 ^h
Launch conditions CPR (coupled power ratio) (dB) ^{f,i}	CPR 850 nm: 24 to 29.5 CPR 1300 nm: 20.5 to 22.5	n/a
HOMP (high order mode power) (dB) ^{f,i}	HOMP 850 nm and 1300 nm 0.3 to 0.8	n/a
Modulation (Hz)	270/330/1000/2000	270/330/1000/2000

FASTEST™ SPECIFICATIONS ^a

Testing speed ^k	FasTest™ Simplex : 3 seconds (2 wavelengths, bidirectional, automated, IL + fiber Length)
Loss range (dB) ^l	Multimode: 20 Singlemode simplex: 45 Singlemode duplex: 50
Length measurement range (km) ^m	Multimode: 20 Singlemode: 200
Length measurement uncertainty ^k	Duplex: ±(0.5 m + 0.5 % x length) Simplex: ±(1 m + 0.5 % x length)
ORL measurement range (dB) ^{k, n}	50
ORL measurement uncertainty (dB) ^{k, n, p}	±1

ORL METER ^{a, n, o}

ORL range (dB)	50
ORL accuracy (dB)	< ±0.5
Resolution (dB)	0.01

a. Unless otherwise specified, all specifications are valid at 1550nm, 23 °C ± 1 °C, on batteries and after 15-minutes of warm-up.

b. Uncertainty valid at calibration condition. Except 1650nm.

c. Nulling required.

d. Singlemode RMS and multimode FWHM.

e. Stability is expressed as ± half the difference between maximum and minimum values measured during the period.

f. Nominal 62.5/125 µm fiber used on multimode port.

g. Valid for temperature variations of ± 10 °C in the range of 17 °C to 40 °C.

h. Valid for temperature variations of ± 25 °C in the range of 0 °C to 40 °C.

i. For CPR measurement, used singlemode cable with 5.2 µm MFD at 850 and singlemode cable with 9.2 µm MFD at 1310 nm wavelength.

j. HOMP: Optical power loss caused by five wraps around 20 mm Mandrel.

k. Typical.

l. Typical value, at 850 nm for multimode and 1550 nm for singlemode.

m. At 1300 nm for multimode and 1550 nm for singlemode.

n. ORL measurement available on singlemode wavelengths only.

o. After manual referencing. Interface connection with ORL > 50 dB.

p. Up to 45 dB.

ENVIRONMENTAL SPECIFICATIONS

Temperature	Operating	–10 °C to 50 °C (14 °F to 122 °F)
	Storage	–30 °C to 70 °C (–22 °F to 158 °F) ^a
Relative humidity		0 % to 95 % non-condensing

GENERAL SPECIFICATIONS

Display	7-in (178-mm) outdoor-enhanced touchscreen, 800 x 480 TFT
Standard connector type	FC, SC, ST, LC (other connector options available)
Size (H x W x D)	166 mm x 200 mm x 68 mm (6 ⁹ / ₁₆ in x 7 ⁷ / ₈ in x 2 ³ / ₄ in)
Weight (with battery)	1.5 kg (3.3 lb)
Interfaces	Two USB 2.0 ports RJ45 LAN 10/100 Mbit/s Optional WiFi/Bluetooth
Storage	6 GB internal memory (150 000 test results, typical)
Battery ^b	Rechargeable lithium-polymer battery 12 hours of operation
Power supply	Power supply AC/DC adapter, input 100-240 VAC, 50-60 Hz

LASER SAFETY



a. –20 °C to 60 °C (–4 °F to 140 °F) with the battery pack.

b. Typical.