

KI 7740C Series Bi- directional Loss Test Set

The KI 7740C series is a very fast and easy bi-directional loss tester. Average fibre optic link loss is automatically displayed in real time on both instruments, at multiple wavelengths, via a single fibre.

Featuring high speed and high accuracy, results can either be stored in internal memory, or inserted directly into a customized acceptance report on a PC, with one mouse click.

Detector & calibration options cover a wide range of connector types and fibre types from +27 to -70 dBm with 2% Traceable Accuracy.

It is a robust, reliable and easy to use instrument for high performance single mode or multimode fibre optic cable testing.

Applications

- Single mode & multimode cable
- General testing & maintenance
- Standards compliant cable certification



Features & Benefits

- Autotest compatibility with other instruments
- Simple to use, reliable, rugged & field proven
- Patented low cost Interchangeable connectors
- Excellent optical power stability on source
- Excellent re-connection repeatability with high measurement confidence
- Mode controlled multimode sources
- Multimode sources come with 50 & 62.5 μm fibre mandrel wraps
- Long battery life & large memory capacity
- Instant Pass / Fail indication & flexible real-time PC reporting software
- Sunlight readable display and backlight
- 3 year calibration cycle
- 3 ~ 7 year warranty
- Made in Australia

Active | Passive | Test Equipment | Tooling | Cable | Fibre Management

For further information:
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This is a very fast and easy bi-directional loss test Set. From start of test to acceptance report takes one mouse click and 4 seconds per wavelength.

The real-time loss display on both instruments means that cable certification and rectification use the same procedure, which simplifies training and operating procedures.

Autotest is available on both Test and Meter ports and is compatible with all other Autotest instruments.

The instrument provides instant accurate and traceable measurements, with a high stability light source.

All emitters feature excellent repeatability and stability. Re-connection repeatability is < 0.1 dB, resulting in exceptional measurement accuracy.

The optical connector adapter is easily changed as required, and is protected with a captive dust cap. This instrument meets the general requirements of MIL PRF 28800F class 2.

The long battery life eliminates the requirement for rechargeable batteries and time consuming re-charging procedures.

High availability is the result of >190 hour battery life, patented interchangeable optical connectors for both of the ports, 3 year calibration cycle and superior reliability.

The instrument is also a stand-alone traceable power meter, multi-light source and optical tone generator.

850 / 1300 nm LED sources are ideal for multimode testing. They meet the Encircled Flux (EF) standard compliance, and provide the most consistent and reliable testing results.

The new InGaAs detector has wider wavelength response range from 600 ~ 1700. It provides good response for all common wavelengths. A Si detector is cost effective for 850 nm and industrial applications.

Flexible KITS™ PC software is a real-time measurement, Pass/Fail assessment and reporting solution. Easily customized for any language and reporting format, it also supports memory download, data logging, label printing, legacy instruments and enterprise level data management.

Technical Specifications (Power Meter)

Re- sponse wave- length (nm)	Damage level (dBm)	Calibration wavelength (nm)	Power range (dBm)	Tone & au- totest min (dBm)	Mid range linearity (dB) ¹	Calibration accuracy (%) ²	Polarization insensitivity (dB)	Total uncer- tainty (dB) ^{3,5}	Wavelength sensitivity ± 30 nm ⁵ dB
InGaAs detector									
600 ~ 1700	+15	780, 820, 850, 980 1270, 1290, 1300, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610, 1625, 1650	+5 ~ -60 +5 ~ -70	-45 -50	0.02	1 % (0.06 dB)	< 0.005	0.3	0.03
H5(InGaAs) detector									
800 ~ 1700	+25	820, 850, 980 1270, 1290, 1300, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610, 1625, 1650	+15 ~ -50 +15 ~ -60	-35 -40	0.02	1 % (0.06 dB)	< 0.005	0.3	0.03
H3B(InGaAs) detector									
800 ~ 1700	+30 ⁴	820, 850, 980 1270, 1290, 1300, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610, 1625, 1650	+27 ~ -40 +27 ~ -50	-25 -30	0.02	1 % (0.06 dB)	< 0.005	0.35	0.03
Ge detector									
600 ~ 1650	+25	780, 820, 850, 980 1270, 1290, 1300, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610, 1625, 1650	+15 ~ -60 +15 ~ -70	-45 -50	0.04	1 % (0.06 dB)	< 0.005	0.5	0.03
Si detector									
600 ~ 1100	+5	635, 650, 660, 780, 850, 980	+0 ~ -70	-50	0.02	1 % (0.06 dB)	< 0.005	0.3	0.03

Note 1: Mid range linearity excludes top 5 dB and bottom 10 dB of range.

Note 2: Calibration condition: non coherent light, -35±5 dBm, 23±1°C, ±1 nm, 10±3 nm FWHM, PC ceramic connector, 100 um fibre.

Note 3: Includes contributions of: varying optical connector types, calibration uncertainty, full temperature, dynamic range and fibre core diameter up to 200 um.

Note 4: H3B can sustain the damage level for 2 minutes.

Note 5: At calibration wavelengths in bold type.

Technical Specifications (Light Source)

	1310/1550 nm Laser	Other lasers	LED	Comments
KI 7340C Series				
2 wavelength source power	-7 dBm	-7 dBm	-26 ⁵ dBm to 62.5um	± 1 dB for laser
3 or 4 wavelength source power	-10 dBm	-10 dBm	-41 dBm to 10 um	± 3 dB for LED
Short term stability (dB)	0.04 ⁶	0.06 ⁶	0.01	For 15 min, typ ± Δ 2°C, after warm up, ORL < -25 dB
Stability over temp (dB)	0.6	0.6	0.35	Typical
Wavelength tolerance (nm)	20	6.5		At 25°C
Wavelength width (nm)	3	<1		FWHM, typical
Mode controlled source			Yes	Mode controlled ⁷
Wavelength (nm/°C)	0.4	0.1	0.4	Typical
Reconnection repeatability (dB)	0.1	0.05		95% confidence
Laser output adjustment	Adjustable over 6 dB in 0.01 dB steps			
Modulation	270Hz, 1, 2 KHz	270Hz, 1, 2 KHz	270Hz, 1, 2 KHz	± 2%

Note 5: For 62.5um fibre

Note 6: For ORL < -25 dB

Note 7: Multimode source mode distribution @ 50/125 is compliant with the following standards: IEC 61280-4-1 (ED.2), TIA/EIA 526-14B, ISO/IEC 14763-3 (ED 2) and TIA TSB-178

General Specifications

Battery life	Power Meter: 360 hrs / Laser: 190 hrs (autotest)
Size WxHxD (mm)	190 x 130 x 70
Weight unit/shipping (kg)	0.5 / 1.5
Temperature	Operating: -15 ~ 55 °C / Storage: -25 ~ 70 °C
Case material / Physical resistance	Polycarbonate, 1m drop tested
Keypad	Hidden, for advanced functions
PC Interface	USB Type B
Memory	1270/874/667 bi-directional 2/3/4 wavelength loss and ORL test results
Power	2 alkaline C cells (7.6 A/Hr); External DC with 2.5mm +ve pin or via USB port. Selectable auto-off, low battery indicator, backlit display
Tone detection	150 ~ 9900 Hz ± 1 %
Calibration cycle / meter res.	3 years / 0.01 dB
Pass / fail	Insertion & return loss pass/fail criteria can be set for all wavelengths
Max / min	Recording feature included for stability testing

Ordering Information

Description	Part number
P/N with Optical Return Loss	
Instrument, LTS-2W 1310-1550-1625 nm, APC, InGaAs	KI77410C-INGAAS-APC
Instrument, LTS-2W 1310-1550 nm, InGaAs	KI7742C-INGAAS
Instrument, LTS-2W 1310-1550 nm, APC, InGaAs	KI7742C-INGAAS-APC
Instrument, LTS-2W 850-1300 nm, Ge	KI7744C-Ge
Instrument, LTS-2W 1310-1625nm, APC, InGaAs	KI7745C-INGAAS-APC*

* Please enquire for other wavelength combinations, high power measurement and large area power meter detector options.

Standard Accessories

Description	Quantity
SC Connector adapter	2
LC Connector adapter	2
ST Connector adapter	2
Operation manual & quick reference guide	1
C cell batteries & AA-to-C size battery converter	2
Calibration certificate	1
Carry pouch, carry strap & leather protective holster	1
50 & 62.5 µm fibre mandrel wraps for multimode sources	1
KITS™ recording /reporting software & USB A/B cable	1

* Please enquire for non-standard connector adapters, carry cases and AC power packs.

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