

KI 7340C Series Bi- directional Loss Test Set with ORL

The KI 7340C series is the industry's fastest and easiest bi-directional loss tester. Average fibre optic link loss and ORL each end is automatically displayed in real time on both instruments, at multiple wavelengths, via a single fibre.

Featuring zero warm up, 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, fibre types and CWDM wavelengths from +27 to -70 dBm with 1% 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
- Optical Power testing
- Optical Loss testing and reporting
- Optical return loss measurement
- Standards compliant cable certification



Features & Benefits

- Bi-directional testing offers very high productivity
- Reliable, rugged and field proven design
- Zero warm up & high accuracy
- Fully featured ORL testing
- Autotest compatibility with other instruments
- Mode controlled multimode sources
- Multimode sources come with 50 & 62.5 μm fibre mandrel wraps
- 3 ~ 7 year warranty
- 3 year calibration cycle
- Interchangeable connectors
- Long battery life and large memory capacity
- Flexible real-time PC software provides instant Pass / Fail indication
- Up to 4 LED or laser sources
- Made in Australia



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For further information:
www.fibreoptic.com.au
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This is the industry fastest and easiest 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 and ORL 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.

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

The instrument is also a standalone traceable power meter, multi-light source and Optical Return Loss Tester.

The ORL Zero function compensates for residual reflections,

and provides extended measurement range with improved linearity.

The ORL User Calibration Mode compensates for stray losses in a test set-up, which improves overall accuracy.

Multimode LED sources feature standards compliant beam geometry & modal distribution across the fibre core, results in greatly improved measurement accuracy.

The new InGaAs detectors have wider wavelength response range from 600 ~ 1700 nm. It provides good response for all common wavelengths.

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 & autotest min (dBm)	Mid range linearity (dB) ¹	Calibration accuracy (%) ²	Polarization insensitivity (dB)	Total uncertainty (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 dBm to 62.5 μ m	\pm 1 dB for laser
3 or 4 wavelength source power	-10 dBm	-10 dBm	-29 dBm to 50 μ m -41 dBm to 10 μ m	\pm 3 dB for LED
Short term stability (dB)	0.03 ⁵	0.05 ⁵	0.01	15 min, max, no warm up, \pm 3°C
Stability over temp (dB)	0.2	0.2	0.35	Max, over temperature
Wavelength tolerance (nm)	20	6.5		At 25°C
Wavelength width (nm)	3	<1		FWHM, typical
Mode controlled source			Yes	Mode controlled ⁶
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	\pm 2%

Note 5: For ORL < -25 dB.

Note 6: Multimode source mode distribution @ 50/125 is compliant with the following standards: IEC 61280-4-1 (Ed.1.0), TIA/EIA 526-14A and TIA TSB-178.

Technical Specifications (ORL)

	1 or 2 Wavelength Laser	3 or 4 Wavelength Laser	LED
KI 7340C Series			
Range ⁷	0 ~ 65 dB	0 ~ 60 dB	0 ~ 40 dB (62.5 μ m fibre) 0 ~ 37 dB (50 μ m fibre)
Port Isolation ⁸	Standard: >30 dB Optional: >50 dB	Standard: >30 dB Optional: >50 dB	> 22 dB
ORL accuracy	0 ~ 50 dB: 0.5 dB 50 ~ 65 dB: 1 dB after zero offset	0 ~ 45 dB: 0.5 dB 45 ~ 60 dB: 1 dB after zero offset	0 ~ 30 dB: 0.5 dB 30 ~ 45 dB: 1 dB after zero offset
Wavelengths available	See source options		

Note 7: After a zero offset, range will be 10 dB better than the connector or other residual ORL. So PC connectors have reduced range.

Note 8: Port Isolation is the passive return loss isolation of an ORL test port (with the instrument turned off). This is not relevant for manual ORL testing, when only one active ORL meter is connected. However in Autotest, the ORL range is limited to the port isolation value when the link attenuation is small. If the standard 30 dB port isolation is inadequate, order the 50 dB port isolation built-in option -ISO50, e.g. KI 73416C-InGaAs-ISO50. In any test situation, the Autotest ORL range limit (in dB) will be: port isolation (dB) + 2 x link loss (dB), up to the instrument specification.

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	1269/874/667 bi-directional 2/3/4 wavelength loss and ORL test results
Power	2 Alkaline AA cells Or 2 x NiMH AA cells, user selectable charging; Ext power input via micro USB; Selectable auto-off, low battery indicator, backlit display
Tone detection	150 ~ 9900 Hz \pm 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

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Ordering Information

Description	Part number
P/N with Optical Return Loss	
Instrument, LTS-2W ORL 1310-1550 nm, InGaAs	KI7343C-InGaAs*
Instrument, LTS-2W ORL 1310-1550 nm, APC, InGaAs	KI7343C-InGaAs-APC*
Instrument, LTS-2W ORL 850-1300 nm LED, 62.5 µm, APC, Ge	KI7344C-Ge-APC*
Instrument, LTS-2W ORL 850/1300 nm LED, 50 µm, APC, Ge	KI7344C-GE-APC-50u*
Instrument, LTS-2W ORL 850 nm LED, APC, Si	KI73411C-Si-APC*
Instrument, LTS-2W ORL, 850 nm LED, 50 µm APC, Si	KI73411C-Si-APC-50u*
Instrument, LTS-2W ORL 1310-1490-1550 nm, InGaAs	KI7347C-InGaAs*
Instrument, LTS-2W ORL 1310-1490-1550 nm, APC, InGaAs	KI7347C-InGaAs-APC*
Instrument, LTS-2W ORL 1310-1550-1625 nm, APC, InGaAs	KI73410C-InGaAs-APC*
Instrument, LTS-2W ORL 1310-1490-1550-1625 nm, APC, InGaAs	KI73416C-InGaAs-APC*
P/N without Optical Return Loss (ORL)	
Instrument, LTS-2W 1310-1625nm, APC, InGaAs	KI7345nC-InGaAs-APC*
Instrument, LTS-2W 1310-1550-1625 nm, APC, InGaAs	KI73410nC-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
SC/PC Terminator to check ORL reading	1
SC/APC Terminator to check ORL reading	1
PC-to-APC Test lead to check ORL reading	1
KITS™ recording /reporting software & USB A/B cable	1
Carry pouch, carry strap & leather protective holster	1
C cell batteries & AA-to-C size battery converter	2
Operation manual & quick reference guide	1
Calibration certificate including: Power meter, light source, two-way detector & ORL	1

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

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