

KI 7340C SERIES

PREMIUM TWO WAY OPTICAL LOSS TEST SET
WITH OPTICAL RETURN LOSS (ORL)



OPTICAL COMMUNICATIONS TEST APPLICATIONS

- Attenuation testing
- System power testing
- ORL testing
- Continuity testing



Revision 22

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

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, fiber 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 fiber optic cable testing.

FEATURES

- Very high productivity
- Reliable, rugged & field proven
- Zero warm up & high accuracy
- Full feature ORL testing
- Autotest compatibility with other instruments
- Mode controlled multimode sources
- Multimode sources come with 50 & 62.5 μ m fiber mandrel wraps
- 3 ~ 7 year warranty
- 3 year calibration cycle
- Interchangeable connectors
- Long battery life
- Large memory
- Flexible real-time PC software
- Instant Pass / Fail indication
- Up to 4 LED or laser sources
- Compact & light weight
- Made in Australia

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 fiber 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.

POWER METER SPECIFICATIONS

Response λ Nm	Damage level dBm	Calibration λ nm	Power range dBm	Tone & Autotest Min dBm	Mid range linearity ¹ dB	Calibration Accuracy ² %	Polarization Sensitivity dB	Total Uncertainty ³ dB	λ 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									
350 ~ 1100	+5	635, 650, 660, 780, 850, 980	+0 ~ -70	-50	0.02	1 % (0.06 dB)	< 0.005	0.3	0.03
					typical		typical	max	typical

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 μm fiber.

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

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

Note 5: At calibration wavelengths in bold type.



LIGHT SOURCE SPECIFICATIONS

Parameters	1310/1550 nm laser	Other lasers	LED	Comments
2 λ source power	-7 dBm	-7 dBm	-26 dBm to 62.5 μ m,	\pm 1 dB for Laser
3 or 4 λ 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, Δ 3°C
Stability over temperature, dB	0.2	0.2	0.35	Max, over temperature
λ tolerance, nm	20	6.5	N/A	At 25 °C
λ width, nm	3	< 1	N/A	FWHM, typical
Mode Controlled Source	N/A	N/A	Yes	Mode controlled ⁶
λ 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	270 Hz, 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.

ORL SPECIFICATIONS

Parameters	Laser		LED
	1 or 2 λ	3 or 4 λ	
Range ⁷	0 ~ 65 dB	0 ~ 60 dB	0 ~ 40 dB (for 62.5 μ m fiber) 0 ~ 37 dB (for 50 μ m fiber)
Port isolation ⁸	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
Resolution	0 ~ 50 dB: 0.01 dB 50 ~ 65 dB: 0.1 dB	0 ~ 45 dB: 0.01 dB 45 ~ 60 dB: 0.1 dB	0 ~ 30 dB: 0.01 dB 30 ~ 45 dB: 0.1 dB
λ 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

Parameters	Values
Battery life	360 hrs Power Meter / 190 hrs laser in Autotest
Size	190 x 130 x 70 mm, 7.5 x 5.1 x 2.8"
Weight	500 gm, 1.1 lb. Shipping 1.5 Kg, 3.3 lb
Temperature	-15 to 55 °C (Operating) / -25 to 70 °C (Storage)
Hidden keypad	For setting advanced functions
Case	Polycarbonate, 1 metre drop tested on concrete
PC interface	USB Type B
Memory	1269/874/667 bi-directional 2 λ /3 λ /4 λ 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 - 9999 Hz \pm 1 %
Pass/Fail	Insertion & Return loss pass/fail criteria can be set for all λ
Max / min	Recording feature for stability testing
Power meter resolution	0.01 dB

ORDERING INFORMATION

Description	P/N	Description	P/N
P/N with Optical Return Loss (ORL)			
Instrument, LTS-2W ORL 1310-1550 nm, InGaAs	KI7343C-InGaAs*	Instrument, LTS-2W ORL 1310-1490-1550 nm, InGaAs	KI7347C-InGaAs*
Instrument, LTS -2W ORL 1310-1550 nm, APC, InGaAs	KI7343C-InGaAs-APC*	Instrument, LTS-2W ORL 1310-1490-1550 nm, APC, InGaAs	KI7347C-InGaAs-APC*
Instrument, LTS-2W ORL 850-1300 nm LED, 62.5 um, APC, Ge	KI7344C-Ge-APC*	Instrument, LTS-2W ORL 1310-1550-1625 nm, APC, InGaAs	KI73410C-InGaAs-APC*
Instrument, LTS -2W ORL 850/1300 nm LED, 50 um, APC, Ge	KI7344C-GE-APC-50u*		
Instrument, LTS-2W ORL 850 nm LED, APC, Si	KI73411C-Si-APC*	Instrument, LTS-2W ORL 1310-1490-1550-1625 nm, APC, InGaAs	KI73416C-InGaAs-APC*
Instrument, LTS-2W ORL, 850 nm LED, 50 um APC, Si	KI73411C-Si-APC-50u*		
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	Qty	Description	Qty
SC connector adaptor (OPT046)	2	KITS™ recording/reporting software & USB A/B cable	1 each
LC connector adaptor (OPT076)	2	Carry Pouch, carry strap & leather protective holster	1 each
ST connector adaptor (OPT040)	2	C cell batteries & AA-to-C size battery converter (OPT101)	2 each
SC PC Terminator to check ORL reading (OPT703)	1	Operation manual & quick reference guide	1 each
SC APC Terminator to check ORL reading (OPT704)	1	Calibration certificates including: Power Meter, Light Source, Two-way detector & ORL	1 each
PC-to-APC Test Lead to check ORL reading (OPT705)	1		

OPTIONAL INTERCHANGEABLE CONNECTOR ADAPTORS

This instrument is supplied with metal-free sleeve optical interchangeable connector adaptors. The source ferrule type is fixed and customer specified as either PC or APC. The power meter is for both PC & APC. Green is associated with APC. You can order any number of connector adaptors. Order quantity two of each type.

Description	P/N	Description	P/N	Description	P/N	Description	P/N
FC	OPT051	E2000/LSH, green	OPT060G OPT060	LC	OPT076	2.5mm universal	OPT081
ST	OPT040			MU	OPT080	SMA 905/906	OPT082
D4	OPT055	E2000/LSH		LSA / DIN47256	OPT071		

The power meter works with both PC and APC connectors.

OPTIONAL ACCESSORIES

Description	P/N
Option, Carry Case for 2 Instruments	OPT153
Option, Carry Case includes Cletop-style cleaner & Cleaning Sticks	OPT154A
Option, KI7000 Series Power Pack IEC 100-240V 2.5 mm Plug	OPT103B

Australian and international patents, technical data is subject to change without notice as part of our program of continuous improvements. Class 1 Laser/LED product, complies IEC60825-1 and 21CFR1040.10

AUTHORISED DEALER



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