KI 2300 / KI 2700 SERIES

HAND HELD LOSS TEST METER

OPTICAL COMMUNICATIONS TEST APPLICATIONS

- Single mode & multimode cable
- Optical Power testing
- Optical Loss testing and reporting
- Optical continuity & tone testing
- Standards compliant cable certification

Revision 13

The KI 2300 / 2700 series Optical Loss Test Set combines an Optical Power Meter & Light Source with many useful features. It is a single direction loss test set which measures and displays loss at multiple wavelengths. Bi-directional testing is supported by PC reporting software.

Robust, versatile and easy to use, the KI2700 series general purpose instrument can also incorporate VisiTester, which conveniently mixes a VFL laser with the test signal, making high fiber count testing much easier.

Alternatively the KI2300 series provides a Zero Warm-Up Source for ultimate test accuracy and speed of deployment.

FEATURES

- Simple to use, versatile & rugged
- Interchangeable connectors with dust cap / tilt bail
- Over 25 genuine calibration wavelengths
- LCD is large, clear, sunlight readable & backlit
- Long battery life, external power / charger via USB
- Memory with text, timestamp & USB key file dump
- Simultaneous 3 λ loss display with Autotest source
- Flexible real-time PC reporting software
- Continuity test tone with 12 fiber Multi-Fiber ID
- Up to 6 mixed LED, Laser & VFL sources
- Zero warm up & ultra stable KI 2300 series
- Encircled Flux compliant multimode sources
- Multimode sources supplied with mandrel wraps
- 3 ~ 7 Year warranty
- 3 year calibration cycle
- Made in Australia

KINGFISHER INTERNATIONAL

CE ISO 9001

kingfisherfiber.com

The KI 2300 / 2700 Loss Test Sets are fast and easy to use single directional loss testers which integrate of a power meter and up to 6 light sources in a single automated unit.

The practical interchangeable optical connectors are dust & drop protected and very simple to swap over or clean. SC adaptors are supplied, with others available including small form factor LC styles. The metal free adaptors avoid contamination of connectors in high power systems.

Autotest provides fast & easy multi λ (wavelength) loss testing, with up to 3 λ displayed simultaneously, along with the source nominal power level and λ, with either local or remote referencing.

Flexible instrument power options include a choice of batteries, with a jumper selectable battery charger. External power is via micro USB.

The instruments meet MIL PRF 28800F class 2 general requirements.

The Power Meter measures absolute/relative power and test tones. It displays mW, µW, nW, dB, dBm to 0.01 dB resolution, with no range changing delays. A separate reference for each λ is stored & displayed. The tight Total Uncertainty specification covers all power levels, temperatures, connectors and fibers, without user dark current offset.

The multi-Fiber ID feature tests common test tones, and can also positively identify 1 of 12 test tones from multiple test sources. This can speed up continuity / polarity testing.

Loss test results can be stored in the large memory, along with a text-input cable name and timestamp, and then dumped onto a USB memory key, providing future-proof data handling.

Alternatively, live readings can be clicked directly onto a customer report using our proven KITS™ customizable Excel-based reporting software. Reports can be easily customized for any terminology, language or format. A one-button file dump only requires Windows OS.

Please enquire for non-standard power meter configurations such as high power detectors, large area detectors, special connectors, wavelength selective detectors, special calibrations etc

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 dB[3,5]	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	*+10 ~ -60* +10 ~ -70	*-45* -50	0.02	1 % (0.06 dB)	< 0.005	0.3	0.03
Ge detector									
600 ~ 1650	+25	*635, 650, 660, 780, 820,* 1590, *1610, 1625, 1650* **850, 980, 1270, 1290, 1300, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490**, 1510, 1530, 1550, 1570	*+15 ~ -50* +15 ~ -60	*-40* -50	0.04	1 % (0.06 dB)	< 0.005	0.5	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 5: At calibration wavelengths in bold type.

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

Up to 6 assorted LED or laser sources can be specified per instrument, making this a versatile Loss Test Set for mixed multimode / single mode fiber testing.

Laser options compliant with CWDM standards cover typical cable qualification for O, E, S, C, & L bands, including the water absorption peak, 1625 and 1650 nm.

LED sources are Encircled Flux (EF) compliant, to provide the most consistent and reliable testing results.

The unique VisiTester option mixes a laser VFL with the Autotest source, so at the power meter end, the active test fiber winks, making it obvious to the user. The mixed signal also extends practical fault finding options since a clip-on fiber identifier can be used simultaneously with VFL methods. The VisiTester laser can also be used as a traditional stand-alone VFL.

The KI2300 series Zero Warm-Up Sources provide a unique level of guaranteed source stability over temperature, and eliminate warm up drift.

Please enquire for non-standard source configurations such as other wavelengths, power levels, connectors etc.

LIGHT SOURCE SPECIFICATIONS

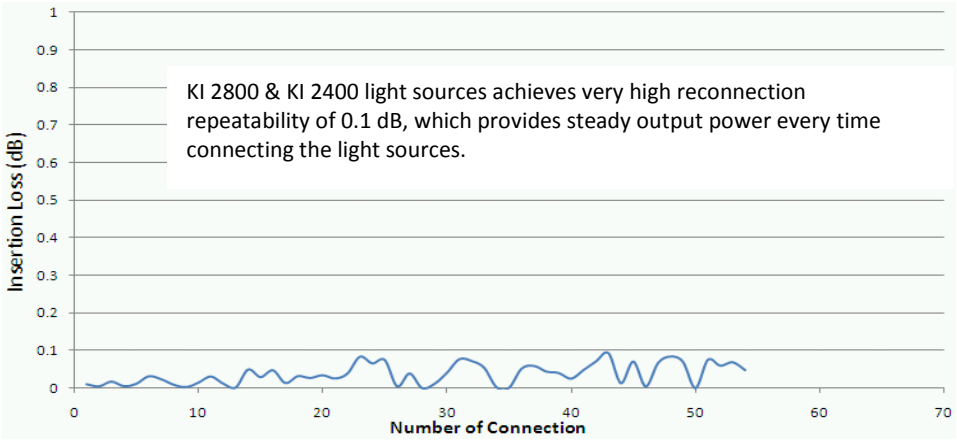
	1310/1550 nm Laser	CWDM[1]	1625 nm Laser	650 nm VisiTest	850 / 1300 nm LED	Comments
KI 2700 series						
Power accuracy	Refer to Ordering Information for nominal power level					± 1 dB
Short term stability (dB)	0.04	0.06	0.06	NA	0.01	For 15 min, typ ± Δ 2°C, after warm up, ORL < -25 dB
Stability over temp (dB)	0.6	0.6	0.6	NA	0.35	Typical
Premium zero warm up & ultra stable KI 2300 series						
Short term stability (dB)	0.03	0.05	0.05	NA	0.01	For 15 min, max, ± Δ 3°C no warm up
Stability over temp (dB)	0.2	0.2	0.2	NA	0.35	Max
Common for both KI 2700 & KI 2300 series						
λ initial tolerance (nm)	20	6.5	20	5	NA	At 25 °C
λ width, nm	3	< 1	3	3	NA	FWHM, typical
λ nm/°C	0.4	0.1	0.4	0.1	0.4	Typical
Mode Controlled Source	NA	NA	NA	NA	Mode controlled	50/125 compliant: IEC 61280-4-1 {Ed.1.0}, TIA/EIA 526-14A & TIA TSB-178.
Reconnection repeatability (dB)	0.1	0.1	0.1	0.1	0.05	95 % confidence
Modulation	270 Hz, 1 kHz, 2 kHz ± 2 %, 12 Multi-Fiber ID tones, 2 Hz blink for Visitest					
Laser output power	Adjustable over 7 dB in 0.01 dB steps				NA	

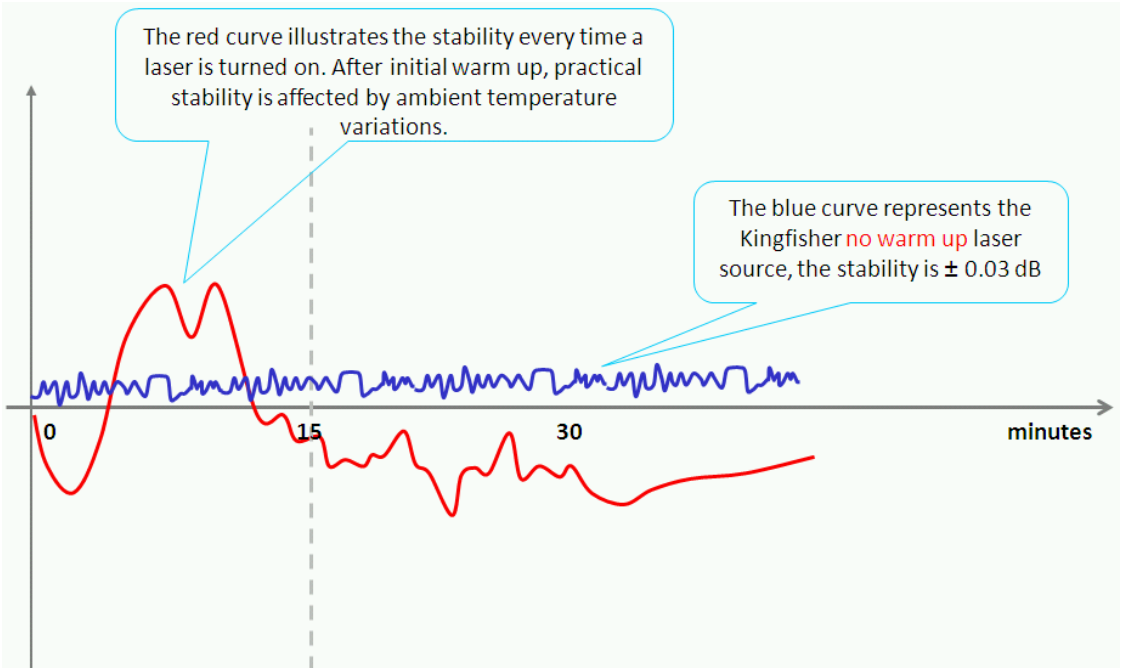
Note 1: CWDM laser wavelengths: 1270, 1290, (1310), 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, (1550), 1570, 1590, 1610 nm

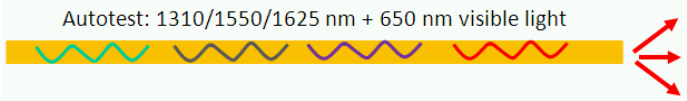
GENERAL SPECIFICATION

Parameters	Value	Parameters	Value
Battery life	Laser/LED source: 90/80 hours in Autotest, typical	Operating/Storage	-15 to 55 °C / -25 to 70 °C
Size	190 x 105 x 35 mm (7.5 x 4.1 x 1.4")	Relative humidity	0 ~ 95 %
Weight	420 gm (0.9 lb) / Shipping 1.5 Kg (3.3 lb)	Tone detection	150 ~ 9900 Hz ± 1 %
LCD size	74 x 55 mm / 2.9 x 2.2"		
Case	Polycarbonate / rubber edges & corners, moisture resistance, 1 metre drop tested	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
Dust cap	Captured, functions as tilt bail when slid open		

Australian and international patents. Technical data is subject to change without notice as part of our program of continuous improvements.
Class 1 Laser / LED infra red device. Compliant with IEC60825-1.







The unique VisiTester option mixes a laser VFL with Autotest, so at the power meter end, the active test fiber winks, making it obvious to the user. It also extends practical fault finding options.

ORDERING INFORMATION

The KI 27624-Ge is usually the perfect instrument for mixed contracting use, providing a perfect balance of useful features.

Description	Power (dBm) @ Fiber Type (µm)					Ports	P/N
	Laser	LED			VisiTest		
	SMF	SMF	50	62.5	SMF		
KI 2700 series							
Instrument, LTS 1310-1550 nm Laser, InGaAs	0	-	-	-	-	2	KI 2722-InGaAs
Instrument, LTS 1310-1550 nm Laser VisiTester, InGaAs	-3	-	-	-	+2	2	KI 27622-InGaAs
Instrument, LTS 850-1300 nm LED, Ge	-	-32	-22	-20	-	2	KI 2703-Ge
Instrument, LTS 850-1300 nm LED VisiTester, Ge	-	-35	-25	-23	+2	2	KI 27603-Ge
Instrument, LTS 850-1300 nm LED, 650 nm VFL, Ge	-	-35	-25	-23	+2	3	KI 27703-Ge
Instrument, LTS 850-1300 nm LED, 1310-1550 nm Laser, Ge	0	-32	-22	-20	-	3	KI 2724-Ge
Instrument, LTS 850-1300 nm LED, 1310-1550 nm Laser APC, Ge	0	-32	-22	-20	-	3	KI 2724-Ge-APC
Instrument, LTS 850-1300 nm LED, 1310-1550 nm Laser VisiTester, Ge	-3	-32	-22	-20	+2	3	**KI 27624-Ge**
Instrument, LTS 850-1300 LED VisiTester, 1310-1550 Laser VisiTester, Ge	-3	-35	-25	-23	+2	3	KI 27634-Ge
Instrument, LTS 850-1300nm LED, 1310-1550nm Laser VisiTester APC, Ge	-3	-32	-22	-20	+2	3	KI 27624-Ge-APC
Instrument, LTS 1310-1490-1550 nm Laser, APC, InGaAs	-3	-	-	-	-	2	KI 2727-InGaAs-APC
Instrument, LTS 1310-1490-1550 nm Laser VisiTester, APC, InGaAs	-7	-	-	-	+2	2	KI 27627-InGaAs-APC
Instrument, LTS 1310-1550-1625 nm Laser, APC, InGaAs	-3	-	-	-	-	2	KI 27010-InGaAs-APC
Instrument, LTS 1310-1550-1625 nm Laser VisiTester, APC, InGaAs	-7	-	-	-	+2	2	KI 27610-InGaAs-APC
Instrument, LTS 1310-1490-1550-1625 nm Laser, APC, InGaAs	-3	-	-	-	-	2	KI27016-InGaAs-APC
Zero warm up & ultra stable light sources, KI 2300 series							
Instrument, LTS 1310/1550 nm ultra stable laser, InGaAs	-4	-	-	-	-	2	KI 2322-InGaAs
Instrument, LTS 1310-1550-1625 nm ultra stable laser, APC, InGaAs	-7	-	-	-	-	2	KI 23010-InGaAs-APC

Please enquire for non-listed specifications such as: Wavelength, Power Levels, PC / APC Connectors.

STANDARD ACCESSORIES

Description	Qty	Description	Qty	Description	Qty
SC connector adaptor OPT046	1 per port	Carry Pouch & Strap	1 each	50 & 62.5 µm fiber mandrel wraps for Multimode sources (OPT701)	1
KITS™ reporting software & USB cable	1 each	Operation manual & calibration certificate	1 each		

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 one per port.

Description	P/N	Description	P/N	Description	P/N	Description	P/N
FC	OPT051	E2000/LSH,	OPT060G	LC	OPT076	2.5mm universal	OPT081
ST	OPT040	green	OPT060	MU	OPT080	SMA 905/906	OPT082
D4	OPT055	E2000/LSH		LSA / DIN47256	OPT071	1.25mm universal	OPT084

OPTIONAL ACCESSORIES

Description	P/N	Description	P/N
Option, Carry Case for 2 Instruments	OPT153	Option, Carry Case includes Cletop-style cleaner & Cleaning Sticks	OPT154B

AUTHORISED DEALER

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