KI 2600XL / 9600XL Series
POF Power Meters

Optical Communications Test Applications

- Testing power, attenuation & continuity on POF Fiber
- Range of Interchangeable POF connectors
- High power options
- Range of calibrated wavelengths

Revision 9

These KI 2600XL & KI 9600XL series Optical Power Meters have large area detectors optimized for general plastic optical fiber testing.

Up to 1% traceable accuracy, ease of use and high availability combine to achieve superior measurement confidence.

A wide range of practical connector and calibration options cover most current and emerging POF applications.

Connectors include Toslink, Mini Toslink, SPDIF, bare fiber, Versalink / HFBR series (simplex and duplex), SMA, SC, 2.5 mm

The KI 2600XL meter has many advanced functions, and Excel computer software for live display, reporting, data logging and other applications.

Typical application areas include: Industrial, POF Ethernet, avionics & sensing.

Other POF specific instruments include Handheld Light Sources, Variable Optical Attenuator and a various complete test kits.

Please refer to other data sheets for other versions of these power meters.

Features

- Large area Si or Ge detector
- Very long battery life
- Industry standard screw-on connector adaptors
- Calibrations at 9 – 28 wavelengths
- KI 2600 external power / charger via micro USB
- KI 2600 memory with text, timestamp, USB dump, KITS™ data logging / reporting software
- Test Tone Detection
- Max / min recording
- Compact, rugged and light weight
- Sunlight readable display
- Made in Australia
- ISO 17025 traceable calibration certificate
- 3 ~ 7 years warranty
- 3 years recommended calibration cycle
- Available in easy to order test kits

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KI 2600XL / 9600XL Series – POF Power Meters

The XL series POF Optical Power Meters measure absolute and relative light level in POF, multimode and single mode optical communication systems. High accuracy backed up by an ILAC/ ISO 17025 traceable calibration certificate and ease of use make them ideal for field and laboratory use.

The large area detector is ideal for testing 1 mm POF, and also works with MT-RJ duplex connectors, MPO/MT/MTP ribbon fiber connectors with up to 12x6 fibers, large fiber bundles, or any other fiber arrangement with an active emission area up to 3 mm across.

Silicon (Si) detectors are optimized for visible light and 350 to 1000 nm spectrum making them suitable for POF, and 850 nm multimode applications.

Germanium (Ge) detectors work over visible and infra-red light from 600 - 1650 nm, and higher power levels, making them attractive for mixed applications.

The industry standard 7/8" 28 TPI screw on connector interface can be equipped with almost any connector style.

Operational savings result up to 1000-hour battery life, and no range changing delays.

The meters display mW, µW, nW, dB, dBm to 0.01 dB resolution. A separate reference for each λ can be stored and displayed.

Tight total uncertainty specifications cover the entire measuring range, operating temperatures, connector types and fiber types.

The handy tone detector is a useful craft aid for fiber identification. The actual modulation frequency is measured and displayed, so that source modulation rates can be checked.

For other versions of this power meter, or for general features of a particular instrument range, please refer to other KI2600 & KI9600 brochures. Please see other brochures for matching light sources, or complete inspection & test kits.

Additional general features of the premium KI2600XL range include: more calibration wavelengths, high power capability, external power & charging, captive dust cover for optical connector, larger display, memory, USB key data dump, text naming, computer interface & software featuring live data logging or reporting in multiple languages.

Please enquire for non-standard calibration wavelengths or connector styles.

OPTICAL SPECIFICATIONS

Response λ, nm	Damage level dBm	Calibration λ nm	Power range dBm	Tone & Autotest Min dBm[4]	Mid range linearity dB[1]	Calibration Accuracy %[2]	Polarization Sensitivity dB[5]	Total Uncertainty dB[3,4]	λ Sensitivity ± 30 nm dB[4]	Response uniformity across detector
KI 2600XL-Ge5 (5 mm Ge detector):										
600 ~ 1650	+20	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 ~ -30 +15 ~ -40	-37	0.06	1 % (0.06 dB)	< 0.05	0.5	0.03	2 % (0.09 dB)
KI 9600XL-Ge5 (5 mm Ge detector):										
600 ~ 1650	+15	635,650,660,780,1610,1625 **850,1300,1310,1390,1490,**1550	+10 ~ -30 +10 ~ -40	-37	0.06	2 % (0.09 dB)	< 0.05	0.5	0.04	2 % (0.09 dB)
KI 2600XL-Si5 (5 mm Si detector):										
350 ~ 1100	+15	400,430,**470,490,520,550,580, 600,635, 650,660,670,700,740,780,820,850, 880,910,940,980**	+10 ~ -50 +10 ~ -60	-45	0.04	1 %[6] (0.06 dB)	< 0.05	0.3	0.03	1 % (0.06 dB)
KI 9600XL-Si5 (5 mm Si detector):										
350 ~ 1100	+10	*470,520* **635,650,660,780,820,850,**980	+5 ~ -50 +5 ~ -60	-45	0.04	2 % (0.09 dB)	< 0.05	0.3	0.03	1 % (0.06 dB)
				Typical	typical		typical	max	typical	

Note 1: Mid-range linearity @ 1550 nm for InGaAs & Ge, or 850 nm for Si. Non-coherent light, with APC connector. Excludes top 5 dB and bottom 10 dB of range.

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

Note 3: Includes contributions of: varying optical connector types, calibration uncertainty, linearity over temperature & range, and fiber core diameter up to 1 mm (for 5 mm detector, max NA= 0.5) or fiber core diameter up to 3 mm (for 5 mm detector, max NA= 0.3).

Note 4: At calibration wavelengths in bold type.

Note 5: For APC connectors only.

Note 6: 400, 430 nm are 4% (0.2 dB) accuracy

GENERAL SPECIFICATIONS

Parameters	KI 2600	KI 9600
Battery life	Up to 1000 hours	300 hours
Size / Weight	190 x 165 x 38 mm (7.5 x 6.5 x 1.5") / 420 gm (0.9 lb.)	124 x 81 x 25 mm (4.9 x 3.2 x 1.0") / 150 gm (0.33 lb.)
Operating / Storage	15 to 55 °C / -25 to 70 °C	-15 to 55 °C / -25 to 70 °C
Relative humidity	0 ~ 95 %	0 ~ 95 %
Recommended calibration cycle	3 years	3 years
Case	Polycarbonate / rubber edges & corners, moisture resistance, 1-meter drop tested	Polycarbonate / rubber edges & corners, moisture resistance, 2.5 meters drop tested
Dust cap	Captive, functions as tilt bail when slid open	Captive
Tone detection	150 ~ 9900 Hz ± 1 %	200 ~ 2500 Hz ± 2 %
Max / Min	Recording feature for stability testing	Recording feature for stability testing
Power	2x Alkaline / Lithium AA cells or 2x NiMH AA cells, user selectable charging; Ext power input via micro USB; Selectable auto-off, low battery indicator, backlit display	2x alkaline / Lithium AAA cells. Selectable auto-off, low battery indicator
Memory	1000 four-λ tests with date & time in internal memory, unlimited on USB memory key	N/A
USB interfaces	Micro-USB for general USB & power; USB-A type connector for memory key only	N/A

FEATURE & APPLICATION COMPARISON

5 mm Ge Detector Power Meters:			
Feature	Typical Application	KI 2600XL-Ge5	KI 9600XL-Ge5
Autotest	Simultaneous multi- λ Loss test	☑	
USB / KITS™ software	Data acquisition, pass /fail, computer display	☑	
External Power		☑	
Backlight		☑	
5 mm Ge	Most connector styles, Max fiber exit diameter for NA= 0.2: 3 mm	☑	☑
Power range		+15 ~ -40 dBm	+10 ~ -40 dBm
Response Range		600 ~ 1650 nm	600 ~ 1650 nm
POF calibration λ		☑	☑
MMF calibration λ		☑	☑
SMF calibration λ		☑	☑

5 mm Silicon Detector Power Meters:			
Feature	Typical Application	KI 2600XL-Si5	KI 9600XL-Si5
Autotest	Simultaneous multi- λ Loss test	☑	
USB / KITS™ software	Data acquisition, pass /fail, computer display	☑	
External Power		☑	
Backlight		☑	
5 mm Si	MPO/MT/MTP, POF, MT-RJ, most connector styles (Max fiber exit diameter for NA= 0.2: 3 mm. POF = 1 mm diameter)	☑	☑
Power range		+10 ~ -60 dBm	+5 ~ -60 dBm
Response Range		350 ~ 1100 nm	350 ~ 1100 nm
POF calibration λ		☑	☑
MMF calibration λ, 850 nm		☑	☑

ORDERING INFORMATION

To order Power Meter, please specify:

1) Instrument part number

2) At least one interchangeable adaptor

3) Accessories as required.

Description	Part number
Instrument, Power Meter Ge 5mm	KI 2600XL-Ge5
Instrument, Power Meter Ge 5mm	KI 9600XL-Ge5
Instrument, Power Meter Si 5mm	KI 2600XL-Si5
Instrument, Power Meter Si 5mm	KI 9600XL-Si5

Please enquire for non-standard specifications.

STANDARD ACCESSORIES

Description	Quantity	
	KI 2600	KI 9600
Operating manual / quick guide	1	1
QA certificate	1	1
ILAC/ NATA traceable calibration certificate	1	1
Soft carry pouch	1	1
Wrist strap	1	1
USB cable (A/micro type)	1	-
KITS™ Recording/reporting software	Download from website for free	-

Note: you will need to order at least one style of connector adaptor

OPTIONAL ACCESSORIES

Description	Part number
Option, Carry Case, KI2x/KI7x/KI3x, small (Carry Case for 2 Instruments)	OPT153*
Option, Carry Case, Cletop, Cleaning Sticks, KI2x / KI9x, large	OPT154B*

Please visit kingfisherfiber.com for a wide range of FiberTester kits.

OPTIONAL INTERCHANGEABLE CONNECTOR ADAPTORS

Description	Part number
POF optimized adaptors:	
Option, Connector Adaptor XL 7/8-28, SMA 905/906	OPT203
Option, Connector Adaptor XL 7/8-28, POF multi For: Mini Toslink, unterminated POF cable, HFBR series (simplex and duplex), 2.5mm. The user turns the turret to the required hole size. Actual hole size 3.85, 3.5, 3.2, 2.55, 2.4, 2.3 mm x 8.5 mm deep.	OPT229
Option, Connector Adaptor XL 7/8-28, Toslink	OPT230
Option, Connector Adaptor XL 7/8-28, HFBR	OPT231
Option, Connector Adaptor XL 7/8-28, POF SC	OPT201-POF
Option, Connector Adaptor XL 7/8-28, POF ST	OPT202-POF
Option, Connector Adaptor XL 7/8-28, POF FC	OPT204-POF
Option, Connector Adaptor XL 7/8-28, POF 2.5 mm universal	POF225-POF
Other adaptors:	
Option, Connector Adaptor XL 7/8-28, SC	OPT201
Option, Connector Adaptor XL 7/8-28, ST	OPT202
Option, Connector Adaptor XL 7/8-28, FC	OPT204
Option, Connector Adaptor XL 7/8-28, Biconic	OPT205
Option, Connector Adaptor XL 7/8-28, 1.25 mm Universal	OPT224
Option, Connector Adaptor XL 7/8-28, 2.5 mm Universal	OPT225
Option, Connector Adaptor XL 7/8-28, LC	OPT226A
Option, Connector Adaptor XL 7/8-28, MTP™ / MPO 12 x n	OPT227
Option, Connector Adaptor XL 7/8-28, MT ferrule	OPT232

Adaptors are suitable for both PC and APC polish connectors. Other styles available on request.

Kingfisher International Pty Ltd
720 Springvale Road, Mulgrave
VIC 3170 Australia

T +61 3 8544 1700
F +61 3 8544 1793
E sales@kingfisher.com.au

kingfisherfiber.com