

# KI 2400/2800 Series Hand Held Fibre Light Source

The KI 2400 / 2800 series Hand Held Fibre Sources are used with an Optical Power Meter to test loss on single mode and multimode optical fibre systems, at up to 6 wavelengths.

The 2800 series provide excellent stability, and the 2400 series provide exceptional stability with zero warm up.

High productivity, high availability and ease of use combine to achieve superior measurement confidence.

The innovative and unique VisiTester option is helpful for general loss testing, continuity testing & fault finding.

These Autotest sources can be used with any Kingfisher Autotest optical power meter, loss test set or two way tester.

## Applications

- Singlemode fibre testing
- Multimode fibre testing
- Mixed mode fibre testing
- Encircled flux compliant MMF testing



## Features & Benefits

- Reliable, rugged, versatile and simple to use
- Up to 6 mixed LED, laser & VFL sources
- Excellent optical power stability
- Excellent re-connection repeatability
- LCD is large, clear, sunlight readable & backlit
- Autotest compatibility with other instruments
- Optical test tone with Multi-Fibre ID function
- VisiTester easily identifies active test channel
- Interchangeable connectors with dust cap / tilt bail
- Multimode sources supplied with mandrel wraps
- KI 2400 series is ultra-stable with zero warm up
- 3 ~ 7 Year warranty
- 3 year calibration cycle
- Australian Made

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

For further information:  
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The KI2400 / 2800 Hand Held Fibre Sources are used with optical power meters for testing optical loss on single mode and multimode fibres. A Multi-Fibre tone feature makes for handy continuity / polarity testing and fault finding, also for use with clip-on traffic identifiers.

The KI2800 source provides excellent general test capability. Alternatively, the KI2400 premium source is unique in the industry, with zero warm up, ultra high stability, and is unaffected by varying back reflection.

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

This instrument meets the general requirements of MIL PRF 28800F class 2. The large display provides the user with an easy view of instrument status and test results.

Practical interchangeable optical connectors are easily changed, and are protected with a captive dust cover / tilt bail. Metal free adaptors help avoid contamination of connectors in high power systems.

AA alkaline batteries have long life, and the micro USB power input ensures high availability. Or use rechargeable batteries with built-in charging.

When used with a Kingfisher Autotest compatible power meter or loss test set, automatic  $\lambda$  identification is achieved, and the nominal source power is displayed on the power meter.

Up to 6 LED / laser sources can be specified, making this a versatile test source for mixed multimode / single mode fibre testing.

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

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

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

Please refer to other brochures for our convenient FibreTester kits, comprising groups of instruments and common accessories supplied in a protective field carry case.

## Technical Specifications

	1310/1550 nm Laser	CWDM <sup>1</sup> Laser	1625 nm Laser	650 nm VisiTest	850 / 1300 nm LED	1310/1550 nm LED	Comments
<b>KI 2800 Series</b>							
Power accuracy	± 1 dB	± 1 dB	± 1 dB	± 1 dB	± 1 dB	± 1 dB	± 1 dB
Short term stability (dB)	0.04	0.06	0.06	NA	0.01	NA	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	NA	Typical
<b>KI 2400 - Premium zero warm up and ultra stable</b>							
Short term stability (dB)	0.03	0.05	0.05	NA	0.01	0.03	For 15 min, max, ± Δ 3°C no warm up
Stability over temp (dB)	0.2	0.2	0.2	NA	0.35	0.2	Max
<b>Common Specifications</b>							
$\lambda$ initial tolerance (nm)	20	6.5	20	5	NA	20	At 25°C
$\lambda$ width (nm)	3	< 1	3	3	NA	35 / 48	FWHM, typical
$\lambda$ (nm/°C)	0.4	0.1	0.4	0.1	0.4	0.4	Typical
Mode controlled source	NA	NA	NA	NA	Yes	NA	50/125 compliant: IEC 61280-4-1 {Ed.1.0}, TIA 526-14A & TIA TSB-178.
Reconnection repeatability (dB)	0.1	0.1	0.1	0.1	0.05	0.1	95% confidence
Modulation	270 Hz, 1 kHz, 2kHz ± 2%, 12 Multi-fibre ID tones, 2 Hz blink for VisiTester						
Laser output power	Adjustable over 7 dB in 0.01 dB steps				NA	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 Specifications

Battery life	Laser/LED source: 90/80 hours in Autotest, typical
Size WxHxD (mm)	105 x 190 x 35
Weight unit/shipping (kg)	0.420 / 1.5
LCD size (mm)	74 x 55
Case material	Polycarbonate / rubber edges & corners
Physical resistance	1m drop test, moisture resistant
Dust cap	Captive, functions as tilt bail when slid open
Operating temp (°C)	-15 to 55
Storage temp (°C)	-25 to 70
Relative humidity (%)	0 ~ 95
Calibration cycle (years)	3
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
Standard accessories	SC adapter, operation manual, calibration certificates, carry pouch, carry strap, 50 & 62.5um mandrel wrap set (multimode only), USB cable. <i>Note: A range of optional accessories available. Contact FOS for details.</i>

## Optical Performance

### Insertion loss

KI 2800 & KI 2400 light sources achieves very high reconnection repeatability of 0.1 dB, which provides steady output power every time connecting the light sources. See figure 1 for an indicative insertion loss performance chart.

### Laser source stability - 2400 series

The red curve shown in figure 2 represents the stability of a typical laser source when switch on. After initial warm up, practical stability is affected by ambient temperature variations only.

Conversely, the blue curve represents the Kingfisher *no warm up* laser source. Stability remains within  $\pm 0.03$ dB right from initial activation. (KI2400 series)

### Visitest

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

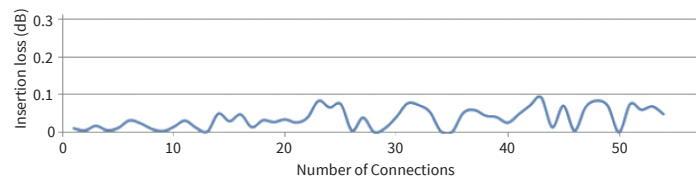


Figure 1. Reconnection insertion loss

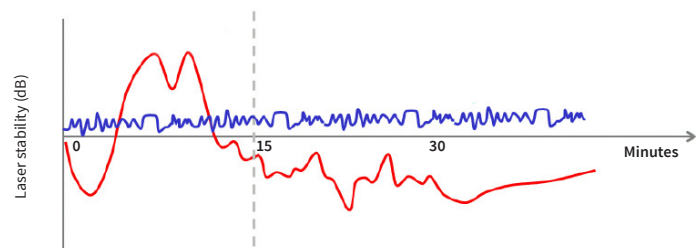


Figure 2. Laser stability



Figure 3. Autotest: 1310/1550/1625 nm + 650 nm visible light

## Ordering Information

Description	Power (dBm)						Part number
	Laser SMF	LED			Visitest SMF	Ports	
<b>KI 2800 Series</b>							
Refer to LIGHT SOURCE SPECIFICATIONS for Power Accuracy specifications							
Instrument, Source 1310-1550 nm Laser	0	-	-	-	-	1	KI2822
Instrument, Source 1310-1550 nm Laser VisiTester	-3	-	-	-	+2	1	KI28622
Instrument, Source 850-1300 nm LED	-	-32	-22	-20	-	1	KI2803
Instrument, Source 850-1300 nm LED VisiTester	-	-35	-25	-23	+2	1	KI28603
Instrument, Source 850-1300 nm LED, 1310-1550 nm Laser	0	-32	-22	-20	-	2	KI2824
Instrument, Source 850-1300 nm LED, 1310-1550 nm Laser APC	0	-32	-22	-20	-	2	KI2824-APC
Instrument, Source 850-1300 nm LED, 1310-1550 nm Laser VisiTester	-3	-32	-22	-20	+2	2	KI28624
Instrument, Source 850-1300 LED VisiTester, 1310-1550 Laser VisiTester	-3	-35	-25	-23	+2	2	KI28634
Instrument, Source 850-1300 LED, 1310-1550 Laser VisiTester APC	-3	-32	-22	-20	+2	2	KI28624-APC
Instrument, Source 1310-1550-1625 nm Laser APC	-3	-	-	-	-	1	KI28010-APC
Instrument, Source 1310-1550-1625 nm Laser VisiTester APC	-7	-	-	-	+2	1	KI28610-APC
Instrument, Source 1310-1490-1550-1625 nm Laser APC	-3	-	-	-	-	1	KI28016-APC
<b>KI 2400 - Premium zero warm up and ultra stable</b>							
Instrument, Source 1310-1550 nm Ultra Stable Laser	-4	-	-	-	-	1	KI2422
Instrument, Source 1310-1550-1625 nm Ultra Stable Laser APC	-7	-	-	-	-	1	KI24010-APC
Instrument, Source 1310-1550 nm Ultra Stable LED	-	-20	-	-	-	1	KI2419

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

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