

# KI 7600C SERIES

## OPTICAL POWER METER WITH VFL



### OPTICAL COMMUNICATIONS TEST APPLICATION

- System power testing
- Attenuation testing
- Fiber identification
- Fault Finding & Continuity Testing



Revision 15

The KI 7600C series Optical Power Meter is used for testing fiber optic communications systems.

1% calibration accuracy, intuitive use and rugged reliability combine to achieve superior measurement confidence.

Detector & calibration options cover a wide range of power levels, connector styles, fiber types and CWDM wavelengths from +27 to -70 dBm.

### FEATURES

- Reliable, rugged & field proven
- Simple to use
- Over 25 calibration wavelengths, including CWDM
- Flexible real-time PC reporting software
- 360 hour long battery life
- Large user memory
- External power & USB data interfaces
- Sunlight readable display and backlight
- Autotest compatibility with other instruments
- 3 year calibration cycle
- 3 ~ 7 year warranty
- Patented low cost Interchangeable connectors
- Optional easy to use visual fault finder
- Test Tone Detection
- Max / Min recording
- Made in Australia

The KI7600C Optical Power Meter measures absolute/relative light levels and test tones in fiber optic systems.

Autotest provides automatic multi  $\lambda$  (wavelength) loss testing with an Autotest light source, for fast, easy, and confident testing. A variety of matching LED & laser sources is available, including zero warm up and 4  $\lambda$  CWDM sources.

The meter displays mW,  $\mu$ W, nW, dB, dBm to 0.01 dB resolution, with no range changing delays. A separate reference for each  $\lambda$  is stored and displayed.

The tight Total Uncertainty specification covers all power levels, temperatures, connectors and fibers, without warm up or user dark current offset.

Patented low cost interchangeable connectors are dust and drop protected. SC, FC, ST adaptors are supplied, with others available including small form factor styles. Metal free adaptors avoid

contamination of connectors in high power systems.

Kingfisher InGaAs detectors have wider wavelength response range from 600 ~ 1700 nm. It provides good response for all common wavelengths. H3B & H5 high power detectors are for testing high power range. Ge detectors provide slightly larger dynamic range with reduced accuracy suitable for 850 ~ 1550 nm.

The visible laser option provides low skill, low cost fault finding and continuity testing.

Flexible KITS™ PC software is a complete Windows compatible acquisition & reporting solution. Based on Excel, one mouse click puts live data directly into a customer's report with pass/fail assessment. Reports can be easily customized for any terminology, language or format. KITS™ also supports memory download, label printing and enterprise level data management.

Special instrument versions are available with a large area detector.

**SPECIFICATIONS**

| Response $\lambda$ Nm        | Damage level dBm | Calibration $\lambda$ nm   | Power range dBm        | Tone & multi-fiber ID sensitivity dBm | Mid range linearity <sup>1</sup> dB | Calibration Accuracy <sup>2</sup> % | Polarization Sensitivity dB | Total Uncertainty <sup>3</sup> dB | $\lambda$ Sensitivity $\pm 30 \text{ nm}^5$ dB |
|------------------------------|------------------|--|------------------------|---------------------------------------|-------------------------------------|-------------------------------------|-----------------------------|-----------------------------------|--|
| <b>InGaAs detector</b>       |                  |  |                        |                                       |                                     |                                     |                             |                                   |  |
| 600 ~ 1700                   | +15              | <b>780, 820, 850, 980</b><br><b>1270, 1290, 1300, 1310,</b><br><b>1330, 1350, 1370, 1390,</b><br><b>1410, 1430, 1450, 1470,</b><br><b>1490, 1510, 1530, 1550,</b><br><b>1570, 1590, 1610, 1625, 1650</b> | +5 ~ -60<br>+5 ~ -70   | -45<br>-50                            | 0.02                                | 1 %<br>(0.06 dB)                    | < 0.005                     | 0.3                               | 0.03   |
| <b>H3B (InGaAs) detector</b> |                  |  |                        |                                       |                                     |                                     |                             |                                   |  |
| 800 ~ 1700                   | +30 <sup>4</sup> | <b>820, 850, 980</b><br><b>1270, 1290, 1300, 1310,</b><br><b>1330, 1350, 1370, 1390,</b><br><b>1410, 1430, 1450, 1470,</b><br><b>1490, 1510, 1530, 1550,</b><br><b>1570, 1590, 1610, 1625, 1650</b>      | +27 ~ -40<br>+27 ~ -50 | -25<br>-30                            | 0.02                                | 1 %<br>(0.06 dB)                    | < 0.005                     | 0.35                              | 0.03   |
| <b>H5 (InGaAs) detector</b>  |                  |  |                        |                                       |                                     |                                     |                             |                                   |  |
| 800 ~ 1700                   | +25              | <b>820, 850, 980</b><br><b>1270, 1290, 1300, 1310,</b><br><b>1330, 1350, 1370, 1390,</b><br><b>1410, 1430, 1450, 1470,</b><br><b>1490, 1510, 1530, 1550,</b><br><b>1570, 1590, 1610, 1625, 1650</b>      | +15 ~ -50<br>+15 ~ -60 | -35<br>-40                            | 0.02                                | 1 %<br>(0.06 dB)                    | < 0.005                     | 0.3                               | 0.03   |
| <b>Ge detector</b>           |                  |  |                        |                                       |                                     |                                     |                             |                                   |  |
| 600 ~ 1650                   | +25              | <b>780, 820, 850, 980</b><br><b>1270, 1290, 1300, 1310,</b><br><b>1330, 1350, 1370, 1390,</b><br><b>1410, 1430, 1450, 1470,</b><br><b>1490, 1510, 1530, 1550,</b><br><b>1570, 1590, 1610, 1625, 1650</b> | +15 ~ -60<br>+15 ~ -70 | -45<br>-50                            | 0.04                                | 1 %<br>(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  $\mu$ m fiber.

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

Note 4: H3B can sustain the damage level for 2 minutes. Note 5: At calibration wavelengths in bold type.

**VISIBLE LASER SPECIFICATIONS**

| Parameters      | Value                 |
|-----------------|-----------------------|
| Output power    | -2 ± 1 dBm            |
| $\lambda$       | 635 nm                |
| $\lambda$ width | 3 nm                  |
| Modulation      | CW, 2, 270, 1k, 2k Hz |

Australian and international patents. Technical data is subject to change without notice as part of our program of continuous improvements. The visible laser is a Class 2 Laser product compliant with IEC60825-1 and 21CFR1040.10.

**GENERAL SPECIFICATIONS**

| Parameters                 | Value  |
|----------------------------|--|
| Battery life               | 300 hrs laser off / 190 hrs laser on   |
| Size / Weight              | 190 x 130 x 70 mm (7.5 x 5.1 x 2.8") / 500 gm (1.1 lb). Shipping 1.5 Kg (3.3 lb)   |
| Operating / Storage        | -15 to 55 °C / -25 to 70 °C  |
| Case                       | Polycarbonate / rubber, 1 metre drop tested  |
| Tone detection             | 150 ~ 9900 Hz ± 1 %  |
| Max / min Power            | Recording feature for stability testing<br>2 alkaline C cells (7.6 A/Hr). External DC with 2.5mm +ve pin or via USB port.<br>Selectable auto-off, low battery indicator, backlit display |
| Memory / USB Hidden keypad | 1900 dual $\lambda$ tests internal & USB memory key / USB type B<br>For setting advanced functions   |



**ORDERING INFORMATION**

Please enquire for non-standard: Connectors, APC etc; large area detection version.

| Description                          | P/N             |
|--------------------------------------|-----------------|
| InGaAs Power Meter                   | KI 7600C-InGaAs |
| InGaAs Power Meter, visible laser PC | KI 7601C-InGaAs |
| H3B Power Meter                      | KI 7600C-H3B    |
| H3B Power Meter, visible laser PC    | KI 7601C-H3B    |
| H5 Power Meter                       | KI 7600C-H5     |
| H5 Power Meter, visible laser PC     | KI 7601C-H5     |
| Ge Power Meter                       | KI 7600C-Ge     |
| Ge Power Meter, visible laser PC     | KI 7601C-Ge     |

**STANDARD ACCESSORIES**

| Description   | Quantity        |                 |
|---|-----------------|-----------------|
|   | KI 7600C series | KI 7601C series |
| SC connector adaptor (OPT046)                         | 1               | 2               |
| FC connector adaptor OPT051                           | 1               | 2               |
| ST connector adaptor OPT040                           | 1               | 2               |
| Operation manual                                      |                 | 1               |
| Calibration certificates                              |                 | 1               |
| Carry Pouch, Carry strap & Leather protective holster |                 | 1               |
| Carry strap   |                 | 1               |
| KITS™ Recording/Reporting software & USB A/B cable    |                 | 1               |
| C cell batteries                                      |                 | 2               |
| AA-to-C battery size converter                        |                 | 2               |

**OPTIONAL INTERCHANGEABLE CONNECTOR ADAPTORS**

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

This instrument is supplied with metal-free sleeve optical interchangeable connector adaptors. The power meter works with both PC and APC connectors. The visible laser connector ferrule type is fixed and customer specified as either PC or APC. Green is associated with APC.

**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 with 2.5 mm Plug     | OPT103B |

Please visit [kingfisher.com.au](http://kingfisher.com.au) for wide range of FiberTester kits.

AUTHORISED DEALER

