

# KI 6106 Series

## Optical 10G/XG PON Power Meter

### Optical Communications Test Applications

- FTTX PON acceptance test
- FTTX PON fault isolation



Revision 4

The KI 6106 series Optical PON Power Meter is used for testing FTTX PON fiber optic communications systems.

Common uses include live acceptance testing during service turn-up, and fault isolation during subsequent maintenance, particularly when an ONT has failed.

It is connected in-line on a live system, and simultaneously displays the power of all 4 operational PON wavelengths, including the return signal power.

### Features

- Compact, rugged & light weight
- For BPON/EPON/GPON/XGPON/XGSPON testing
- Perform in-circuit and terminated measurements
- Large, sunlight readable LCD display
- In-line testing 1270, 1310, 1490, 1577 nm
- 1310, 1270 nm Burst Mode testing
- Pass/Fail displays
- Internal memory for 99 records of 4λ tests with timestamp
- Saved test data downloadable to PC using Data Management Software
- Real-time clock for test data timestamp
- Backlit display
- 1-year warranty
- 3 years calibration cycle

## KI 6106 Series – Optical 10G/XG PON Power Meter

The KI 6106 handheld in-line 10G/XG PON Power Meter is ideal for measuring power in a typical live BPON/EPON/GPON FTTX communication link. It can also be used to perform terminated measurements. i.e., using ONT port to measure burst power at 1270-1310 nm and/or, OLT port to measure power at 1490 -1577 nm independently.

This feature rich instrument makes for easy pass/fail results storage and reporting. Stable readings inspire user confidence.

The clear sunlight readable and backlit display is combined with simple operation, to ensure good quality testing.

The instrument features rugged construction, moisture resistance, rubber holster and captive connector dust caps.

Operational savings come from a 3-year recalibration cycle and fast & simple operation.

The meter displays dBm, W and dB. The resolution is 0.01dB. A separate reference for each  $\lambda$  can be stored.

Pass/Fail display is available, and Pass/Fail value is user definable.

The saved 4 $\lambda$  test data with timestamp can be downloaded from the unit onto PC via USB connection using the Data Management Software.

### OPTICAL SPECIFICATIONS

| Parameters                    | 1270 nm (upstream)                         | 1310 nm (upstream)                         | 1490 nm (downstream)            | 1577 nm (downstream)            |
|-------------------------------|--------------------------------------------|--------------------------------------------|---------------------------------|---------------------------------|
| Passband <sup>1</sup> (nm)    | 1260 ~ 1280                                | 1290 ~ 1330                                | 1470 ~ 1505                     | 1570 ~1585                      |
| Measurement range (dBm)       | -30 ~ 10                                   | -30 ~ 10                                   | -45 ~ 10                        | -45 ~ 10                        |
| Damage level (dBm)            | > 10                                       | > 10                                       | > 10                            | > 10                            |
| Isolation (dB)                | > 30 (@ 1310 nm)<br>> 40 (@ 1490, 1577 nm) | > 30 (@ 1270 nm)<br>> 40 (@ 1490, 1577 nm) | > 40<br>(@ 1270, 1310, 1577 nm) | > 40<br>(@ 1270, 1310, 1490 nm) |
| Uncertainty <sup>2</sup> (dB) | 0.5                                        |                                            |                                 |                                 |
| PDL (dB)                      | < 0.25                                     |                                            |                                 |                                 |
| Linearity (dB)                | 0.1                                        |                                            |                                 |                                 |
| Insertion Loss (dB)           | < 1.5                                      |                                            |                                 |                                 |
| ORL (dB)                      | 50                                         |                                            |                                 |                                 |

**Note 1:** FWHM

**Note 2:** At calibration conditions

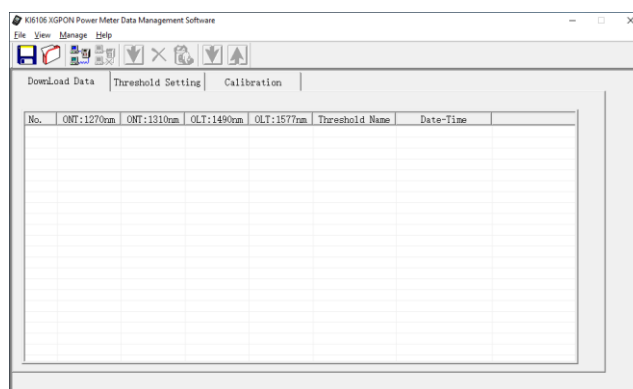
### GENERAL SPECIFICATIONS

| Parameters                                 | Value                                                                                                                                   |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Fiber type / Connector interface           | SM 9/125 $\mu$ m / Fixed SC-PC or SC-APC                                                                                                |
| Detector type                              | InGaAs                                                                                                                                  |
| Display                                    | 44 x 57 mm (1.73 x 2.24 "), back lit sunlight readable LCD                                                                              |
| Show Results                               | dBm / W / dB, pass / fail                                                                                                               |
| Display Resolution                         | 0.01 dB                                                                                                                                 |
| Auto off function                          | Selectable auto-off                                                                                                                     |
| Internal memory capacity                   | 99 records of 4 $\lambda$ test with timestamp                                                                                           |
| Battery type / life (continuous operation) | 7.4V 1000mAH rechargeable Lithium battery / 10 hrs                                                                                      |
| Power adaptor/charger                      | Input: 100~240V, 50/60Hz 0.3 A; US stype plug<br>Output: 8.4V, 0.5A; 1.3(ID) x 3.5(OD) x 9.5 (L) mm connector, ID=positive, OD=negative |
| Instrument case                            | 1.2 m drop tested                                                                                                                       |
| Operate / storage temperature              | -10 ~ 50 °C / -25 ~ 70 °C                                                                                                               |
| Relative humidity                          | 95%                                                                                                                                     |
| Size / Weight                              | 200 x 90 x 43 mm (7.87 x 3.54 x 1.69") / 0.4 kg (0.9 lb.)                                                                               |
| Recommended calibration cycle              | 3 years                                                                                                                                 |
| Warranty                                   | 1 year                                                                                                                                  |

Technical data is subject to change without notice as part of our program of continuous improvements.

## KINGFISHER PON POWER METER SOFTWARE

- Download testing data in the meter to a PC via USB
- Download/Upload threshold settings to the meter
- Calibration



## ORDERING INFORMATION

| Description                                        | Part number |
|----------------------------------------------------|-------------|
| Instrument, In-line 10G/XG PON Power Meter, SC/APC | KI 6106-APC |

Please enquire for nonstandard SC/PC connector.

The instrument comes with an external power supply/charger of US AC plug type. If required, order suitable AC plug adapter from OPTIONAL ACCESSORIES section below.

## STANDARD ACCESSORIES

| Description                             | Quantity |
|-----------------------------------------|----------|
| Power supply/charger with US style plug | 1        |
| SC/APC-SC/APC or SC/PC-SC/PC test cord  | 1        |
| USB cable: A-B(mini)                    | 1        |
| CD (Data Management Software & manuals) | 1        |
| Cleaning cotton stick pack              | 1        |
| Soft carry pouch                        | 1        |
| User manual                             | 1        |
| QA certificate (ISO9001 compliant)      | 1        |

## OPTIONAL ACCESSORIES

| Description                        | Quantity |
|------------------------------------|----------|
| Option, AC adaptor plug, US-to-UK  | OPT093   |
| Option, AC adaptor plug, US-to-AUS | OPT094   |
| Option, AC adaptor plug, US-to-EUR | OPT095   |

## AUTHORIZED DEALER

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