TTI introduces...

The FPM-250

Simply the BEST Shirt-Pocket Fiber Power Meter you can buy!

Dimensions: 5″ L x 2.5″ H x 1″ D, 130 mm L x 64 mm H x 25 mm D

- **+5 to-75 dBm dynamic range (+25 to -55 dBm for the CATV model)**
- **Four digit display for .01 db resolution**
- **Large area InGaAs detector for the ultimate performance at 1550 nm**
- **Universal 2.5 mm ferrule adaptor (1.25 mm ferrule adaptor optional)**
- **Two hundred hour battery life**
- **Storage of three reference values for dB relative measurements**
- **Auto-off mode for maximum battery life**
- **Virtually indestructible hard carrying/storage case included**

The FPM-250 is the result of years of refinement of light measurement technology. This small and rugged unit is comparable with fiber optic power meters many times it size and price.

The FPM-250 incorporates a large-area Indium Gallium Arsenide detector which provides much improved temperature stability at 1550 nm than the Germanium detectors used in convention instruments. This detector has much higher resistance than Germanium which enables the unit to deliver 15 to 20 dB greater sensitivity at the low end and, as a result, better linearity at intermediate power levels.

The FPM-250 is equipped with a simple universal 2.5 mm ferrule adaptor that accepts FC, ST, SC, DIN and similar connectors without the need for a multitude of costly and easy-to-lose screw-on adaptor caps.

For higher power optical measurements such as those frequently required in the CATV industry, the FPM-250 with HP (high power) option permits measurements of up to 25 dBm.

Each unit has three calibration wavelengths of 850, 1310, and 1550 nm. A reference level for each wavelength can be stored in non-volatile memory for the purpose of making loss measurements.

A battery saving Auto-Shutdown mode may be invoked whereby the unit will power itself down after 20 minutes without a key activation. Even without this feature, the 200 hour battery life far exceeds that of most competitive units.

The rugged carrying case provided with each unit protects the unit from virtually any abuse for years of use. (see photo on reverse)

The FPM-250 is by far the best value in fiber optic instrumentation today and is simply the best fiber power meter in its class. Contact us for a demo or additional information.

FPM-250 Fiber Optic Power Meter
Features and Specifications

Optical Power Measurement Range

+5 dBm to -75 dBm (3.16 mW to 31.6 pW)
+25 dBm to -55 dBm (316 mW to 3.16 nW)

Detector Type

1 mm dia. Indium Gallium Arsenide

Display

4 digit LCD, 0.5 in. high, .01 dB resolution

Fiber Optic Connector Interface

Universal 2.5 mm receptacle that accepts FC, ST, SC, DIN, E2000 connectors
Optional 1.25 mm receptacle

Calibrated Wavelengths

850 nm, 1310 nm, 1550 nm

Measurement Uncertainty

+/- 0.20 dB from 0 to -65 dBm,
+/- 0.27 dB from 0 to +3 dBm, and from -65 dBm to -77 dBm

Controls

On/Off, STOre REFerence, dB/dBm, λ (wavelength select)

Power

Four type N Alkaline cells power the unit for approximately 200 hours

Temperature Range

Operating: -15 to 50 °C
Storage: -25 to 60 °C

Size, Weight

Dimensions: 5″ L x 2.5″ H x 1″ D, 130 mm L x 64 mm H x 25 mm D
Weight: 6.5 oz, 185 g

Carrying Case

Crushproof, Gasketed and Waterproof

Size, Weight

Dimensions: 6.5" L x 4.5" H x 1.6" D
165 mm L x 114 mm H x 40 mm D

Weight: 6.5 oz, 185 g

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Why are InGaAs Detectors Better than Germanium?

Indium Gallium Arsenide detectors are ideal for fiber optic power measurements. InGaAs has a significantly higher shunt resistance than does Ge. This results in improved accuracy and less drift at low power levels. InGaAs has a band edge of approximately 1600 nm vs approximately 1550 for germanium. At wavelengths longer than the band edge, the temperature coefficient of either material increases dramatically. Thus at 1550 nm, the InGaAs detector is significantly more temperature stable than is Ge. This advantage becomes greater at longer wavelengths such as those used for supervisory functions.

The main disadvantage is cost.