

PRO IM-09 SOLAR IRRADIANCE METER

PRODUCT INTRODUCTION

The Metravi IM-09 is a pocket-sized, handheld device which is very convenient to hold & use while working on a sloping roof or even on top of a ladder. The IM-09 helps with installation and maintenance of solar panels and arrays.

The IM-09 is a multifunction instrument which measures Irradiance, Temperature, Inclination Angle and has a built in compass as well. It features a backlit, large LCD and a measurement range up to 1400 W/m² for solar power readings, built-in temperature and light irradiance sensors and automatic on/off to save battery life.

Irradiance is a measurement of Solar Power. It is basically the rate at which solar energy falls onto a surface. The unit of power is the Watts (W). Since it is a measure of power per unit area, Irradiance is typically quoted as W/m², that is, Watts per square meter.

Measurement of solar irradiance has several important applications, including predicting energy generation from solar power plants, calculating heating and cooling loads of buildings, climate modelling, weather forecasting, passive daytime radiative cooling applications, as well as space travel.

FEATURES

- Simultaneous measurements and readings for Temperature & Irradiance.
- Both internal sensor & external probe sensor available.
- Selectable °C/°F units.
- Measure Tilt Angle.
- Measure Basic Direction.
- Big, backlit LCD display.
- Low Battery Indicator.
- Auto Power Off.
- Data Hold.
- Compass is user-calibratable.





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TECHNICAL SPECIFICATIONS

IRRADIANCE

- Measuring Range: 0 - 1400W/m²
- Resolution: 1W/m²
- Accuracy: $\pm(5\% + 5 \text{ Digit})$

TEMPERATURE

- Measuring Range: -30°C to 100°C (-22°F to 212°F)
- Resolution: 0.1°C (0.2°F / 1°F @ >100°F)
- Accuracy: $\pm 1^\circ\text{C} (\pm 2^\circ\text{F}) @ -10^\circ\text{C to } 75^\circ\text{C} (14^\circ\text{F to } 167^\circ\text{F})$
 $\pm 2^\circ\text{C} (\pm 4^\circ\text{F}) @ -30^\circ\text{C to } -10^\circ\text{C} (-22^\circ\text{F to } 14^\circ\text{F})$
 $\pm 2^\circ\text{C} (\pm 4^\circ\text{F}) @ 75^\circ\text{C to } 100^\circ\text{C} (167^\circ\text{F to } 212^\circ\text{F})$

INCLINATION ANGLE

- Measuring Range: -90° to +90°
- Resolution: 0.1°
- Accuracy: $\pm 1.5^\circ @ -50 \text{ to } +50^\circ$
 $\pm 2.5^\circ @ -85^\circ \text{ to } -50^\circ \text{ and } +50^\circ \text{ to } +85^\circ$
 $\pm 3.5^\circ @ -90^\circ \text{ to } -85^\circ \text{ and } +85^\circ \text{ to } +90^\circ$

COMPASS

- Measuring Range: 0° to 360°
- Resolution: 1°
- Accuracy: $\pm 7^\circ$

GENERAL

- Display:
- Certification: IP54 Dust & Splash Proof
- Power: 4* AA 1.5V alkaline batteries
- Operating Temperature: Tester -10°C to 50°C (14°F to 122°F)
Probe -30°C to 100°C (22°F to 212°F)
- Operating Humidity: $\leq 80\%RH$
- Storage Temperature: 30°C to 60°C (22°F to 140°F)
- Storage Humidity: $\leq 80\%RH$
- Weight:
- Dimensions: