

## HT307 - HT309 - HT204 LUXMETERS AND POTABLE SOLAR POWER METERS

HT307 and HT309 are digital luxmeters to measure lighting up to 20kLux (HT307) and 400kLux (HT309) through silicon photodiode. HT309 permits also lighting measurement of LED sources with several colours setting the corresponding correction factors. HT204 is a digital solar meter to measure solar radiation up to 2000W/m<sup>2</sup> very useful in industrial photovoltaic installations for the evaluation of solar power incidence on panels.

FUNCTIONS	HT307	HT309
Measurement range (Lux/Fc)	0.01 ÷ 200kLux 0.01 ÷ 20kFc	0.01 ÷ 400kLux 0.01 ÷ 40kFc
Lighting measurement (Cd)		•
Lighting measurement of LED sources		•
Accuracy	±3%rdg	
Zeroing	Manual with trimmer	Digital
Autorange		•
Spectral response correction	•	•
Data HOLD, MAX/MIN	•	•(even AVG)
Internal memory		•
DC analogical output	•	
Auto Power OFF		•
Reference standards	Class A JIS C 1609:1993	Class A JIS C 1609:1993 + CNS 5119

### ACCESSORIES HT307-HT309

#### Standard

Jack for DC analogical output connection  
(HT307 only)

Trimmer adjustment screwdriver  
(HT307 only)

Carrying bag

Test certificate

Battery

User manual

### ACCESSORIES HT204

#### Standard

Carrying bag

CE conformity declaration

Battery

User manual

FUNCTIONS	HT204
Measurement range	1 ÷ 1999 W/m <sup>2</sup> 1 ÷ 634 BTU/(ft <sup>2</sup> * h)
Resolution	1W/m <sup>2</sup> 1BTU/(ft <sup>2</sup> *h)
Accuracy	10 W/m <sup>2</sup> or 5% (whichever is the greater) 1 BTU/(ft <sup>2</sup> * h) or 5% (whichever is the greater)
Unit of measurement	W/m <sup>2</sup> and BTU/(ft <sup>2</sup> *h)
Zeroing	Manual with trimmer
Unit of measurement	W/m <sup>2</sup> and BTU/(ft <sup>2</sup> * h)
Manual range	•
Data HOLD, MAX/MIN	•



**HT204**  
HA000157

**HT307**  
HA000309

**HT309**  
HA003090



## 1. TECHNICAL SPECIFICATIONS

Accuracy is indicated as [% rdg]. It is referred to the following reference conditions: 23°C ± 5°C with RH < 80%. The luxmeter is calibrated with standard incandescent lamp at color temperature 2856 K and corrected LED in white, yellow, green, blue, red LED light spectrum

### Illuminance measurements (Autorange)

Range (Lux)	40	400	4k	40k	400k
Resolution (Lux)	0.01	0.1	1	10	100
Accuracy	± (3% rdg)				

Range (Fc)	40	400	4k	40k
Resolution (Fc)	0.01	0.1	1	10
Accuracy	± (3% rdg)			

- 1Fc (Footcandle)=10.76Lux, 1Klux=1000Lux, 1Kfc=1000fc.
- For temperature/color different form reference, accuracy its 6%rdg

### Luminous intensity measurements (Autorange)

Range (Cd)	depend on Lux(Fc) measurements
Range distance	0.01 ÷ 30.47m (0.01 ÷ 99.99ft)

- Luminous intensity (Cd) = Illumination (Lx/Fc) x distance (m<sup>2</sup>/ft<sup>2</sup>)

### Specifications

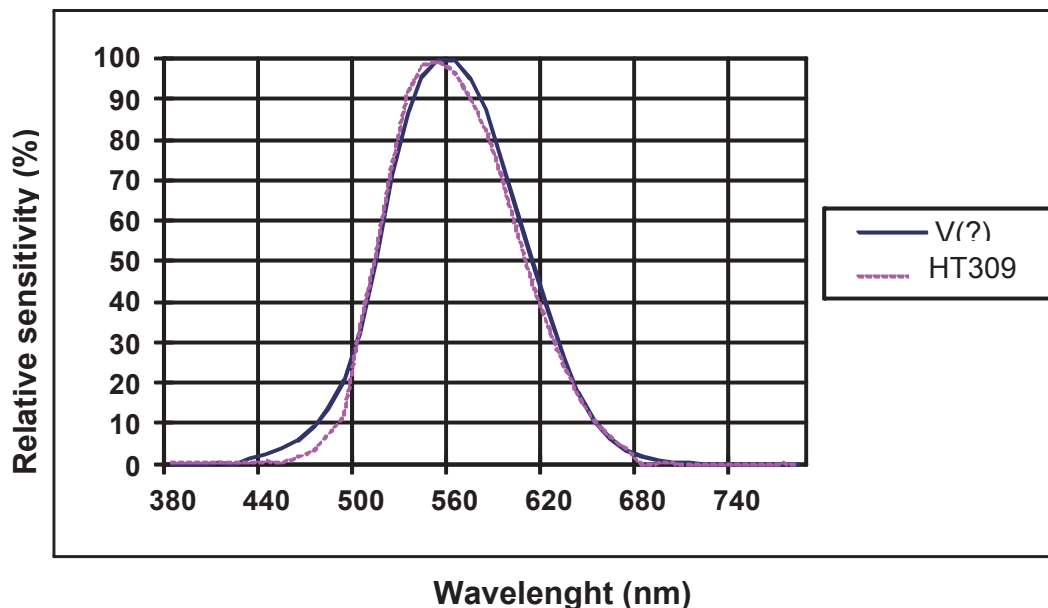
Spectral response: CIE Photopic. (CIE human eye response curve).  
Accuracy on angular deviation from cosine curve: 30° (± 2%), 60° (± 6%), 80° (± 25%)

### Light source specifications

LED colour	White	Red	Yellow	Green	Blue	Purple
Light source factor	0.99	0.516	0.815	1.216	1.475	1.148

### Spectral sensitivity

The photodiode with filters makes the spectral sensitivity almost meet the CIE photo-optic curve V(λ) as shown below.



### Photo detector

The photo detector is a silicon photodiode with spectral response filter.



## 2. GENERAL SPECIFICATIONS

### Features

Data HOLD  
MAX/MIN/AVG  
Digital Zero adjustment  
Autorange  
Internal memory: max 99 locations  
Recall and Clear memory

### Mechanical characteristics

Meter sizes: 130(L) x 55(W) x 38(H)mm  
Sensor sizes: 80(L) x 55 (W) x 25(H) mm  
Weight (including battery): 250g

### Supply

Battery type: 1x9V type IEC 6F22 JIS 006P  
Low battery indication: "⚡" is displayed when the battery level is too low.  
Battery life: about 200 hours  
Auto Power OFF: after 5 minutes of idleness (disable)

### Display

Characteristics: LCD, 4000 points, with "OL" indication.  
Sample rate: 2.5 times/sec

### Standards considered

Standard guidelines: JIS C 1609:1993 and CNS 5119  
general Class A specification

## ENVIRONMENTAL CONDITIONS

### Climatic conditions

Reference temperature:  $23^{\circ} \pm 5^{\circ}\text{C}$   
Operating temperature:  $-5 \div 40^{\circ}\text{C}$   
Operating humidity: <80% RH  
Storage temperature:  $-10 \div 60^{\circ}\text{C}$   
Storage humidity: <70% RH  
Max altitude of use: 2000m  
Pollution degree: 2

This product conforms to the prescriptions of the EMC directive 2004/108/EEC