



*auto range*

*0 to 50,000 Lux, 3 ranges*

# LIGHT METER

Model : LX-113S



Your purchase of this LIGHT METER marks a step forward for you into the field of precision measurement. Although this LIGHT METER is a complex and delicate instrument, its durable structure developed. Please read the following instructions carefully and always keep this manual within easy reach.

## OPERATION MANUAL



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# 1. FEATURES

- \* 2,000/20,000/50,000 Lux , Autorange.
- \* Light sensor used the exclusive photo diode & color correction filter, spectrum meet C.I.E. photopic.
- \* Light sensor cosine correction factor meet standard.
- \* Separate Light Sensor allows user to measure the light at an optimum position.
- \* Light meter can default the display unit to Lux or Ft-cd with default.
- \* Zero key function.
- \* Sepeare light probe, easy operation
- \* Microprocessor circuit.
- \* DC 9V battery ( 006 P ).
- \* Microcomputer circuit provides high accuracy.
- \* Data hold function for freezing the desired value.
- \* Built-in low battery indicator.



## 2. SPECIFICATIONS

### 2-1 General Specifications

Circuit	Custom one-chip of microprocessor LSI circuit.
Display	LCD size : 44 mm x 29 mm dual function LCD display.
Light Meter	<i>Range :</i> 0 to 50,000 LUX 0 to 5,000 Feet-candle ( Ft-cd ), * 3 ranges * Auto range.
	<i>Unit :</i> LUX, Feet-candle ( Ft-cd ).
	<i>Sensor :</i> The exclusive photo diode & color correction filter, spectrum meet C.I.E. Cosine correction factor meet standard.
	<i>Zero Adjustment :</i> External adjustment by pushing button.
Over Indication	Show " - - - - - ".
Data Hold	Freeze the display reading.
Sampling Time of display	Approx. 1 second.
Power off	Manual off by push button.
Operating Temperature	0 to 50 °C .
Operating Humidity	Less than 80% R.H.
Power Supply	006P DC 9V battery ( Alkaline or Heavy duty type ).
Power Current	Approx. DC 5 mA
Weight	278 g/0.61 LB. * Include light probe and battery.



Dimension	Meter	135 x 60 x 33 mm. ( 5.3 x 2.4 x 1.3 inch ).
	Light probe	82 x 55 x 7 mm ( 3.2 x 2.2 x 0.3 inch ).
Accessories Included	Instruction manual.....	1 PC
	Light probe.....	1 PC
Optional Accessories	* Carrying case, CA-52A.	

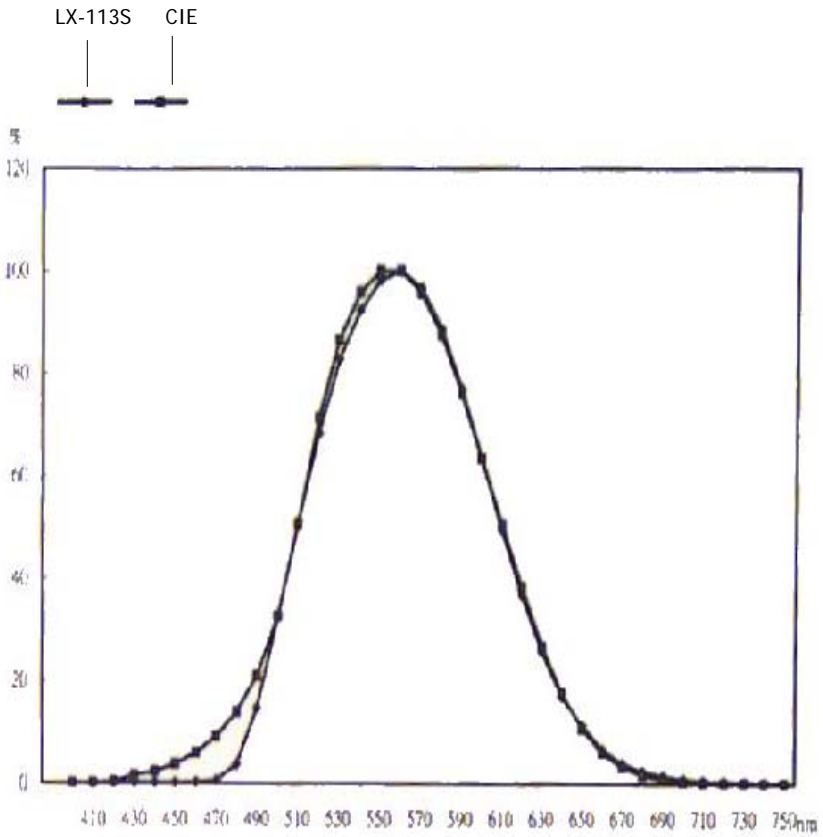
### ***2-2 Electrical Specifications (23± 5 °C)***

LUX @ auto range			
<b>Range</b>	<b>In-range Display</b>	<b>Resolution</b>	<b>Accuracy</b>
2,000 LUX	0-1,999 LUX	1 LUX	± ( 5 % + 4 LUX )
20,000 LUX	2,000-19,990 LUX	10 LUX	± ( 5 % + 40 LUX )
50,000 LUX	20,000-50,000 LUX	100 LUX	± ( 5 % + 400 LUX )

Feet-candle ( Ft-cd ) @ auto range			
<b>Range</b>	<b>In-range Display</b>	<b>Resolution</b>	<b>Accuracy</b>
200 FC	0-199.9 Ft-cd	0.1 FC	± ( 5 % + 0.4 FC )
2,000 FC	200-1,999 Ft-cd	1 FC	± ( 5 % + 4 FC )
5,000 FC	2,000-5,000 Ft-cd	10 FC	± ( 5 % + 40 FC )
@ FC = Ft-cd			



### 2-3 Spectrum for Light Sensor







## 4. GENERAL MEASURING PROCEDURE

The meter default value are :

*\* The light unit is LUX..*

### 4-1 Light measurement

2) Power on the meter by pressing the " Power button " ( 3-2, Fig. 1 ) once.

The display show the Light unit ( LUX or Ft-cd ), the meter is ready for the light measurement.

or Ft-cd →

LUX 631

*\* During the power on , if press the " Power button " ( 3-2, Fig. 1 ) once again will off the meter.*

3) Position the " Light Sensor " ( 3-5, Fig. 1 ) directly under the light source.

The display will show the measuring light value that sensing from the " Light sensor " .

### Change the light measuring unit

If press the " UNIT button " ( 3-3, Fig. 1 ) > 2 seconds will change the the measurement unit from " LUX " to " Ft-cd " ( or from the Ft-cd " to " LUX " ) with default.





## **Zero Adjustment**

Cover the Light Sensor ( 3-5, Fig. 1 ) with " Light probe cover " ( 3-8, Fig. 1 ) completely, press the " ZERO button " ( 3-6, Fig. 1 ) once, the display will show zero value.


\* *The zero adjustment can be executed when display value is within 10 LUX.*

### **4-2 Data Hold**

During the measurement, press the " HOLD button " ( 3-3, Fig. 1 ) once will hold the measured value & the LCD will display a " HOLD " symbol.

\* Press the " HOLD button " once again will release the data hold function.

## **5. BATTERY REPLACEMENT**

- 1) When the left corner of LCD display show "  it is necessary to replace the battery. However, in-spec. measurement may still be made for several hours after low battery indicator appears before the instrument become inaccurate.
- 2) Open the " Battery Cover " ( 3-7, Fig. 1 ) away from the instrument and remove the battery.
- 3) Replace with 9V battery ( Alkaline or Heavy duty type ) and reinstate the cover.
- 4) Make sure the battery cover is secured after changing the battery.

## **6. OPTIONAL ACCESSORIES**

Carrying case CA-52A	Soft carrying case with sash. ( 200 x 80 x 50 mm )
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