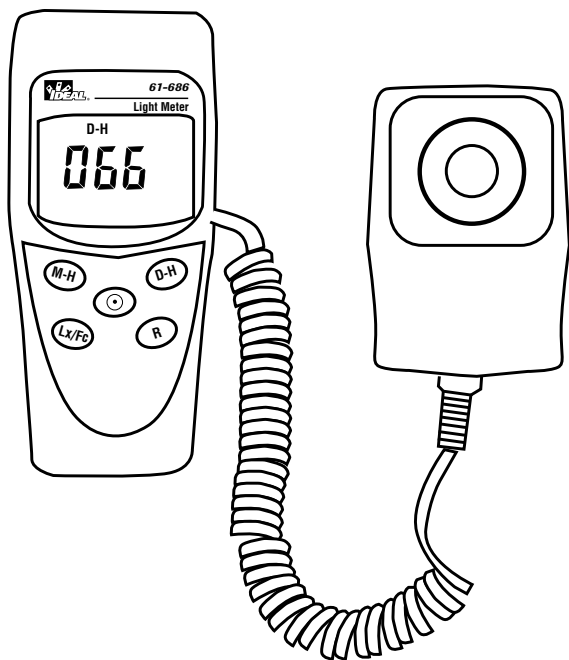




61-686

## ***Light Meter Operating Instructions***



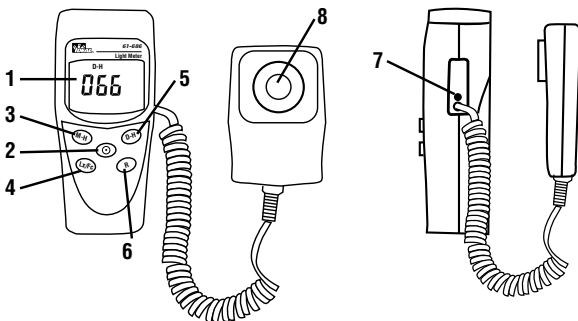
## IMPORTANT SAFETY INFORMATION

### **CAUTION**

Take extreme care for the following conditions while measuring

- Do not operate the meter in an environment with explosive gas, combustible gas steam or an area filled with dust.
- If erratic operation occurs please replace the battery immediately.
- In order to avoid damage caused by contamination or static electricity, do not service the unit.
- Verify the meter is working properly by taking a reading on a known measurement.

## INSTRUMENT DESCRIPTION



1. **Display(LCD):** Displays measurements and function symbols
2. **Power Button:** Switches the meter on and off.
3. **M-H:** Max Hold Button
4. **Lx/Fx:** Unit of measure button
5. **D-H:** Data Hold Button
6. **R:** Range Button
7. **0 ADJ:** Zero Adjustment
8. **Light Sensor**

## INTRODUCTION

The 61-686 meter measures light from fixtures that are equipped with fluorescent, metal halide, high-pressure sodium and incandescent light sources.

The foot-candle unit is defined as the amount of illumination the inside surface an imaginary 1-foot radius sphere would be receiving if there were a uniform point source of one candela in the exact center of the sphere. Alternatively, it can be defined as the illuminance on a 1-square foot surface of which there is a uniformly distributed flux of one lumen. This can be thought of as the amount of light that actually falls on a given surface. The foot-candle is equal to one lumen per square foot.

The SI derived unit of illuminance is the lux. One foot-candle is equal to approximately 10.764 lux, although in the lighting industry, typically this is approximated as 1 footcandle being equal to 10 lux.

$$\frac{\text{Nbr. of Lumen}}{\text{Area (sq. foot or sq. meter)}}$$

Nbr. of Lumen = Nbr. of foot (or meter) x area

Foot-candle / Lux conversion

1 foot-candle = 10.764 lux

1 lux = 0.09290 foot-candles  
(sq. foot or sq. meter)

## OPERATING THE METER

1. Press the "⊙" button to turn the power on or off
2. Remove the sensor's cap and place the sensor in the area to be measured.
3. Press the Lx/Fc button to select the desired units of measure. Fc is the default.
4. Read the light level on the display. If the measurement is out of range, an OL will appear in the display. Press the Range button to change the range.
5. To save the current value on the LCD press the Data Hold button. Press the Data Hold button again to resume normal measuring.
6. To capture the maximum reading while taking measurements, press the Max Hold button to capture the maximum value. Press max Hold button again to resume normal measuring.
7. After testing, replace the light sensor cap and press the power button to turn off the meter.

## ZEROING THE METER

Turn the meter on with the sensor cap in place over the light sensor. The value should read 000 in any range. If the meter does not read 000, adjust 0 ADJ with a small screwdriver until the reading indicates 000.

## SPECIFICATIONS:

Display	2000 count LCD display	
Sensor	Silicon photodiode and filter	
Measuring Range	200,2000, 20000,200000 Lux 20,200,2000,20000 Footcandles	
Accuracy	±3% (Calibrated to standard incandescent lamp 2856°K) 8% all other visible light sources	
Angle deviation from cosine characteristics	30°	±2%
	60°	±6%
	80°	±25%
Power Supply	9V NEDA 1604, IEC 6F22, JIS 006P battery x 1pc	
Battery life	Approximately 200 hours	
Dimensions	Meter: 1.5 (H) x 2.2 (W) x 5.1 (L) in. 38 (H) x 55 (W) x 130 (L) mm Sensor 9.8 (H) x 2.2 (W) x 3.1 (L) in. 25 (H) x 55 (W) x 80 (L) mm	
Weight	Approx. 8.8 oz. (250 g) with battery	
Accessories	User's manual,carrying case, 9V battery	
Length of cable for light sensor: Approx. 4.92 ft. (1.5M)		

**Operating Environment:** Indoor use only. This instrument has been designed for use in an environment with pollution degree 2.

**Operation Altitude:** Up to 2000M.

**Operating Conditions:** 14 to 104 (-10°~ 50°) Humidity: 0%~ 80% RH.

**Storage Conditions:** 14 to 104 (-10°~ 50°) Humidity:

0%~ 70% RH.

**EMC:** EN61326(1997)+A1(1998)+A2(2001)


## **MAINTENANCE:**

### **BATTERY REPLACEMENT**



#### **WARNING**

If the symbol "" appears on the LCD replace the battery immediately.

When the battery power falls low, the battery symbol "" will appear on the display. Replace the one (1) 9V battery by removing the battery cover and accessing the battery compartment. Observe polarity when replacing the battery. Install the battery cover.

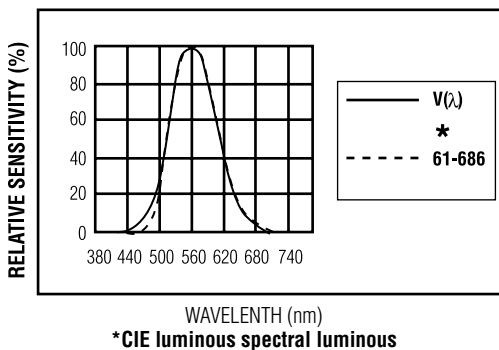
### **CLEANING AND STORAGE**

1. The white plastic light sensor should be cleaned with a damp cloth when necessary.
2. When the meter is not in use keep the light sensor covered with the light sensor cap.
3. Remove the battery if the unit is not used for an extended period of time.
4. Store the meter in an area with moderate temperature and humidity (refer to the operating and storage range in the specifications chart)

## RELATIVE SPECTRAL SENSITIVITY

Peak sensitivity wavelength: 550nm

Typ.  $T_a=23^{\circ}$



## **WARRANTY STATEMENT**

This tester is warranted to the original purchaser against defects in material and workmanship for two years from the date of purchase. During this warranty period, IDEAL INDUSTRIES, INC. will, at its option, replace or repair the defective unit, subject to verification of the defect or malfunction.

This warranty does not cover fuses, batteries or damage from abuse, neglect, accident, unauthorized repair, alteration, or unreasonable use of the instrument.

Any implied warranties arising out of the sale of an IDEAL product, including but not limited to implied warranties of merchantability and fitness for a particular purpose, are limited to the above. The manufacturer shall not be liable for loss of use of the instrument or other incidental or consequential damages, expenses, or economic loss, or for any claim or claims for such damage, expenses or economic loss.

State laws vary, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

**IDEAL INDUSTRIES, INC.**

Sycamore, IL 60178, U.S.A.

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