LATNEX

LUX Led Light Meter
LM-50KL

HB4LM50KL001

.

CONTENTS

1. Description

Measures light from visible luminaries equipped with white light LED, fluorescent, metal halide, high-pressure sodium and incandescent sources.

2. Accessories

1	Meter
1	9 Volt battery
1	Manual
1	Carrying Case

3. Safety Precaution

CAUTION

Be extremely careful for the following conditions while measuring

Do not operate the meter under the environment with explosive gas (material), combustible gas (material) steam or filled with dust.

In order to avoid reading incorrect data, please replace the battery immediately when the symbol "" appears on the LCD.

Operating Environment: Indoors use. This instrument has been designed for being used in an environment of pollution degree 2.

Operation Altitude: Up to 2000M.

EMC: EN61326-1:CISPR 11:Group 1, ClassA

Class A – Equipment for use in all establishments other than domestic.

Group 1 – RF energy generated is needed for internal functioning.

4. Preface

The flux of light received in a unit area of a certain side being shown is popularly known as illumination. The measuring unit in both United Kingdom and America is known as footcandles light, but in Europe it is also known as meter candlelight.
One foot-candles light is the illumination of light that falls on one side which is one foot away from a one foot-candlelight and exactly intersecting with the light. Its abbreviated form is written as 1 Fc=1 Lm/ft, similarly, one-meter candlelight is the illumination of light that falls on a side which is one meter away from a one meter candlelight and exactly intersecting the light. It is also called Lux i,e. the flux of light being received in each sq. meter is called the illumination of one lumen.

1 FC=10.764 LUX, 1 LUX=0.09290 FC,
therefore,Nbr. of foot (meter) candlelight =

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

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

5. General Specifications

- Overload Indication: LCD screen will show “OL” on the upper left-hand corner.
- Low battery Indication”  ”.
- Sampling Rate: 2.5 times per second for digital display.
- Spectral response close to CIE luminous spectral efficiency.
- Cosine Angular corrected.
- According to JIS C 1609:1993 and CNS 5119 general A class Specifications.
- Measuring lights source: LED white light and all visible light.
- Measuring intensities of illumination in Lux or footcandles.
- Many applications include: Warehouses, factories, office buildings, restaurants, schools, library, hospitals, photographic, many video, parking garages, museums, art galleries, stadiums, building security.
- Data hold.
- Maximum hold.
- Zero adjustment.
- Operating Temperature & Humidity: 5℃ ~ 40℃, 0%~ 80%RH.
- Storage Temperature & Humidity: -10℃ ~ 60℃, 0%~ 70%RH.

6. Electrical Specifications

Display of LM-50KL	2000 count, maximum display 1999	
Sensor	Silicon photodiode and filter	
Measuring Range of	200,2000, 20000,200000 Lux 20,200,2000,20000 Footcandles	
Accuracy	±3% (Calibrated to standard incandescent lamp 2856◦K) 8% other visible light source	
Angle deviation from cosine characteristics	10 ○	±0.5%
	30 ○	±2%
	50 ○	±3%
	60 ○	±6%
	80 ○	±25%
Power Supply	9V NEDA 1604, IEC 6F22, JIS 006P	
Battery life	About 200 hours	
Dimensions	Meter: 38 (H) x 55(W) x 130(L) mm 1.5(H)x 2.2(W) x 5.1(L) inch Sensor: 25(H) x 55(W) x 80(L) mm 9.8H)x 2.2(W) x 3.1(L) inch	
Weight	250 g (include battery)	
Length of wring for light sensor: Approx. 1.5M		

7. Operation

1. Press the "  " button to turn power on or off.
2. Remove sensor cap and place the sensor perpendicular to the light.
3. Select LUX or FC.
4. When "OL" is shown on the LCD screen, press the  button for useable reading.
5. If you want to keep the reading value on the LCD screen permanently after testing, press the "  " button.
6. When done testing, replace the sensor cover to protect the filter and sensor.

- **Data Hold**
  Freezes the reading present on the LCD screen at the moment the button is pressed.

- **R (LM-50KL)**
  Press the manual ranging button for usable reading.

- **ZERO (LM-50KL)**
  Adjust to 0, ADJ to enable LCD to indicate 000 on the screen.

- **M-H (LM-50KL)**

  Press 

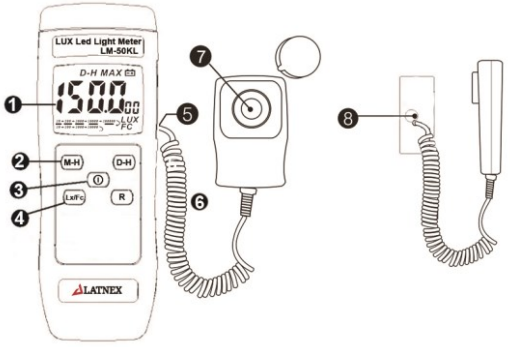
button to Lockup data maximal value of measure data.

- **LX/FC (LM-50KL)**

  Illuminance Lux or Foot candle measuring unit button.

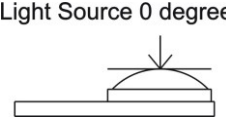
8. Instrument Description of LM-50KL

1. Display (LCD).
2. MAX HOLD.
3. Power Button: ON/OFF.
4. Lux/Fc button
5. DATA HOLD button.
6. Range button.
7. Photo detector.
8. Zero Adjustment.



9. Attention

- Set for referring the testing of source of light is located at the right top end (0 degree) of the light sensor ball plane.



- When the meter is not in use, please keep the cap of the light sensor in its place to avoid the photo diode from wearing out.
- When it is not in use for a long time, please take the batteries away. And avoid keeping it in a place of high temperature and humidity.

10. Recommended Levels of Illumination

Suitable levels of illuminance
(According to the JIS standard Z 9110-1979)

Offices

Illuminance (lux)	Place
1500 to 750	Offices, designing, drawing rooms
750 to 300	Offices, conference rooms, computer rooms
300 to 100	Workrooms, corridors, stairways, restrooms
75 to 30	Indoor emergency stairways

Factories

Illuminance (lux)	Place
3000 to 1500	Where such work as assembling, inspecting testing, selecting, extremely precision visual work
1500 to 750	Assembling, inspecting, testing, selecting, precision visual work
750 to 300	Assembling, inspecting, testing, selecting and visual ordinary work
300 to 150	Wrapping and packing
75 to 30	Indoor emergency stairways

Schools

Illuminance(lux)	Place
1500 to 300	Precision drawing or drafting, precision experimenting, library
750 to 200	Classrooms, library reading rooms, staff rooms, gymnasia
300 to 75	Lecture halls, assembly rooms, locker rooms, corridors, stairways and restrooms
75 to 30	Warehouses and emergency stairways
10 to 2	School passages

11. Battery Replacement

	WARNING
	If the symbol " -+ " appears on the LCD, please replace the battery immediately

Remove the battery cover
Replace the battery.
Install the battery cover.

12. DISPOSAL

Caution: this symbol indicates that equipment and its accessories shall be subject to a separate collection and correct disposal