

**DIGITAL LIGHT METER**

*92.88*

**MODEL YF-170**

**OPERATING MANUAL**

Thank you very much for your patronage. Please read the manual carefully for proper operation and best function of this device prior to using.

## - PREFACE

**Illumination:** The flux of light received in a unit area of a certain side being shone is popularly known as illumination. In both United Kingdom and America its unit is known as foot candlelight, but in Europe it is known as meter candlelight. One foot candlelight is the illumination of light which falls on one side that lies in a distance one foot away from a one foot candlelight and exactly intersecting the light. Its abbreviated form is written as 1 Fc=1 Lm/ft, Similarly, one meter candlelight is the illumination of light which falls on a side that lies in a distance one meter away from a onemeter candlelight and exactly intersects 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.

As one foot candle=10.76 Lux, therefore,

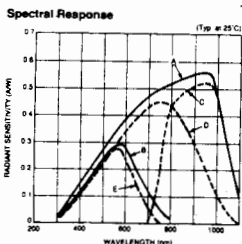
$$\text{Nbr. of foot (meter) candlelight} = \frac{\text{Nbr. of Lumen}}{\text{Area(sq. foot or sq. meter)}}$$

$$\text{Nbr. of Lumen} = \text{Nbr. of foot (or meter)} \times \text{area (sq. foot or sq. meter)}$$

## 1.FEATURES

- Silicon Photodiodes
- Features: For visible Light
- Spectral Response
- Range Mark (nm): 320-730/E 80E
- Peak Wavelength (nm): 560
- Silicon Diode light receiving wave is found to long and extensive in area.

- Testing: Lux and Fc are available for selection.
- Ranges for Lux: 200, 2000, 20000 Lux  
Fc: 20, 200, 2000 Fc.
- Testing Range: Lux from 0.1 ~ 20000 Lux.  
Fc from 0.01 ~ 2000 Fc
- With DATA HOLD function which allows testing indication value to be fixed at will.
- Large size LCD indication, featured for low battery indication function.



## 2. SPECIFICATIONS

- 1) Indication: 3 1/2 digit LCD with Maximum indication value 9999.
- 2) Overload indication: Indicated by '1' at the highest position on the left lateral side.
- 3) Low battery indication: when "⎓" is indicated by the LCD indicator, it means that the battery should be renewed.
- 4) Battery life: Approximately 200 hours.
- 5) Operation temperature/humidity: 0 °C ~ 40 °C ,  
Below 80% RH.
- 6) Length of wiring for light receiver: Approximately 1.5 m.
- 7) Power supply: 006P DC 9V.
- 8) Dimension and weight of meter:

Dimension: 143 × 74 × 34mm. Weight: 215g

LUX	Accuracy	FC	Accuracy
200	± 3% rdg	20	± 3% rdg
2000	± 3% rdg	200	± 3% rdg
20000	± 5% rdg	2000	± 5% rdg

9) Dimension and weight of light receiver:

Dimension: 60 × 80mm. Weight: 60g

10) Accessory: One operation manual, one light receiver cover, one carrying case and one battery.

11) Specifications

(Rectification should be made based on the standard of color temperature 2856 ° K)

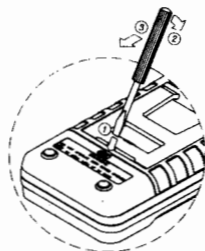
Remark: When LCD indicates Lux, the unit will be Lux,  
When there is no indication, the unit will be Fc.

### 3. OPERATION PROCEDURE

- 1) Open the carrying case, Retate the upper cap until it turned to the bottom.
- 2) Turn on the Power Switch. Choose the unit of Lux or Fc which you want to test. Then choose the right range appropriate for testing.
- 3) Remove the cover of the light receiver, Put the light receiver at the spot where the testing of source of light is to be conducted, Auto testing will then be conducted by the meter, Read the testing value after the reading indicated becomes stable.
- 4) when "1" is shown at the highest position at the left lateral side, overload is indicated, Then please choose another range which is located at a comparatively higher position.

Attention: when testing is fixed at the range of 20000 Lux, the numerical value shown by the indicator must be multiplied by 10 times to get the true value tested.



- 5) If you want to keep the reading value on the LCD permanently after testing, press the HOLD Key whereby the reading value will be locked permanently up. Press the HOLD Key once again when you want to remove the previous locking.
- 6) After testing, put the cover of the light receiver back to its former position, and turn off the switch.
- 7) After testing is completed, the indication value should be 000 no matter what its range would be after putting the cover of the light receiver back to its former position. Please adjust VR1 (0 ADJ) to enable LCD to indicate 000 if zero cannot be recover. If zero still can not be recovered, it means that the meter breaks down.
- 8) Disassembling method of the battery: as indicated per the attached drawing
  1. Insert a screw driver into the OPEN hole of the battery cover.
  2. Press the screw driver downward to enable it making entry into hole of the battery cover, and fix within the fixing hold.
  3. Press the screw driver backward. Then take off the battery cover.



#### 4. ATTENTION

- 1) In the measurement of illumination, the reading will

be caused to jump by the variance of power or the shadow of surrounding people. The condition of the surrounding temperature, air current and ventilation will also cause the source of light to vary.

- 2) When the source of light is received too early by the light receiver, the precision of the meter will be reduced. Always keep the cover of the light receiver in its place. Avoid to allow the light receiver to be come overloaded or avoid to input high source of light when testing is being conducted at low illumination.
  - 3) The mark set for referencing the testing of source of light is located at the right top end of the light receiving ball plane.
  - 4) When the meter is turned on and the light receiver cover is put in its place, 000 should be indicated by LCD, However, if the voltage of the battery varied and the low battery sign " " is still not yet indicated it, will easily prevent zero from being recovered when the meter is being switched on. VR1 should then be adjusted to turn it back to zero before measurement should be started.
  - 5) When low battery sign " " is indicated, the batteries should be renewed. If zero cannot be recovered after the battery has been renewed, Please adjust VR1 so as recover zero.
  - 6) When the meter is not in use, please keep the cover of the light receiver in its place to avoid the sensor from wearing out.
  - 7) When it is not in use for a long time, please take the batteries away. And avoid to keep it in a place of high temperature and humidity.
5. ATTACHED BELOW IS A STANDARD REFERENCE TABLE OF ILLUMINATION

illumination range & place	2000 LUX 3000 ↔ 1500	1000 LUX 1500 ↔ 700	500 LUX 700 ↔ 300	200 LUX 300 ↔ 150	100 LUX 150 ↔ 70	50 LUX 70 ↔ 30
School	.Precision Experiment .Blackboard .Drawing Office .Precision Drawing .Sewing Machine		.Store Room .Staircases .Corridor .Washbasin Stand		.A Firescape	
			.Classroom .A Gymnasium .Teaching Staff Office .Restaurant .Reading Room .Indoor Gymnasium		.Car Lane .Passage	
Office	.Calculating .Typing .Punching .Design and Drawing .Passage in a hall(in day time)		.Conference Room .Book Store .Reception Room .Lift		.Tea Room .Dressing Room .Warehouse .Washbasin Stand	
			.Restaurant .Entertainment Room			
Factory	.Ultraprecision Processing .Design and Drawing .Precision Impction		.Packaging .Metering .Surface Treatment .Warehouse Office Desk		.Dyeing .Foundry .Electric Room	
	.Design Room .Analysis .Assembly Line .Coating		.Frozen Food Compartment .Drying Room		.A Firescape	
Hospital	Surgical Operation Room		.Ward .Therapy .Drug Storage Room .Dressing Room		.Animals Room .Dark Room .A Firescape	
	.Visibility Examination		.Anatomization Examination .First-aid Treatment .Pharmacy		.Reading on bed in a ward .To change Fresh Dressing for a wound .Plaster Dressing for bone fracture	
Beauty Saloon a hairdresser's Saloon	.Hair Dyeing		.Injection .Medical Treatment Room .First-aid Room		.X-Ray Room .Ward Corridor	
	.Hairstyling .Make-up		.Hair Washing .Cashier's Counter		.In the saloon .Washbasin Stand	
Inns, Hotels Entertainment Place	.Counter (Cashier Counter)		.The door of a house .Banquet Hall		.Office .Restaurant .Toilet	
					.Entertainment Room .Corridor .Staircases	
Shops Department Store	.Display inside the shop .Window Display .Demonstration Venue		.Sitting Room .Conference Room		.Washbasin Stand .Toilet .Staircases	
	.Packaging Table					
Residence	.Household Handicraft .Tailoring		.Reading .Make-up .Kitchen		.Kitchen .Entertainment Room .Dinning table	
					.Wardrofe .Staircases .Bed Room .Corridor .Toilet .Study Room	