91.5.2.

HB2YF00172 10. YF-172-1

DIGITAL LIGHT METER

MODEL YF-172

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.

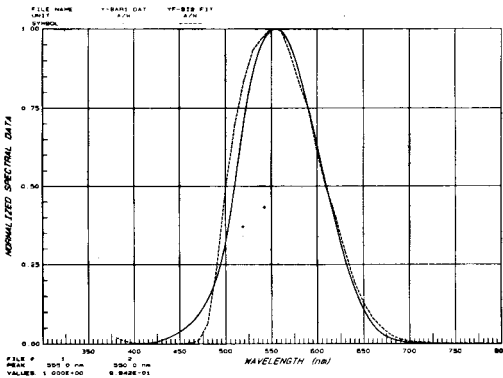
As one foot candle = 10.76 Lux, therefore,

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

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

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, 50000 Lux.
  Fc: 20, 200, 2000, 5000 Fc.
- Testing Range: Lux from 0.1 ~ 100000 Lux.
  Fc from 0.01 ~ 10000 Fc.
- With DATE HOLD function which allows testing indication value to be fixed at will.
- Large size LCD indication, featured for low battery indication function.
- MAX function: Hold the maximun value on the LCD indication.
- RANGE funtion: range touch selector.
- Lux/Fc function: For selsction of Lux or Fc.
- POWER Function:For power on and off.
- CLASS: Conforms to JIS C 1609 ~ 1993 general A class. (CNS A Level)
- Spectral Response



- Angled incident light characteristics:

ANGLE	Deviation from cosine characteristice
30°	± 2%
60°	± 7%
80°	± 25%

2. SPECIFICATIONS

1) Indication: 3 1/2 digit LCD with Maximun indication value 1999.
2) Overload indication: Indicated by "OL" 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 ℃ ~ 40 ℃ , 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: 200 X 98 X 40mm. Weight: 325g
9) Dimension and weight of light receiver: Dimension: 66 X 125mm. Weight: 110g.
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)
12)Sampling rate: 2.5 times persecond.

3. OPERATION PROCEDURE

1) Open the carrying case.
2) Turn on the Power Switch. Choose the unit of Lux of 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 "OL" 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 20000Lux, 50000Lux, 5000Fc, the numerical value shown by the indicator must be multiplied by 10 times or 100 times to get the true value tested.

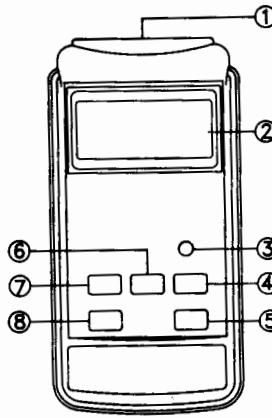
5) If you want to keep the reading value on the LCD permanently after testing, press the D-H Key whereby the reading value will be locked permanently up. Press the D-H Key once again when you want to remove the previous locking.
6) After testing, put the cover of the light receiver back to its former 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 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:
   1.Make the screw loose first and push the battery cover back.
   2.Then the battery cover can be seperated the meter.

4.PANEL DISPOSITION.

1).SENSOR Input connector: The sensor test input terminal.
2).Display (LCD): Display measurements and function symbols.
3).0 ADJ: If any digits appear in the LCD display. Then ADJ is indicated and the zero adjustment for all ranges is performed at the samtime.

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 Fireescape
			.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 .Reception Room	.Book Store .Lift	.Tea Room .Dressing Room .Warehouse .Washbasin Stand	.A Fireescape
			.Restaurant .Entertainment Room			
Factery	.Ultraprecision Processing .Desigh and Drawing .Precision Impection	.Design Room .Analysis .Assembly Line .Coating	.Packaging .Metering .Surface Treament .Warehouse Office Desk	.Dyeing .Foundry .Electric Room	.Frozen Food Compartment .Drying Room	.A Fireescape
Hospital	.Visibility Examination	Surgical Operation Room		.Ward .Therapy .Drug Storage Room .Dressing Room		.Animals Room .Dark Room .A Fireescape
		.Anatomization Examination .First-aid Treatment .Pharmacy	.Injection .Medical Treatment Room .First-aid Room	.Reading on bed in a ward .To change Fresh Dressing for a wound .Plaster Dressing for bone fracture	.X-Ray Room .Ward Corridor	
Beauty Saloon a hairdresser's Saloon	.Hair Dyeing	.Hairstyling .Make-up	.Hair Washing .Cashier's Counter	.In the saloon .Washbasin Stand	.Corridor .Staircases	
Inns, Hotels Entertainment Place		.Counter (Cashier Counter)	.The door of a house .Banquet Hall	.Office .Restaurant .Toilet	.Entertainment Room .Corridor .Staircases	.A Fireescape
Shops Department Store	.Display inside the shop .Window Display .Demonstration Venue	.Packaging Table	.Sitting Room .Conference Room	.Washbasin Stand .Toilet .Staircases		
Residence	.Household Handicraft .Tailoring		.Reading .Make-up .Kitchen	.Kitchen .Entertainment Room .Dinning table	.Wardrofe .Staircases .Bed Room .Corridor .Toilet .Study Room	

4).D-H switch: Touch D-H the meter captures a stable measurement and holds it in the display.
5).Lux/Fc Switch: For selecting switch Lux and Fc.
6).MAX: Lock up max, value of LCD.
7).POWER Switch: ON/OFF switching.
8).Range Selection switch: For selecting various ranges(resolutions).



5. ATTENTION

1) In the measeurement 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 ligth receiver, the precision of the meter will be reduced. Always keep the cover of the ligth 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 conduction at low illumination.
3) The mark set for referencing the testing of source of light is located at the rigth top end of the light recieving 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 should then be adjusted to turn it back to aero be fore measurement shoud 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 o ADJ 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. ATTACHED BELOW IS A STANDARD REFERENCE TABLE OF ILLUMINATION.