

Please carefully read this User's Manual before you use this Auto Digital Light Meter so that you can operate the instrument correctly and grasp the general skills for maintenance.

This Digital Light Meter is a precise instrument for environmental test, used for measuring the illuminance of different locations.

The unit of measurement for this instrument is Lux, equivalent to the illuminance on an area of 1 m² on which 1 lm of luminous flux is received at a distance 1 meter away from the light source. 1 Lux=10.76 fc

I. Specialties

- Spectrum response complying with standards of International Commission on Illumination;
- Measuring range: 0.1Lux~100-500 Lux;
- Resolution: up to 0.1 Lux;
- High accuracy and prompt response;
- Automatic switching of measuring range, quick and convenient;
- Automatic compensation for cosine angle of incident light;
- Holding for maximum measured value;
- Measuring relative value;
- Automatic reset when no sign is input;
- Automatic shut-off after ten minutes of non-operation state;
- Ultra-large LCD screen, convenient for data reading.

II. Technical features:

1. Displaying: 3 1/2 digit LCD displaying, font height 19mm.
2. Sampling rate: 2.5 times/second.
3. Min. resolution: 0.1Lux.
4. Photosensitive component: Si-light Cell attached with light filter.
5. Temperature characteristics: ±0.1%/°C.

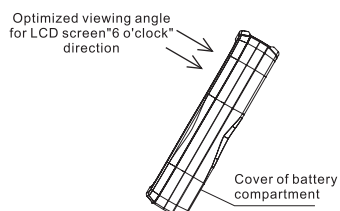
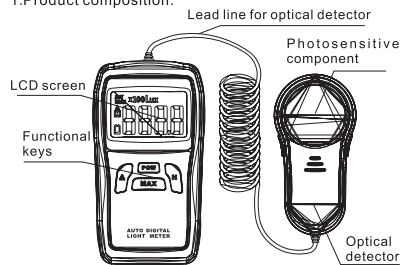
6. Repeated test: better than ±2%.
7. Technical index:

Measuring range	Resolution	Accuracy
0.1~200.0	0.1	±3%rdg+3Lux
200~2000	1	±2%rdg+2Lux
2000~20000 Displayed value multiplied by 10	10	±3%rdg+8Lux
20000~50000 Displayed value multiplied by 10	100	±4%rdg+10Lux
Over 50000 Displayed value multiplied by 100	100	Reading is for reference only.

8. When the value to be measured is 8% higher than the upper limit of the current measuring range, or 8% lower than the next measuring range, the meter will automatically switch the measuring range.
9. Standard flat lamp with color temperature 2856k is used for calibration.
10. Working temperature: 0~40°C, 0~80% Rh.
11. Storage temperature: -10~50°C, 0~85% Rh.
12. Power supply: one 9V layer-built battery, model: 6F22;
- Can provide power for 150 hours
13. Dimensions: 135 (L) ×74 (W) ×30 (H) mm.
14. Optical detector: 106 (L) ×54 (W) ×28 (H) mm.
15. Length of the lead line for optical detector: 150cm.
16. Weight: about 250g (including battery).
17. Attachments: User's Manual (1 copy), packing box, Certificate of Conformity;

III. Appearance

1. Product composition:



2. Keys and symbols:

- (1) POW: power switch key;
- (2) H: data holding key;
- (3) MAX: max value holding key;
- (4) ▲: key for measuring relative value;
- (5) □: icon indicating the low battery voltage.
- (6) AUTO: indicating the automatic switching of

measuring range;

- (7) Lux: illuminance measurement unit;
- (8) X10: displayed data shall be multiplied by 10 to obtain the measured value;
- (9) X100: displayed data shall be multiplied by 100 to obtain the measured value;
- (10) OFF: symbol indicating the shutoff state.

IV. Operating instructions

1. After the battery is loaded correctly, press POW key, after the ticking sound is heard, release the key. At the time, the LCD displays in full screen and the device enters into the self-check state. The self-check process will be finished in two seconds and then the device will enter into the normal working state.
2. First check whether the icon "□" is shown on LCD screen. If so, it means the battery voltage is below the normal level and the functions and accuracy of the Light Meter will be affected due to the over low voltage. In this case, the battery should be replaced in time (referring to the section "Maintenance"). Sometimes, if the battery voltage is excessively low, the Light Meter even won't be turned on.
3. Remove the protective cover of the optical detector and keep the cover properly. Aim the very top part of milky white Fresnel lens of the photosensitive component at the light source to be measured. At the time, the data displayed on LCD screen is the illuminance of the light source measured.
4. The Light Meter can switch its measuring ranges automatically, without the need of manual selection. When the measured value is over 2000Lux, the displayed data shall be multiplied by 10 to obtain the actual value; When the measured value is over 20000Lux, the displayed data shall be multiplied by 100 to obtain the actual value. The user shall notice that, if the value to be measured is over 50000Lux, the obtained data is for reference only and no guarantee on accuracy is provided.
5. In the course of measurement, if you want to keep the current data on LCD screen for reading and

recording, you can press the key "H". After you hear the ticking sound, the letter "H" will appear on LCD screen, and the measured data will become still. When you finish reading or recording the data, you can press the key "H" again, the holding state of measured data will be cancelled and the system return back to the measuring state.

6. In the course of measurement, if you want to record the maximum value, you can press the key MAX. After you hear the ticking sound, the character "MAX" will be displayed on LCD screen. At the time, the Light Meter enters into the maximum-value-holding state and only the maximum values of the measured data will be displayed. Press the key MAX again, the maximum value holding state will be cancelled after the ticking sound. Then the Light Meter enters into the measuring state.
7. During the measurement, if you want to directly know the illuminance difference between two environments, first place the Light Meter into first environment and wait till the data becomes stable, then press the key "▲" and, after you hear the ticking sound. At the time, the symbol "▲" appears on LCD screen and the data becomes "0". Then place the Light Meter into second environment, the data displayed on LCD screen is the illuminance difference between the two environments. Press the key "▲" again, the relative value state will be cancelled after the ticking sound is heard and the Light Meter returns to the measuring state.
8. This Light Meter can be set into an automatic shutoff mode that's activated after ten minutes of non-operation state. If any operation with the keys occurs, the automatic shutoff time will be delayed by another ten minutes. Normally, an indicative ticking sound will be heard before the instrument is shut off.
9. When the measurement is completed, first put back the protective cover of the optical detector, then press the key POW for more than two seconds. After you hear the ticking sound, the character OFF will appear on LCD screen. At the time, release the POW key to turn off the Light Meter.

1

2

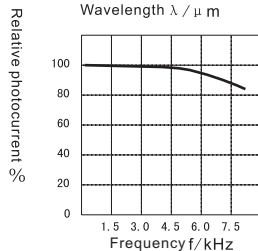
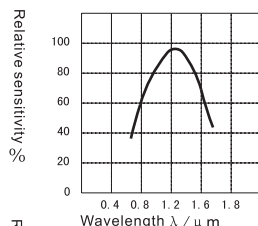
3

4

5

Maintenance/Illuminance criterion

V. Characteristic curves



VI. Maintenance

1. To ensure the service life, the user should try its best not to use this precise Light Meter in harsh environment so as to avoid decreasing the accuracy of the instrument or damaging it.
2. To ensure the accuracy of measurement, the user should not randomly change the wiring inside the Light Meter. As the sensitivity of the optical detector can be lowered down by the conditions and time of application, it is recommended that the Light Meter be calibrated regularly so as to

guarantee the accuracy.

3. If the Light Meter is not used for a long time, the battery should be taken out so as to avoid the liquid leakage that may damage the instrument.
4. If the icon indicating the low electricity quantity in the battery appears, the battery should be immediately replaced with a new 9V 6F22 battery or layer-built battery of the same type. To do that, first use a Philip's type screwdriver to remove the M3 machine screw that is used to fastening the cover of battery compartment. Then remove the cover, take out the used battery and load the new battery with cathode on the top and anode at the bottom. After the new battery is loaded, place the cover back and tighten it with the M3 machine screw by using a Philip's type screwdriver.
5. The external surface of the instrument should be kept clean. If there is any dirt on the surface, use soft cloth dipped with Bilizhu or other cleaning agent to remove it. It is prohibited to use chemical reagents or sharp articles to remove the dirt as it may damage the instrument.
6. If the Light Meter is wetted by water, only after the water is dried can the Light Meter be used for measurement.

VII. References for illuminance standard at different locations

Schools

Illuminance (Lux)	Locations
1500~750	Drawing classroom, sewing classroom, computer classroom
750~300	Classroom, lab, practice factory, research room, library Office, lounge, meeting room, clinic, broadcasting room Dining room, kitchen, printing room, phone operator's room, security room
300~150	Big classroom, auditorium, storage room, stair hall
150~75	Corridor, washroom, duty room, overpass, outdoor sports ground
75~30	Warehouse, garage, emergency staircase

Illuminance criterion

Hospitals

Illuminance (Lux)	Locations
10000~5000	Eyesight examination room (Bright room at ophthalmology Dept.)
1500~750	Operating room
750~300	Diagnosis and cure room, pharmaceutical room, dispensary room, delivery room Dissection room, pathology bacteriology room, emergency room, Director office Dispensary room, office, nurse room, meeting room
300~150	Sickroom, reading area at hospital bed, dressing room, gypsum bandaging room, infant room Recording room, waiting room, consultation room, clinic corridor
150~75	Dressing room, physical therapy room, X-ray room, sickroom corridor, staircase Disinfection room, sickroom office, endoscopes room
75~30	Animal room, darkroom (photo), emergency staircase

Shopping centers

Illuminance (Lux)	Locations
3000~750	Indoor exhibiting places, exhibiting windows, demonstrate and performing places Cashier's desk, packing counter
750~300	Elevator hall, escalator
300~150	Negotiation room, restroom, washroom, staircase, walkway
150~75	Lounge, normal illuminating

Factories

Illuminance (Lux)	Locations
3000~1500	Places for precision working, design, drawing or precision examination
1500~750	Design room, analysis room, assembly workshop, painting workshop
750~300	Places for packing, measuring, surface treatment, warehouse, office
300~150	Places for dyeing or casting, electric room
150~75	Corridor, staircase, toilet, walkway

Illuminance criterion

Residence

Illuminance (Lux)	Locations
2000~750	Places for handicrafts or sewing
1000~750	Places for writing or operating
750~300	Places for reading, make-up, kitchen table, recuperating or phone
300~150	Washing tank, entertainment room, living room, front door
150~75	Wardrobe, bedroom, washroom, staircase, corridor
75~30	Doorplate, mailbox, doorbell button, balcony

Offices

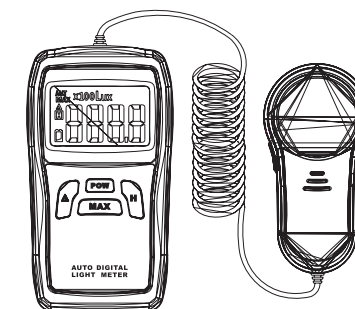
Illuminance (Lux)	Locations
2000~750	Design room, business room
1500~750	Hall passage, business hall, drawing room, typing
750~300	Computer room, meeting room, printing room, phone operator's room, dining hall Control room, reception room, entertainment room
300~150	Book storage, lounge room, security room, elevator, toilet
150~75	Tea room, dressing room, warehouse, night-duty room
75~30	Emergency staircase

Hotels, restaurants and entertainment places

Illuminance (Lux)	Locations
1500~750	Counters
750~300	Gateway, banquet hall, offices, parking lot, kitchen
300~150	Dining hall, toilet, Japanese style big room
150~75	Entertainment room, walkway, staircase, bathroom, dressing room
75~30	Emergency staircase

Intelligent Auto Digital Light Meter

User's Manual



6

7

8

9