




INTRODUCTION

Model 1300 is a Stable, Safe, Reliable Mini Digital Light Meter, widely used in Lightening Enterprises, Agriculture and Animal Husbandry, Mining Enterprises, Laboratory, Office, Household Street lights construction and others.

- 4 Digits Backlit LCD Display
- MAX – MIN Record Function
- Data Hold
- Auto Power Off
- Low Battery Indication
- Measures in Lux and in Foot Candle

GENERAL TYPE

- LCD display : 4 digits LCD display. The max display is 9999.
- Overload indication : When illumination is over 199,999 Lux, "OL" will be displayed.
- Battery low power display : Prompt "  ". New battery should be replaced in time.
- Sampling rate : 2/s.
- Sensor type :Silicon photocell.
- Impact strength : Can withstand the impact of landing from 1 meters height.
- Battery requirement : 1.5V batteries (AAA) x3
- Product size : 160 x 50 x 28mm
- Weight : 118g

ENVIRONMENT SPECIFICATION

- Indoor use
- Maximum operating height : 2000m
Safety : EN61326-1
- Pollution level : 2
- Working temperature and humidity : 0°C ~ 40°C (not greater than 80%RH) 40°C ~ 50°C (not greater than 45%RH)
- Storage temperature and humidity : -20°C ~ 60°C (not greater than 75%RH)



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ELECTRICAL SPECIFICATION

- Accuracy : 0 ~ 9999 Lux, $\pm(4\%rdg + 8dgts)$
 ≥ 10000 Lux, $\pm(5\%rdg + 8dgts)$
- Environment temperature : $23^{\circ}C \pm 3^{\circ}C$
- Environment humidity : $\leq 80\%RH$

TECHNICAL SPECIFICATION

1. Wind Speed and Temperature

Function	Range	Resolution	Accuracy	Description
Illumination	0 ~ 9999 Lux	1 Lux	$\pm(4\%rdg + 8rdg)$	(regulate in the standard of 2856K color temperature flat lamp) Note: 1FC=10.76 Lux
	≥ 10000 Lux	10 Lux	$\pm(5\%rdg + 10dgts)$	
Range	0 ~ 199, 999 Lux			Auto-ranging
Sampling Time	0 ~ 12		0.5s	Refresh sampling in 0.5s
Overload Indication			OL	Shows "OL".
MAX/MIN Measurement			MAX/MIN	Shows "MAX/MIN".
Data Hold			HOLD	Shows "HOLD"
Backlight			BL	Manually ON and OFF.
Auto Power off			5mins	Automatically power off after 5mins without operation.
Low Battery			3.0 ~ 3.5V	Shows low battery prompt when power is 3.0 ~ 3.5V.



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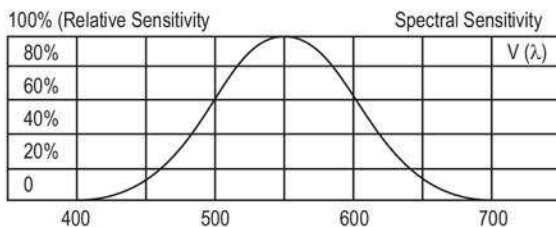
FEATURES

- 3½ Digits LCD display with low battery indication
- Easy to use with single function switch operating, pocket size and light weight
- Light measuring levels ranging from 0.01 lux to 50,000 lux
- Multiplication Factor for 20,000 Lux range and 50,000 Lux Range: 2000 Lux: reading x 10; 50,000 Lux: reading x 100

SPECIFICATIONS

Display	3-1/2 digits 1999 counts LCD display with low battery indication
Over-range Indication	"1" mark indication
Low battery indication	The "BAT" is displayed when the battery voltage drops below the operating level.
Measurement rate	1.5 times per second, nominal
Storage temperature	-10°C to 60°C (14°F to 140°F) at <80% relative humidity
Power	battery
Photo Detector	15 x 60 x 27 mm
Dimension	188 x 64.5 x 24.5 mm
Weight	160g
Light	
Measuring Range	200, 2000, 20,000 lux (20,000 lux range reading x 10) and 50,000 lux (50,000) lux range reading x 100)
Accuracy	± 5% rdg ± 10 dgts (<10,000 lux) ± 10% rdg dgts (>10,000 lux) (calibrated to standard incandescent lamp 2856 k)
Repeatability	± 2%
Temperature	
Characteristic	± 0.1%/°C
Photo detector	One silicon photo diode with filter

Spectral sensitivity characteristic: To the detector, the applied photo diode with filters makes the spectral sensitivity characteristic almost meet (C.I.E (International Commission on Illumination) photopia curve V (λ) as the following chart described



RECOMMENDED ILLUMINATION

Locations	Lux
• Office	
Conference, Reception room	200 ~ 750
Clerical work	700 ~ 1,500
Typing Drafting	1000 ~ 2,000
• Factory	
Packing work, Entrance passage	150 ~ 300
Visual work at production line	300 ~ 750
Inspection work	750 ~ 1,500
Electronic parts assembly line	1500 ~ 3,000
• Hotel	
Public room, Cloakroom	100 ~ 200
Reception, Cashier	200 ~ 1,000
• Store	
Indoors Stairs Corridor	150 ~ 200
Show window, Packing table	750 ~ 1,500
Forefront of show window	1500 ~ 3,000
• Hospital	
Sickroom, Warehouse	100 ~ 200
Medical Examination room	300 ~ 750
Operating room/ Emergency treatment	750 ~ 1,500
• School	
Auditorium, Indoor Gymnasium	100 ~ 300
Class room	200 ~ 750
Laboratory Library Drafting room	500 ~ 1,500

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FEATURES

- Easy to use with pock size and light weight
- 3½ Digits LCD display with LUX, fc, LOBAT, MAX, HOLD indication
- Accurately displays light level in terms of Foot Candles (Fc) or Lux over wide range.
- Measures from 0 to 50000 Lux/ Fc in four ranges with resolution 0.1Lux/Fc .
- Max Hold and Data Hold
- Auto power off

GENERAL SPECIFICATIONS

- **Display** : 3½ digits, 1999 counts LCD display with LUX, fc, LOBAT, MAX, HOLD indication
- **Polarity** : Automatic, (-) negative polarity indication.
- **Over-range** : "1" mark indication.
- **Low battery indication** : The "BAT" is displayed when the battery voltage drops below the operating level.
- **Measurement rate** : 1.5 times per second, nominal.
- **Storage temperature** : -10°C to 60°C (14°F to 140°F) at < 80% relative humidity
- **Auto Power Off** : Meter automatically shuts down after approx .15 minutes of inactivity.
- **Power** : One standard 12V, A23 battery.
- **Dimensions/Wt.** : 188 (H) x 64.5 (W) x 24.5 (D) mm/160g
- **Photo Detector Dimensions/Wt.** : 115 X 60 X 27 mm/80g

TECHNICAL SPECIFICATIONS

Measuring Range	200, 2000, 20000, 50000 Lux/fc (1Fc=10.76 Lux)
Accuracy	± 5% rdg ± 10dgts (<10,000Lux/fc)
Accuracy	± 10% rdg ± 10dgts (>10,000Lux/fc)
	(20,000lux range reading x10, 50,000lux range reading x100)
Overrate Display	Highest digit of "1" is displayed. (calibrated to standard incandescent lamp at color temperature 2856 k).
Repeatability	± 2%.
Temperature Characteristic	±0.1% / °C
Photo detector	One silicon photo diode with filter.



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FEATURES

- Low cost highest precision.
- Overload Indication: LCD will show "OL" in the left highest position.
- 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 include all visible.
- 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.
- Zero adjustment.
- Large integrated circuit design.
- Auto Range (1332A)



TECHNICAL SPECIFICATIONS

Display	2000 count, large LCD display, easier to read.
Sensor	Silicon photodiode and filter
Measuring Range	20(1332A), 200, 2000, 20000, 200000 Lux; 20, 200, 2000, 20000 Footcandles
Accuracy	±3% (Calibrated to standard incandescent lamp 2856°K) 8% other visible light source (1332) 6% other visible light source, (1332 A)
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	About 200 hours
Dimensions	Meter: 38 (H) x 55 (W) x 130 (L) mm (1332/1332A) 1.5 (H) x 2.2 (W) x 5.1 (L) inch (1332/1332A) Sensor: 25 (H) x 55 (W) x 80 (L) mm (1332/1332A) 9.8 (H) x 2.2 (W) x 3.1 (L) inch (1332/1332A)
Weight	250 g (include battery)
Accessories	User's manual, carrying case, 9V battery

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FEATURES

- Light-measuring levels ranging from 0.01lux~0.1klux/0.01fc~0.01kfc, repeatedly.
- High accuracy and rapid response.
- Data-hold function for holding measuring values.
- Unit and sign display for easy reading.
- Automatic zeroing.
- Meter corrected for spectral relative efficiency.
- Correction factor need not be manually calculated for non-standard light sources.
- Short rise and fall times.
- Peak-hold function for tracing the peak signal of light pulse with least duration 10 μ s and store it.
- Capable of selecting measuring mode in lux or fc scale alternatively.
- Auto power off 30 minutes.
- Maximum and minimum measurements.
- Relative reading & Reset function.
- Easy to read large backlit display

SPECIFICATIONS

Display	3-3/4 digit LCD with high speed 42 segment bargraph.
Measuring Range	40.00 lux,400.0 lux,4000 lux,40.00 Klux and 300.0 Klux /40.00 fc,400.0 fc,4000 fc,30.00 Kfc.
NOTE	1fc = 10.76lux,1Klux = 1000lux,1Kfc = 1000fc
Overrange Display	LCD will show "OL" symbol.
Spectral Response	CIE Photopic. (CIE human eye response curve).
Spectral Accuracy	CIE V_{λ} function $f_1' \leq 6\%$
Cosine Response	$f_2' \leq 2\%$
Accuracy	$\pm 5\%$ rdg $\pm 0.5\%$ f.s.
Repeatability	$\pm 3\%$
Sampling Rate	13.3 times/sec of analog bar-graph indication;1.3times/sec of digital display.
Photo Detector	One silicon photo diode and spectral response filter.
Operating temperature & Humidity	0°C to 40°C (32°F to 104°F) & 0% to 80% RH.
Storage Temperature & Humidity	-10°C to 50°C (14°F to 140°F) & 0% to 70% RH.
Power Source	1 piece 9V battery
Photo detector Lead Length	150cm (approx.)
Photo detector Dimensions	115L x 60W x 20H(mm)
Meter Dimensions	170L x 80W x 40H (mm)
Weight	390g.
Accessories	Carry case, instruction manual, battery.



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INTRODUCTION

- The digital illuminance meter is a precision instrument used to measure illuminance (Lux, footcandle) in the field.
- It meets CIE photopic spectral response.
- It is fully cosine corrected for the angular incidence of light.
- The illuminance meter is compact, tough and easy to handle owing to its construction.
- The light sensitive component used in the meter is a very stable, long-life silicon photo diode and spectral response filter.

FEATURES

- Light-measuring levels ranging from 0.1Lux~0.1kLux/0.01FC~0.01kFC, repeatedly.
- High accuracy and rapid response.
- Data-hold function for holding measuring values.
- Unit and sign display for easy reading.
- Automatic zeroing.
- Meter corrected for spectral relative efficiency.
- Correction factor need not be manually calculated for non-standard light sources.
- Short rise and fall times.
- Peak-hold function for tracing the peak signal of light pulse with least duration 10 μ s and hold it.
- Capable of selecting measuring mode in Lux or FC scale alternatively.
- Auto power off 15minutes.
- Maximum and minimum measurements.
- Relative reading .
- Easy to read large backlit display
- USB output for PC connectivity
- Auto ranging



SPECIFICATIONS

Display	3-3/4 digit LCD with high speed 40 segment bar graph.
Measuring Range	400.0 Lux,4000 Lux,40.00 KLux and 400.0 KLux /40.00 FC,400.0 FC,4000 FC,40.00 KFC.
NOTE	1FC=10.76Lux,1KLux =1000Lux,1KFC =1000FC
Over range Display	LCD will show "OL" symbol.
Spectral Response	CIE Photopic. (CIE human eye response curve).
Spectral Accuracy	CIE V λ , function f1 \leq 6%
Cosine Response	f2' \leq 2%
Accuracy	\pm 5% rdg \pm 10d.($<$ 10,000Lux) \pm 10% rdg \pm 10d.($>$ 10,000Lux)
Repeatability	\pm 3%
Sampling Rate	1.3 times/sec of analog bar-graph indication;1.3times/sec of digital display.
Photo Detector	One silicon photo diode and spectral response filter.

Operating temperature & Humidity

0°C to 40°C (32°F to 104°F) & 0% to 80% RH.

Storage Temperature & Humidity

-10°C to 50°C(14°F to 140°F) & 0% to 70% RH.

Power Source

1 piece 9V battery.

Photo detector Lead Length

150cm (approx.);

Photo detector Dimensions

115L \times 60W \times 20H(mm);

Meter Dimensions

170L \times 80W \times 40H;

Weight

390g.

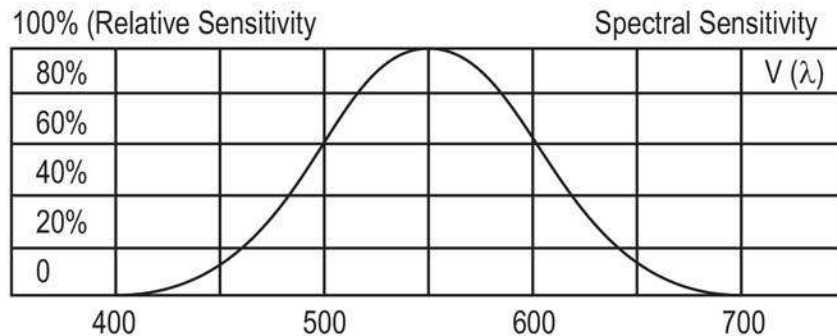
Accessories

Carry case, instruction manual, battery.

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SPECTRAL SENSITIVITY CHARACTERISTIC

To the detector, the applied photo diode with filters makes the spectral sensitivity characteristic almost meet C.I.E.(INTERNATIONAL COMMISSION ON ILLUMINATION) Photo curve V (λ) as the following chart described.



RECOMMENDED ILLUMINATION

1FC=10.76Lux

LOCATIONS		Lux	FC
OFFICE	Conference, Reception room	200~750	18~70
	Clerical work	700~1,500	65~140
	Typing drafting	1,000~2,000	93~186
FACTORY	Visual work at production line	300~750	28~70
	Inspection work	750~1,500	70~140
	Electronic parts assembly line	1,500~3,000	140~279
	Packing work, Entrance passage	150~300	14~28
HOTEL	Public room, Cloakroom	100~200	9~18
	Reception	200~500	18~47
	Cashier	750~1,000	70~93
STORE	Indoors Stairs Corridor	150~200	14~18
	Show window, Packing table	750~1,500	70~140
	Forefront of show window	1,500~3,000	140~279
HOSPITAL	Sickroom, Warehouse	100~200	9~18
	Medical Examination Room	300~750	28~70
	Operating room, emergency treatment	750~1,500	70~140
SCHOOL	Auditorium, Indoor Gymnasium	100~300	9~28
	Class room	200~750	18~70
	Laboratory, Library, Drafting, room	500~1,500	47~140

PC System requirements:

Windows 98 or windows 2000 (or higher)

Minimum hardware requirements

Pc or notebook, 90MHz Pentium or faster, 32Mb Ram,

At least 5Mb free hard disk space screen resolution

800×600.

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