SD Card, real time data logger, + type K/J Temp., Patent

LIGHT METER

Model : LX-1128SD   *ISO-9001, CE, IEC1010*

LUTRON ELECTRONIC

The Art of Measurement

SD Card real time data logger
LIGHT METER + type K/J Temp.
Model : LX-1128SD

FEATURES

* 3 ranges, 2,000/20,000/100,000 LUX.
* LUX & Foot Candle unit selection with default.
* Auto range for light measurement.
* Spectrum of photo sensor meets C.I.E..
* Light measurement with zero adjustment by push button.
* Separate probe, easy for operation of different measurement environment.
* Type K, Type J thermocouple thermometer.
* Real time SD memory card Datalogger, it Built-in Clock and Calendar, real time data recorder , sampling time set from 1 second to 3600 seconds.
* Manual datalogger is available (set the sampling time to 0), during execute the manual datalogger function, it can set the different position (location) No. (position 1 to position 99).
* Innovation and easy operation, computer is not need to setup extra software, after execute datalogger, just take away the SD card from the meter and plug in the SD card into the computer, it can down load the all the measured value with the time information (year/month/date/ hour/minute/second) to the Excel directly, then user can make the further data or graphic analysis by themselves.
* SD card capacity : 1 GB to 16 GB.
* LCD with green light backlight, easy reading.
* Can default auto power off or manual power off.
* Data hold, record max. and min. reading.
* Microcomputer circuit, high accuracy.
* Power by UM3/AA (1.5 V) x 6 batteries or DC 9V adapter.
* RS232/USB PC COMPUTER interface.

GENERAL SPECIFICATIONS

Circuit	Custom one-chip of microprocessor LSI circuit.
Display	LCD size : 52 mm x 38 mm LCD with green backlight (ON/OFF).
Measurement/ Unit	Light : LUX, Feet candle (Ft-cd) Type K/J thermometer : ℃ or ℉.
Light Sensor Structure	The exclusive photo diode & color correction filter, spectrum designed to meet C. I. E.
Zero Adj. * Light	By push button.
Datalogger Sampling Time Setting range	Auto	1 second to 3600 seconds @ Sampling time can set to 1 second, but memory data may loss.
	Manual	Push the data logger button once will save data one time. @ Set the sampling time to 0 second. @ Manual mode, can also select the 1 to 99 position (Location) no.
Memory Card	SD memory card. 1 G to 16 G.
Advanced setting	* Set clock time (Year/Month/Date, Hour/Minute/ Second) * Decimal point of SD card setting * Auto power OFF management * Set beep Sound ON/OFF * Set thermometer type to Type K or Type J * Set temperature unit to ℃ or ℉ * Set sampling time * SD memory card Format
Temperature Compensation	Automatic temp. compensation for the type K/J thermometer.
Data Hold	Freeze the display reading.
Memory Recall	Maximum & Minimum value.
Sampling Time of Display	Approx. 1 second.

Data Output	RS 232/USB PC computer interface. * Connect the optional RS232 cable UPCB-02 will get the RS232 plug. * Connect the optional USB cable USB-01 will get the USB plug.
Operating Temperature	0 to 50 ℃.
Operating Humidity	Less than 85% R.H.
Power Supply	*.Alkaline or heavy duty DC 1.5 V battery (UM3, AA) x 6 PCs, or equivalent. *.DC 9V adapter input. (AC/DC power adapter is optional).
Power Current	Normal operation (w/o SD card save data and LCD Backlight is OFF) : Approx. DC 6.5 mA. When SD card save the data but and LCD Backlight is OFF) : Approx. DC 30 mA. *.If LCD backlight on, the power consumption will increase approx. 16 mA.
Weight	489 g/1.08 LB.
Dimension	177 x 68 x 45 mm (7.0 x 2.7x 1.9 inch)
Accessories Included	* Instruction manual...........................1 PC * Light sensor with protective cover...1 PC * Soft carrying case (CA-05A)............1 PC
Optional Accessories	SD Card (1 GB) SD Card (2 GB) Type K thermocouple probe. AC to DC 9V adapter. USB cable, USB-01. RS232 cable, UPCB-02. Data Acquisition software,SW-U801-WIN. Hard carrying case, CA-06.

ELECTRICAL SPECIFICATIONS (23±5 ℃)

Light meter

Measurement	Range	Max. In-range Display
LUX @ auto range	2,000 LUX	0 - 1,999 LUX
	20,000 LUX	1,800 - 19,990 LUX
	100,000 LUX	18,000 - 99,900 LUX
Feet-candle @ auto range	200 Ft-cd	0 - 186.0 Ft-cd
	2,000 Ft-cd	167.0 - 1,860.0 Ft-cd
	10,000 Ft-cd	1,670.0 - 9,290.7 Ft-cd

Range	Resolution	Accuracy
2,000 LUX	1 LUX	± (4 %+2 dgt)
20,000 LUX	10 LUX	
100,000 LUX	100 LUX	
200 Ft-cd	0.1 Ft-cd	
2,000 Ft-cd	1 Ft-cd	± (4 % +2 Ft-cd)
10,000 Ft-cd	10 Ft-cd	± (4 %+20 Ft-cd)

Note : Accuracy tested by a standard parallel light tungsten lamp of 2856 K degree temperature.

Type K/J thermometer

Sensor Type	Resolution	Range	Accuracy
Type K	0.1 ℃	-50.0 to 1300.0 ℃	± (0.4 % + 0.5 ℃)
		-50.1 to -100.0 ℃	± (0.4 % + 1 ℃)
	0.1 ℉	-58.0 to 2372.0 ℉	± (0.4 % + 1 ℉)
		-58.1 to -148.0 ℉	± (0.4 % + 1.8 ℉)
Type J	0.1 ℃	-50.0 to 1200.0 ℃	± (0.4 % + 0.5 ℃)
		-50.1 to -100.0 ℃	± (0.4 % + 1 ℃)
	0.1 ℉	-58.0 to 2192.0 ℉	± (0.4 % + 1 ℉)
		-58.1 to -148.0 ℉	± (0.4 % + 1.8 ℉)