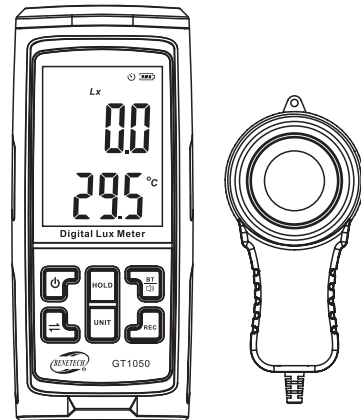




MODEL: GT1050

Digital Lux Meter instruction manual



Specific Declarations:

Our company shall hold no any responsibility resulting from using output from this product as an direct or indirect evidence.

We reserves the right to modify product design and specification without notice.

Version: GT1050-EN-00



Android



iOS

Scan the QR code to download the LUXLab PRO App
Note: LuxLab PRO App only supports Android 5.0 and iOS 9.0 or above

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A. Introduction

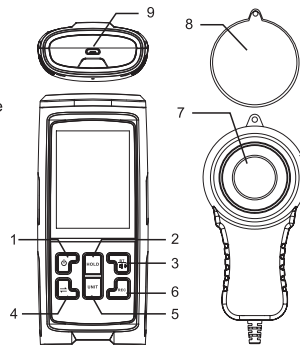
Digital Lux Meter is a professional instrument for measuring luminosity and brightness. It is used for light intensity measurement engineering, quality control, health prevention, and light intensity measurement in various environments, such as factories, schools, offices, traffic routes, homes, etc.

B. Features

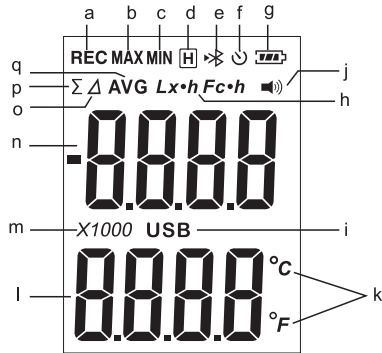
1. Measuring illuminance and current value, maximum value, minimum value and difference.
2. Measurement statistics illuminance integral, integral average and data recording functions.
3. The alarm function of illuminance exceeding the default setting. By default, the high alarm is set to 20,000; the low alarm is 0; the set value is not related to the unit.
4. Illuminance value data hold.
5. Illuminance temperature detection.
6. Automatic range; sensitive response; be able to measure low-light environment ($<10\text{Lx}$).
7. Switchable illuminance units (Lx/Fc) and temperature units (C°/F°). Fc: footcandle; Lx: lux; conversion relationship: $1\text{Fc} = 10.764\text{Lx}$
8. Automatically shut off without operation for a long period of time can be turned on.
9. Bluetooth mobile phone APP communication and computer communication function.

C. Name of parts

1. Switch
2. Hold/calibrate the zero point
3. Bluetooth/sound alarm
4. Switch the measurement mode
5. Switch the illuminance unit
6. Record/delete
7. Luminance head (illuminance head)
8. Shading cover
9. USB charging interface



D. LCD display



- a. Data recording
- b. Maximum value
- c. Minimum value
- d. Data hold
- e. Bluetooth
- f. Timed shutdown
- g. Power and charging display
- h. Illuminance units
- i. USB connection status

- j. Sound alarm
- k. Temperature units
- l. Temperature value display area
- m. Multiplier of illuminance value
- n. Illuminance value display area
- o. Difference display
- p. Integral value
- q. Integral average

Note: When " " appears, please charge it in time, otherwise the measured value may be distorted, Bluetooth communication is abnormal.

E. Functional operation

1. On/off operation

Short press the " " button to turn on, and enter the real-time interface after booting up the full screen for 2s; after booting, press the button for a long time for 1s, and then the instrument shuts off.

2. Data hold

In the real-time interface or difference interface, short press the " " button to switch to the Hold interface, and the top of the screen will display [H]; Press the button again in the hold interface to return to the interface before entering the hold interface. In the real-time interface, long press the " " button to calibrate the zero point.

3. Sound alarm on/off settings

Under the real-time interface, long press " " button to display []; turn on an audible alarm. Long press the button again to close.

4. Measurement mode switching

In the real-time interface, short press the " " button to switch the measurement mode; Mode: Normal - Difference [Δ] - Maximum [MAX] - Minimum [MIN] - Integral Value [Σ] - Integral Average [AVG], long press to return to normal mode.

5. Illuminance unit switching

In the real-time interface, short press the " " button to switch the illuminance unit [Lx]/[Fc]; long press the button to switch the temperature unit [C]/[F].

6. Record data/delete records

In the real-time interface, short press the " " button, and [REC] is displayed in the upper left corner at the top of the screen. When it flicks,

it means to record a piece of data. Short press the button again to close, and long press the button to delete the record.

7. Timed shutdown on/off setting

In the real-time interface, short press the "☰" button, and [☺] is displayed in the upper right corner at the top of the screen, indicating that the timed shutdown function has been turned on. Short press the button again to turn it off.

8. Bluetooth on/off settings

In the real-time interface, short press the "📶" button, and [➤] is displayed at the top of the screen. When it flashes, it indicates that Bluetooth is on; when [➤] stops flashing, it means Bluetooth is connected; (the first short press after connecting to Bluetooth is to disconnect Bluetooth; the second short press is to turn off Bluetooth).

9. Display

- (1) Difference [Δ]: the absolute value of the value after the button is pressed minus the previous value.
- (2) Maximum value[**MAX**]: the maximum value after a short press.
- (3) Minimum value[**MIN**]: the minimum value after a short press.
- (4) Integral [Σ]: Calculated by adding the average value of the comparison value within 0.001 hour of unit time together. The maximum value is 999999.
- (5) Integral average[**AVG**]: Integral value/cumulative frequency.
- (6) Data hold [**H**]: Save the current data.

10. Power-off memory

- (1) Automatic shutdown function (1min~99min)
- (2) Bluetooth switch
- (3) Alarm sound switch
- (4) Illuminance & Temperature Units (Lx- Fc & °C -°F)
- (5) Maximum number of records: 32752; Recording interval: 1s~9999s

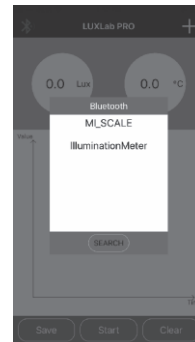
F. Technical specification

Illuminance probe		silicon photodiodes	
Illuminance range		0~200000Lx (0~18581Fc)	
Gears	Range	Resolution	Error
1 gear	0~999.9Lx (0~92.894Fc)	0.1 Lx (0.01Fc)	±3%
2 gear	1000~9999Lx (93~929Fc)	1 Lx (0.1Fc)	±4%
3 gear	10000~99999Lx (929~9290Fc)	10 Lx (0.9Fc)	±4%
4 gear	100000~200000Lx (9290~18581Fc)	100 Lx (9.3Fc)	±4%
Temperature	-10°C~65°C (14°F~149°F)	0.1 °C (32°F)	±1.5°C (35°F)

G. Bluetooth App

1. App main interface:


(1) When you enter the homepage and click [📶] in the upper left corner, a Bluetooth device search box will appear. Click the [SEARCH] button. When the device list searches for the [IlluminationMeter] device name, click the device name, and when the [Connection is successful] prompt appears, it indicates that the connection has been successful. If [Connection failed], you need to click the [SEARCH] button again to search and click the device name again.

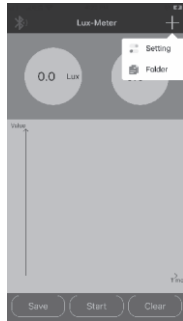



(2) After the connection is successful, you can click the three buttons at the bottom of the page, namely [Save], [Start] and [Clear]. Click the [Start] button to start reading the real-time data of the device and making a line chart show. When you need to stop, just click again. Click the [Save] button to save the real-time data displayed on the current page. When you name the data to be saved, you can view the saved data in the [Folder]. Click the [Clear] button to clear the real-time data read before and the current data displayed by the line graph.

(3) If you need to check other functions, just click the settings button in the upper right corner. A dropdown menu with [Setting] [Folder] options will appear (click [Setting], you will enter the setting page, you can set other aspects of the device; click [Folder], you will enter the page of historical data, and you can view real-time data and a history list for storage data preservation)



Android:
Click  , [Setting] [Folder] option will pop up.




iOS:
Click  , the pop-up window [Setting] [Folder] option.


2. Setting Mode

Android:


(1) Auto Save Mode:

1) Record total: display the number of data stored in the product;

2) After opening Auto Save [], you can set the Auto Save Time Interval: 1~9999s.

3) Auto Shutdown Time: After opening [], you can set the timed shutdown time: 1~99min, click [Save], the setting is complete.

(2) Alarm Setting:


After opening the Alarm switch [], you can set the Real time interval and High/Low alarm value (the default high alarm value is 10000, the maximum limit is set to 200000, and the default low alarm value is 0), click [Save], and the setting is complete.




Android

iOS:

(1) SET CONTENT:

1) Auto Shutdown Time: After opening [], you can set the Auto Shutdown Time: 1~99min, click [storage settings save], the setting is complete.


2) Number of stored: Display the number of data stored in the product and the proportion of the total number of strokes (32752);

3) Save Time Interval: After turning on the storage switch [], you can set the recording interval: 1~9999s. Click [storage settings save] to complete the Settings.

4) Stored data clear: Clear the data stored in the product;

5) store data read: It is to read the data stored on the device and save it to the phone for viewing.

(2) SET THE ALARM VALUE:

After opening the Alarm switch [], you can set the Measurement interval and high/low alarm value (the default high alarm value is 10000, the maximum limit is set to 200000, and the default low alarm value is 0), click [Alarm settings save], and the setting is complete.



iOS

3. History

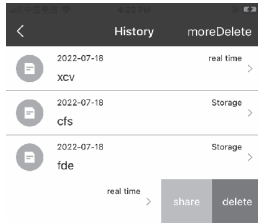
(1) The currently saved data has been classified and distinguished. For the real time data stored on the home page, the word [real time] will be displayed on the right side of the data list. If the data stored by the device is read on the setting page, the word [Storage] will be displayed on the right side . The left side will display the date, date, and file name of the file accordingly.

(2) Click the [moreDelete] button in the upper right corner of the page, and a pair of check items will appear in front of each saved data. After the check, click the [delete] button in the upper left corner of the page to delete multiple data at the same time.

(3) The [share] and [delete] options will appear on the slide for each data group;

1) [share] option, the current data will be shared with a third party. After sharing, it can be viewed in an Excel table.

2) [delete] option, the current data will be deleted individually, and no multiple files will be deleted.



4. Data list:

The saved data is displayed in a tabular manner, which is convenient for users to view

(1) The upper right corner shows the number of data stored in the current data group

(2) First column, Number/recordingTime. When real time mode, display the recorded time; When storage mode, display the serial Number.

(3) Second column, the illuminance value, followed by the unit when saving, if the unit is changed in the process of use, record the synchronous change of the unit.

(4) Third column, temperature/illuminance mode. When real time mode, display temperature value. When storage mode, display mode.

<	Data List	loadNum:20
recordingTime	illuminance	TEMP/LX Model
17:03:37	302.8 Lx	27.6 °C
17:03:38	303.0 Lx	27.6 °C
17:03:39	303.0 Lx	27.6 °C
17:03:40	303.0 Lx	27.6 °C
17:03:41	303.1 Lx	27.6 °C
17:03:42	380.6 Lx	27.6 °C
17:03:43	280.6 Lx	27.7 °C
17:03:44	99.4 Lx	27.7 °C
17:03:45	127.2 Lx	27.6 °C
17:03:46	166.7 Lx	27.6 °C
17:03:47	166.7 Lx	27.6 °C
17:03:48	168.6 Lx	27.6 °C
17:03:49	193.9 Lx	27.6 °C
17:03:50	193.9 Lx	27.7 °C
17:03:51	196.0 Lx	27.6 °C
17:03:52	198.3 Lx	27.6 °C
17:03:53	198.3 Lx	27.6 °C
17:03:54	197.6 Lx	27.6 °C

real time mode

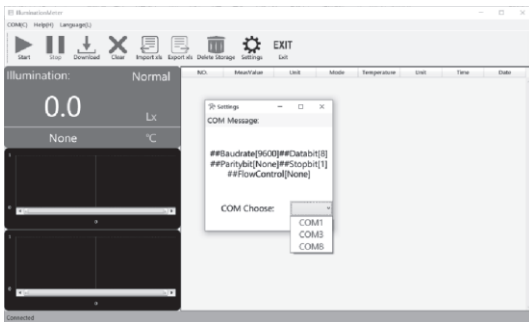
<	Data List	loadNum:139
NO.	illuminance	TEMP/LX Model
00001	47.5 Lux	Normal
00002	52.4 Lux	Normal
00003	52.4 Lux	Normal
00004	21.4 Lux	Normal
00005	6.8 Lux	Normal
00006	4.7 Lux	Normal
00007	4.7 Lux	Normal
00008	13.6 Lux	Normal
00009	47.9 Lux	Normal
00010	47.9 Lux	Normal
00011	29.0 Lux	Normal
00012	95.5 Lux	Normal
00013	95.5 Lux	Normal
00014	52.2 Lux	Normal
00015	43.1 Lux	Normal
00016	58.4 Lux	Normal
00017	58.4 Lux	Normal
00018	46.2 Lux	Normal

storage mode

H. PC software

1. Instructions for use

- (1) Computer configuration: Operating memory (RAM): 4G or above; Main frequency: 3G or above; 64-bit W IN7/W IN10/W IN11.
- (2) For the serial communication method, you need to select a port. When using real-time measurement, make sure that the product is connected to the computer (that is, "connected" is displayed in the lower left corner; if "ready" is displayed, the product is not connected).
- (3) When the icon is gray, it means that it cannot be operated currently.
- (4) One computer can open multiple Lux Meter apps at the same time.



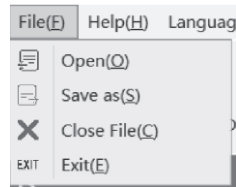
2. Download software

Enter the website "www.benetechco.net" in the browser, press enter and enter the page to find the menu "Support"->"Download Catalog". Click into the page to find the software installation package "Lux Meter 1050.zip". Click the download button to directly extract the "zip package" after downloading. Double click on "setup_Lux Meter.exe" to install.

3. Menu bar

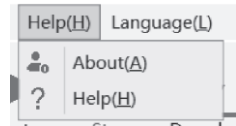
(1) File

Press "Alt+F+Up/Down" to switch:
Open - Save as - Close File - Exit, and press "Enter" to select; Or mouse operation.



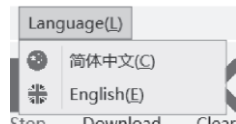
(2) Help

Press "Alt+H+Up/Down" to switch:
About-Help, press "Enter" to select; Or mouse operation.



(3) Language

Press "Alt+L+Up/Down" to switch:
Simplified Chinese - English, press "Enter" to select; or use the mouse.



4. Key bar

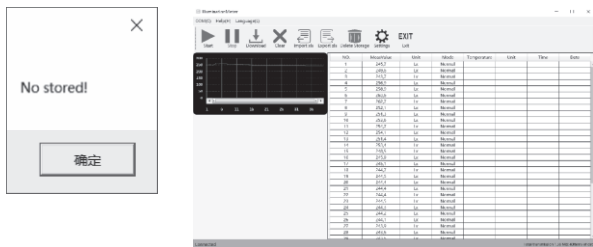


(1) Start: After the product is connected to the computer, click "Start" to measure and synchronize the data to the computer in real time;

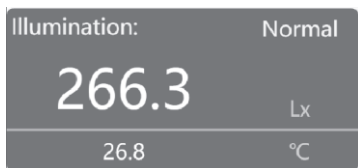
(2) Stop: To end real-time measurement, press this button to stop data transmission;

(3) Download: Used to download data saved on the product when not connected to a computer. If the product does not save data, "No storage" is displayed; for saved data, clicking "Download" will be displayed in the "Documents" column.

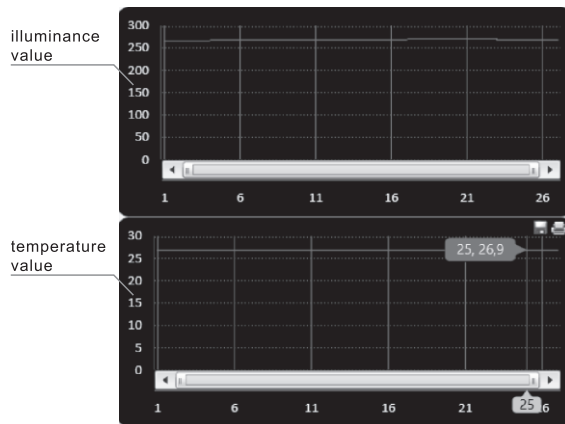
- (4) Clear: Clear recorded data;
- (5) Input xls: only.xls files can be entered;
- (6) Output xls: output only .xls file, the output path can be customized, and the output file can be opened with EXCEL;
- (7) Delete storage: Delete all stored data from the meter.
- (8) Setting: Read the instrument setting information and enter the setting page, if there is no update setting data, please click again.
- (9) Exit: Close the software.



5. Measurement display
When starting the measurement, click the "Start" button to record data in real time; click the "Stop" button to end the measurement;



6. Line chart
(1) The X-axis is the sampling data serial number, the upper figure on the y-axis is the illuminance value, and the lower figure is the temperature value;
(2) The illuminance unit and temperature unit are consistent with the product selection unit during real-time measurement;
(3) When the mouse moves to the interface, the "Save" and "Print" icons appear in the upper right corner. Slide the mouse wheel (middle key) to zoom in or out.




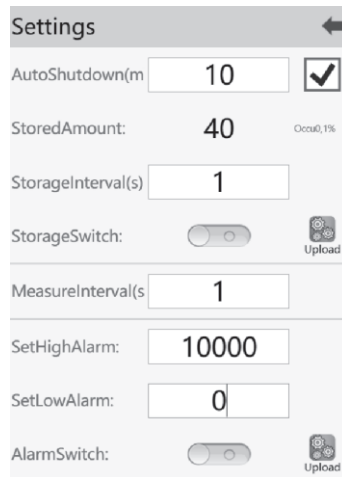
7. Measurement data list

- (1) The illuminance value, illuminance unit, mode, temperature value, temperature unit, computer time, and computer date in the table will be updated each time the data is transmitted.
- (2) Time and date refers to the current computer time date.
- (3) You can drag the mouse to change the column width.
- (4) To save table data, click "Output" in the button bar, select the save path, and name the file.

NO.	MeasValue	Unit	Mode	Temperature	Unit	Time	Date
3	264.9	Lx	Normal	26.9	°C	16:24:58	07/06/2022
4	263.9	Lx	Normal	26.9	°C	16:24:59	07/06/2022
5	263.2	Lx	Normal	26.9	°C	16:25:00	07/06/2022
6	262.1	Lx	Normal	26.9	°C	16:25:01	07/06/2022
7	262.2	Lx	Normal	26.9	°C	16:25:02	07/06/2022
8	262.4	Lx	Normal	26.9	°C	16:25:03	07/06/2022
9	262.3	Lx	Normal	26.9	°C	16:25:04	07/06/2022
10	261.8	Lx	Normal	26.9	°C	16:25:05	07/06/2022
11	261.3	Lx	Normal	26.9	°C	16:25:06	07/06/2022
12	261.4	Lx	Normal	26.9	°C	16:25:07	07/06/2022
13	262.3	Lx	Normal	26.9	°C	16:25:08	07/06/2022
14	266.1	Lx	Normal	26.9	°C	16:25:09	07/06/2022
15	268.1	Lx	Normal	26.9	°C	16:25:10	07/06/2022
16	268.3	Lx	Normal	26.9	°C	16:25:11	07/06/2022
17	269.7	Lx	Normal	26.9	°C	16:25:12	07/06/2022
18	265.9	Lx	Normal	26.9	°C	16:25:13	07/06/2022
19	260.1	Lx	Normal	26.9	°C	16:25:14	07/06/2022
20	259.0	Lx	Normal	26.9	°C	16:25:15	07/06/2022
21	262.5	Lx	Normal	26.9	°C	16:25:16	07/06/2022
22	259.1	Lx	Normal	26.9	°C	16:25:17	07/06/2022
23	255.6	Lx	Normal	26.9	°C	16:25:18	07/06/2022
24	256.5	Lx	Normal	26.9	°C	16:25:19	07/06/2022
25	260.2	Lx	Normal	26.8	°C	16:25:20	07/06/2022
26	262.1	Lx	Normal	26.9	°C	16:25:21	07/06/2022
27	263.4	Lx	Normal	26.9	°C	16:25:22	07/06/2022
28	263.3	Lx	Normal	26.9	°C	16:25:23	07/06/2022
29	263.3	Lx	Normal	26.9	°C	16:25:24	07/06/2022
30	263.4	Lx	Normal	26.9	°C	16:25:25	07/06/2022

8. Setup interface:

- (1) The automatic shutdown requires a check before setting the value. The range is 1 to 99 minutes. Click " " to save the settings to the instrument.
- (2) Total number of stored data is 32,752, recording time = recording time interval (range 1 to 999 seconds) * Record the number of strokes. Turn on the recording switch, and when the settings are complete, click Upload to save to the instrument.
- (3) Online measurement time interval: range 1~999 seconds, no need to click upload.
- (4) Set the alarm value in the range of 0.0-200000, regardless of the unit. Turn on the switch and click Upload to save settings to the meter.
- (5) For the above box of setting values, you need to delete the value operation before entering a new setting value. Otherwise, the error message will overflow.



The screenshot shows the 'Settings' menu of a device. It includes the following options:

- AutoShutdown(m):** 10, with a checkmark icon.
- StoredAmount:** 40, with a small 'Occu6,1%' indicator.
- StorageInterval(s):** 1.
- StorageSwitch:** A toggle switch is turned off. An 'Upload' button is visible to the right.
- MeasureInterval(s):** 1.
- SetHighAlarm:** 10000.
- SetLowAlarm:** 0.
- AlarmSwitch:** A toggle switch is turned off. An 'Upload' button is visible to the right.

9. Status bar

*Connection status with the product

(1) Unconnected products:

Disconnected

(2) Connected products:

Connected