

**EXTECH**<sup>®</sup>

**User Manual**

## **LT250W Light Meter**

Bluetooth® Connectivity with the ExView® Mobile App



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# 1 Introduction

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Thank you for selecting the Extech LT250W Light Meter. This meter measures illuminance and displays it in Lux or foot candle units on the backlit LCD. Light is captured by the built-in domed photo-cell, situated at the top of the meter.

The meter includes Bluetooth connectivity, MAX/MIN memory, selectable unit of measure, auto power off, data hold, backlit LCD, and tripod mount.

Using the Extech ExView mobile app, you can pair your smart devices with the meter using Bluetooth. The app and the W Series meters were developed together for seamless integration. Download the free app from the App Store (iOS®) or from Google Play (Android™).

This quality instrument is designed to provide years of reliable service, high accuracy and simple operation. Please visit the Extech website for additional information and world-class support.

## 2 Safety

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Please read all safety information before using this device

 CAUTION
<ul style="list-style-type: none"><li>• Check for damage to the device's housing, sensor, display, and battery compartment before use. If obvious damage or abnormalities are noticed, please discontinue use and return the device for service.</li><li>• Do not attempt to open the meter housing or access the sensor module. There are no user-serviceable components in this device.</li><li>• Replace the batteries immediately after the low battery symbol appears. If the device is to be stored for a period of months, please remove the batteries and store separately.</li><li>• Do not store the device in high temperature or humidity environments, in flammable or combustible areas, or where a strong electromagnetic field is present.</li><li>• This device is CE certified.</li></ul>

## 3 FCC Compliance

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This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

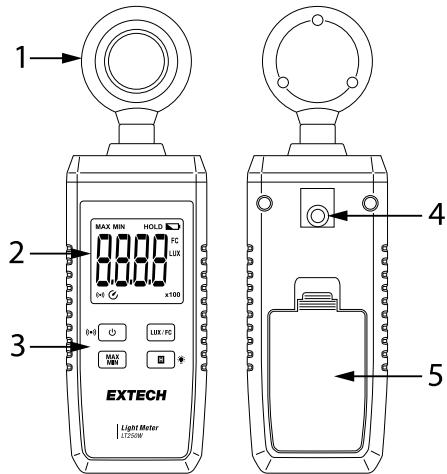


### WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

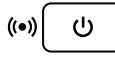
# 4 Product Description

## 4.1 Meter Description



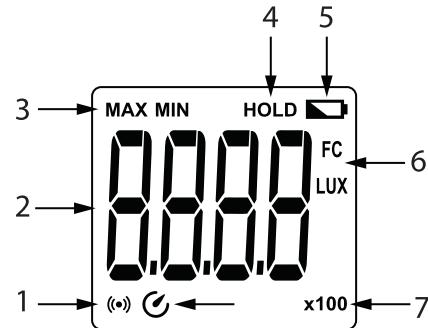
1. Light sensor
2. Backlit LCD (detailed below)
3. Function buttons (detailed below)
4. Tripod mount
5. Battery compartment

## 4.2 Function Buttons

	<b>Power / Bluetooth button</b> Long press to switch the device on. Short press to switch off. With meter powered, long press to switch Bluetooth on/off. Short press to switch the meter off directly from the Bluetooth mode.
	<b>MAX/MIN button</b> Short press to cycle through MAX/MIN readings. MAX/MIN memories are cleared each time meter power is cycled.
	<b>Data Hold / Backlight button</b> Short press to freeze/unfreeze the displayed reading. <i>HOLD</i> will display when data hold is active. Long press to switch the LCD backlight on/off.

	<b>Unit of Measure button</b> Short press to toggle Lux and foot candle (fc) units. Lux is the standard measurement unit, Foot candle readings are calculated.
<b>APO ON/OFF</b>	With the meter on, long press the power and <i>H</i> buttons to switch APO on/off. The APO symbol  is displayed when APO is enabled. APO is reset each time the meter power is cycled.

#### 4.3 Display Symbols



1. Bluetooth active
2. Illuminance measurement
3. Maximum and Minimum reading modes
4. Data Hold
5. Low battery symbol
6. Unit of measure symbols
7. *x10* and *x100* indicators (multiply reading)

# 5 Operation

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## 5.1 Powering the Meter

The meter operates on three (3) 1.5 V (AAA) batteries, installed in the rear compartment.

Long press the power button  $\text{P}$  to switch the meter on. Short press the power button to switch the meter off. If the meter does not switch on, check the batteries for proper orientation.

When the low battery symbol  appears on the display, replace the batteries immediately to ensure accurate readings.

## 5.2 Auto Power Off (APO)

The meter switches off automatically five (5) minutes after the last button press.

The default mode for APO is ON (the APO symbol  indicates that APO is enabled).

To switch the APO function off, with the meter switched on, long press the power  $\text{P}$  and data hold ( $H$ ) buttons. The APO symbol will switch off, indicating that the function is disabled. APO is reset each time the meter's power is cycled.

Repeat this process to switch APO back on manually.

## 5.3 Taking Measurements

1. Long press the power button  $\text{P}$  to switch the meter on.
2. Hold the meter in hand, set it face-up on a table or desk, or mount it on a tripod in the area under test.
3. For best results, allow the light to fully encompass the sensor dome. Also, reduce the 'angle of incidence' as much as possible (angle at which the light strikes the dome).
4. Read the illuminance reading on the LCD. If the  $x10$  or  $x100$  display appears, multiply the displayed reading by 10 or 100 to obtain the actual measurement.
5. If the measurement is out of range,  $OL$  will appear on the display in place of a typical reading.

 **CAUTION**

Do not touch or otherwise obstruct the sensor.

Do not allow liquids to come in contact with the sensor.

**5.4 Changing Measurement Units**

Short press the *LUX / FC* button to toggle the displayed unit of measure (Lux or foot candles).

**5.5 Data Hold Function**

Short press the Data Hold (*H*) button to freeze/unfreeze the displayed readings. While Data Hold is active, *HOLD* will appear on the LCD.

**5.6 LCD Backlight**

Long press the backlight button  to switch the display backlight on or off. Excessive use of the backlight will shorten battery life.

**5.7 MAX/MIN Readings**

When the device is switched on, it begins tracking the highest (MAX) and lowest (MIN) readings.

Short press the *MAX/MIN* button to step through the MAX/MIN memories. *MAX* will show when the Maximum reading is displayed and *MIN* will show when the Minimum reading is displayed. The memories are cleared each time the meter power is cycled.

Press the *MAX/MIN* button again to exit this mode (*MAX* and *MIN* symbols switch off when you exit).

**5.8 Bluetooth Operation**

Long press the Bluetooth button  with the meter on, to switch Bluetooth on or off. This communication symbol  is shown when Bluetooth is on.

The Bluetooth utility allows you to remotely monitor readings on an iOS or Android smart device using the Extech ExView mobile app designed for use with this meter.

Download the ExView mobile app from the App Store for iOS devices or from Google Play for Android devices. Instructions for mobile app use are available from the ExView product page on the Extech website (link below).

5      **Operation**

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Switch APO off when using Bluetooth by pressing and holding the power  and  buttons for 2 seconds (the APO symbol  will switch off). This will prevent the meter from automatically switching off while you are logging data or monitoring readings in real time on your smart device.

# 6 Maintenance

## CAUTION

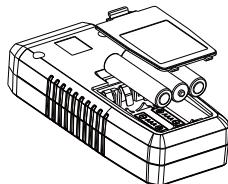
Warning: Do not open the housing or sensor module. Service should only be performed by factory personnel, there are no user-serviceable components in this device.

### 6.1 General Cleaning

Wipe the housing and sensor with a damp cloth as necessary to clean. Do not use abrasives or solvents to clean this device.

### 6.2 Battery Replacement

This device is powered by three (3) 1.5 V (AAA) batteries. When the low battery symbol  appears, replace the batteries immediately, as explained below.



1. Switch the meter off and remove the rear battery compartment cover.
2. Replace the batteries, observing correct polarity. Always use batteries of the same type.
3. Secure the battery compartment before use.



 Do not dispose of used batteries or rechargeable batteries in household waste.

# 7 Specifications

## 7.1 General Specifications

Display	4 digit (9999) backlit multifunction LCD. Readings > 9999 are accompanied by a $\times 10$ or $\times 100$ indicator
Over range indication	$OL$ is displayed when a measurement is out of range
Low battery indication	Battery symbol  appears when batteries are low
Reading update rate	Two readings per second
Sensor	Silicon photo-cell
Meter power	Three (3) 1.5 V (AAA) batteries
Dimensions	6.4 x 2.2 x 1.1 in. (163 x 55 x 28 mm)
Weight	4.2 oz. (118 g)

## 7.2 Measurement Specifications

Accuracy specifications apply for the following conditions:

Temperature:  $73.4^{\circ}\text{F} \pm 9^{\circ}\text{F}$  ( $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$ ); Relative Humidity:  $\leq 80\%$

Illuminance ranges	Resolution	Accuracy (% of reading)
0 to 9999 Lux	1 Lux	$\pm (4\% + 8 \text{ digits})$
$\geq 10,000$ Lux	10 Lux	$\pm (5\% + 10 \text{ digits})$
$\geq 100,000$ Lux	100 Lux	$\pm (5\% + 10 \text{ digits})$

Notes:

The total range is 0 to 199,900 Lux

Foot candle (Fc) readings are converted from Lux measurements

Readings above 9999 are accompanied by a  $\times 10$  or  $\times 100$  indicator

## 7.3 Environmental Specifications

For indoor use only

Altitude	6562 ft. (2000 m) maximum
Pollution degree	2
Operating conditions	32 to $104^{\circ}\text{F}$ (0 to $40^{\circ}\text{C}$ ); $< 80\%$ RH
Storage conditions	-4 to $140^{\circ}\text{F}$ (-20 to $60^{\circ}\text{C}$ ); $< 75\%$ RH
Drop-proof rating	3.3 ft. (1 m)

#### **7.4 Connectivity Specifications**

Connectivity	Bluetooth (with ExView app)
ExView app compatibility	iOS 13.0 and Android 9.0 or higher
Transmission distance	Up to 295.3 ft. (90 m) with no line-of-sight obstruction

## 8 Two-year Warranty

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**FLIR Systems, Inc. warrants this Extech brand instrument to be free of defects in parts and workmanship for two years from date of shipment (a six-month limited warranty applies to sensors and cables). To view the full warranty text please visit:**

### 8.1 Calibration and Repair Services

**FLIR Systems, Inc. offers calibration and repair services** for the Extech brand products we sell. We offer NIST traceable calibration for most of our products. Contact us for information on calibration and repair availability, refer to the contact information below. Annual calibrations should be performed to verify meter performance and accuracy. Product specifications are subject to change without notice. Please visit our website for the most up-to-date product information: