EXTECH ®
INSTRUMENTS

Pocket Light Meter

Model LT10

Lux

128.3

LT10
Light Meter

Introduction

Thank you for selecting the Extech Instruments Model LT10 Pocket Light Meter. The LT10 measures and displays light intensity in foot candle and Lux units using a precision photo-diode sensor. This device is shipped fully tested and calibrated and, with proper use, will provide years of reliable service. Please visit our website (www.extech.com) to check for the latest version of this User Guide. The Extech Instruments brand, a wholly owned subsidiary of FLIR Systems, Inc., is ISO-9001 certified.
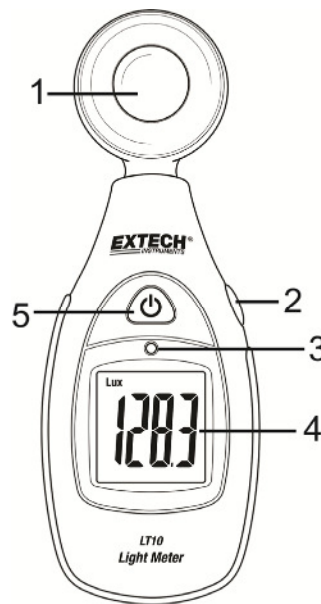
Safety

Use CAUTION when operating this device. The light sensor is sensitive and should be handled with great care.

Meter Description

1. **Photo detector** (Light Sensor): Sensor contains a long life silicon photo diode

2. **MAX-LUX/fc** function button: Press button momentarily to view the maximum (MAX) reading. Press the button momentarily again to release the MAX display and return to the normal operating mode. Press and hold this button for at least 2 seconds to switch between LUX and fc (foot candle) units of measure. Note that 1fc = 10.76 LUX).

3. **LCD Backlight Control Sensor**: The meter switches the LCD backlight ON and OFF automatically based on environmental lighting conditions.

4. **LCD display**: 1999 count, backlit LCD with LUX, fc, MAX, and low battery icons.

5. **Power button**: Press to switch the unit ON or OFF.

Note: Battery compartment and tripod mount are located on rear of instrument.

Operation

Turn Power ON or OFF

Press the ⓞ button to turn power on or off. If the display does not switch on, check that a 9V battery is installed and is fresh.

Selecting LUX or Foot candle (fc) units of measure

Press and hold the MAX-LUX/fc button for at least 2 seconds to switch between **LUX** and **Fc** units.

Measurement Procedure

1. Switch the meter ON and position the light sensor to capture the light that is to be measured.
2. The display will indicate the light level in Fc or LUX units.
3. The meter automatically selects the correct range. If the 'OL' icon appears, the light measurement is out of range and cannot be measured accurately.
4. If the **x10** or **x100** indicator appears, multiply the displayed value by the corresponding multiplier to obtain the correct measurement value.

Max Hold

Momentarily press the MAX-LUX/fc button to view the highest reading (MAX) encountered since the meter was last switched ON. Press the button again to return to the normal operating mode. To reset the MAX reading, switch the meter OFF and then ON again.

LCD Backlight

The meter automatically controls the LCD backlighting (ON and OFF) to match the available ambient lighting.

Battery Replacement

When the battery power begins to fail, the low battery symbol will appear on the LCD. Replace the 9V battery by following these steps.

1. Open the rear battery compartment to access the battery
2. Replace the 9V battery, carefully securing the battery in the compartment
3. Securely fasten the compartment cover
4. Ensure that the compartment cover is securely fastened before using the meter

All EU users are legally bound by the Battery Ordinance to return all used batteries to community collection points or wherever batteries / accumulators are sold.

Disposal in household trash or refuse is prohibited.

Disposal: Follow the valid legal stipulations in respect of the disposal of the device at the end of its lifecycle

Battery Safety Reminders

- Please dispose of batteries responsibly; always observe local, state, and federal regulations with regard to battery disposal.
- Never dispose of batteries in a fire. Batteries may explode or leak.
- Never mix battery types or old and new batteries. Always install new batteries of the same type.

Specifications

General Specifications

Display	1999 Count Backlit LCD with LUX, fc, battery, and MAX indicators
Display Polarity	Automatically detects polarity; displays (-) for negative polarity
Over range indication	LCD displays 'OL'
Low Battery Indication	Battery icon appears when battery voltage is below operating level
Measurement rate	2.5 readings per second, nominal
Measurement Repeatability	±2%
MAX indication	Displays highest reading
Temperature coefficient	±0.1% per ^{o}C
Photo detector	Silicon photo-diode with spectral response filter
Sensor Calibration	Calibrated to standard incandescent lamp; color temperature 2856k
Spectral response	CIE photopic (CIE human eye response curve)
Power supply	9V battery
Auto Power Off	Meter automatically switches off after 17 minutes of inactivity
Operating conditions	Temperature: 0 to 40°C (32 to 104°F); Humidity: < 80% RH
Storage conditions	Temperature: -10 to 60°C (14 to 140°F); Humidity: < 80% RH
Dimensions	157 (H) x 54 (W) x 34 (D) mm (6.2 x 2.1 x 1.3 ")
Weight	170 g (6 oz.)

Electrical Specifications

Ranges and Resolution	Accuracy
LUX	± (5% reading + 10 digits (<10000 LUX/fc)
200.0, 2000, 20000, 40000	± (10% reading + 10 digits (>10000 LUX/fc)
Foot candles (Fc)	**Note** that readings over 1999 will show the x10 or x100 multiplier.
20.0, 200.0, 2000, 4000	In these cases, multiply the displayed value by the multiplier to obtain the correct reading.

Appendices

Typical Light Levels

Lux	Foot Candles		Lux	Foot Candles	
		Factories			Homes
20-75	2-7	Emergency Stairs, Warehouse	100-150	10-15	Washing
75-150	7-15	Exit/Entrance Passages	150-200	15-20	Recreational Activities
150-300	15-30	Packing Work	200-300	20-30	Drawing Room, Table
300-750	30-75	Visual Work: Production Line	300-500	30-50	Makeup
750-1,500	75-150	Typesetting: Inspection Work	500-1,500	50-150	Reading, Study
1,500-3,000	150-300	Electronic Assembly, Drafting	1,000-2,000	100-200	Sewing
		Office			Restaurant
75-100	7-10	Indoor Emergency Stairs	75-150	7-15	Corridor Stairs
100-200	10-20	Corridor Stairs	150-300	15-30	Entrance, Wash Room
200-750	20-75	Conference, Reception Room	300-750	30-75	Cooking Room, Dining Table
750-1,500	75-150	Clerical Work	750-1,500	75-150	Show Window
1,500-2,000	150-2000	Typing, Drafting			
		Stores			Hospitals
75-150	7-15	Indoors	30-75	3-7	Emergency Stairs
150-200	15-20	Corridor/Stairs	75-100	7-10	Stairs
200-300	20-30	Reception	100-150	10-15	Sick Room, Warehouse
300-500	30-50	Display Stand	150-200	15-20	Waiting Room
500-750	50-75	Elevator	200-750	20-75	Medical Exam Room
750-1,500	75-150	Show Window, Packing Table	750-1,500	75-150	Operating Room
1,500-3,000	150-300	Storefront, Show Window	5,000-10,000	500-1000	Eye Inspection

Spectral Sensitivity

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