

User's Guide

EXTECH[®]
INSTRUMENTS
A FLIR COMPANY

EasyView Digital Light Meter

Model EA30



Introduction

Congratulations on your purchase of the Extech EasyView Digital Light Meter which measures light level (illuminance). This device measures up to 40,000 Fc and 400,000 Lux. Careful use of this meter will provide years of reliable service.

Specifications

Ranges and Resolution	Accuracy
Lux	
40.00, 400.0, 4000, 40.00k, 400.0kLux	$\pm (3\% \text{ Rdg} + 0.5\% \text{ FS})$ $\pm (4\% \text{ Rdg} + 0.5\% \text{ FS}, \text{ if } > 10,000 \text{ lux})$
Foot candles	
40.00, 400.0, 4000, 40.00kfc	$\pm (3\% \text{ Rdg} + 0.5\% \text{ FS})$ $\pm (4\% \text{ Rdg} + 0.5\% \text{ FS}, \text{ if } > 1,000 \text{ fc})$

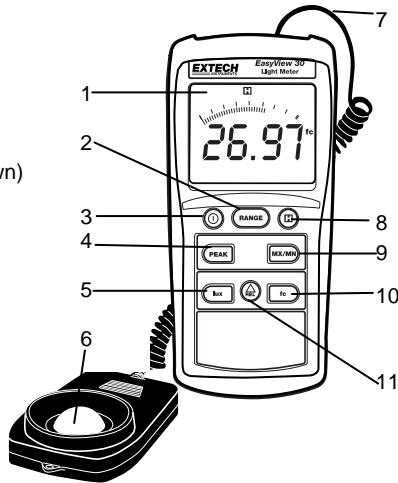
General Specifications

Display	Multi-function 3-3/4 (3999) digit LCD with Bargraph indicator
Over range indication	LCD displays 'OL'
Spectral response	CIE photopic (CIE human eye response curve)
Spectral accuracy	CIE V _λ function (f ₁ ⊙ □ 6%)
Measurement Repeatability	±2%
Temperature coefficient	±0.1% per °C
Sampling rate	13.3 times per second (bargraph); 1.3 times per second (digital display)
Photo detector	Silicon photo-diode with spectral response filter
Peak hold	Capture light peaks to 100uS
Operating conditions	Temperature: 32 to 104°F (0 to 40°C); Humidity: < 80% RH
Storage conditions	Temperature: 14 to 140°F (-10 to 50°C); Humidity: < 80% RH
Dimensions	5.91 x 2.8 x 1.4" (150 x 72 x 33mm)
Weight	Approx. 11.3 oz. (320g) with battery
Low battery indication	"BT" appears on the LCD
Power supply	6 'AAA' cells; Battery life approx 400 hours

Meter Description


1. LCD display
2. Range button
3. Power ON/OFF button
4. Peak hold button
5. Lux select button
6. Photo sensor (lens cover not shown)
7. Sensor input to top of meter
8. Data HOLD button
9. MAX/MIN button
10. fc foot candle select button
11. RELATIVE function button

Note: Battery compartment is located on the rear of the instrument



Operation

Turn Power ON or OFF

1. Press the  button to turn power on or off. The meter will perform a short self-test when turned on.

Light sensor

1. The light sensor is permanently attached to the meter. A coiled cable attaches the sensor to the meter.
2. The white domed light sensor lens is a photo diode and resides underneath the protective cap.
3. The meter automatically zeroes, therefore a zero calibration is not necessary.
4. The back of the sensor has a tripod mounting hole.

Taking light measurements

1. Remove the protective cap from the sensor and face the white domed light sensor toward the source of light to be monitored. For overhead lighting, the sensor can be placed on a desk or table top.
2. The light being measured must encompass the entire white sensor dome.
3. Read the light level on the LCD. If the light measurement is out of range an "OL" indication will appear on the display. If the 'OL' appears, select another range by pressing the RANGE button.

Selecting Lux or Foot candle units of measure

Press the **LUX** button to select lux units and the **fc** button to select foot candle units.

MX MN Function (stores/recalls highest MX and lowest MN readings)

Press the **MX/MN** button once to put the meter in MX mode. The meter will now display only the highest reading (MX is displayed on the upper left-hand portion of the LCD). Press **MX/MN** again to put the meter in MN mode where the meter displays only the lowest reading (MN icon is displayed). Press **MX/MN** again to have the meter continue to record the highest and lowest readings but display only the current reading (both MX and MN icons appear flashing), then use the **MX/MN** button to scroll through the highest and lowest readings. To exit the MX MN mode, press and hold the **MX/MN** button until the MX and MN icons completely disappear.

Data Hold

Press the **HOLD** button to freeze the displayed reading. The 'H' hold icon will appear on the upper right-hand side of the display. Press the **HOLD** button again to return to normal operation (the 'H' hold icon will disappear). When hold function is enabled the analog bar graph will continue to display level changes.

Peak Hold

The Peak Hold feature allows the meter to capture light level changes that occur in as little time as 100 μ s. Press the **PEAK** button momentarily and the 'P+' icon will appear on the LCD. The meter can now measure a fast acting light peak and display it on the LCD. To exit the Peak Hold mode, press the **PEAK** button.

Relative mode

Measurements can be displayed as a difference between actual light level and a stored reference value. To store a reading as a reference, press the **REL** button when the desired reference measurement is on the LCD (the triangle icon will appear steady in the upper left-hand corner of the LCD). All subsequent displayed readings will be "relative" to the stored reference value. For example, if the reference value is 100 and the actual light level is 125, the meter will display 25. To view the reference value, press the **REL** button again so that the triangle icon begins to flash. The displayed value will be the reference value. To exit the Relative mode, press and hold the **REL** button until the triangle icon disappears.

Maintenance

Cleaning and storage

1. The white plastic sensor dome should be cleaned with a damp cloth when necessary.
2. Store the meter in an area with moderate temperature and humidity (refer to the operating and storage range in the specifications chart earlier in this manual).

Battery Replacement

When the battery power falls low, the 'BT' symbol will appear on the lower left-hand side of the LCD. Replace the six (6) 1.5 'AAA' batteries by removing the rear (center) battery compartment screw and accessing the battery compartment. Observe polarity when placing the batteries in the compartment. Ensure that the compartment cover is securely fastened when finished.

Calibration and Repair Services

Extech offers repair and calibration services for the products we sell. Extech also provides NIST certification for most products. Call the Customer Service Department for information on calibration services available for this product. Extech recommends that annual calibrations be performed to verify meter performance and accuracy.

Warranty

EXTECH INSTRUMENTS CORPORATION (A FLIR COMPANY) warrants this instrument to be free of defects in parts and workmanship for **one year** from date of shipment (a six month limited warranty applies to sensors and cables). If it should become necessary to return the instrument for service during or beyond the warranty period, contact the Customer Service Department at (781) 890-7440 ext. 210 for authorization or visit our website www.extech.com for contact information. A Return Authorization (RA) number must be issued before any product is returned to Extech. The sender is responsible for shipping charges, freight, insurance and proper packaging to prevent damage in transit. This warranty does not apply to defects resulting from action of the user such as misuse, improper wiring, operation outside of specification, improper maintenance or repair, or unauthorized modification. Extech specifically disclaims any implied warranties or merchantability or fitness for a specific purpose and will not be liable for any direct, indirect, incidental or consequential damages. Extech's total liability is limited to repair or replacement of the product. The warranty set forth above is inclusive and no other warranty, whether written or oral, is expressed or implied.

Product Support

Technical Support: support@extech.com -- Calibration and Repairs: repair@extech.com

Product specifications subject to change without notice

For the latest version of User Guides, Software updates, and other information:

www.extech.com (781) 890-7440

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Appendix

Typical Light Levels

Lux	Foot Candles		Lux	Foot Candles	
		Factories			Home
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	150-200	Typing, Drafting			
		Store			Hospital
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

