EXTECH ®
INSTRUMENTS

# EasyView Digital Light Meter

Model EA30

Introduction

Thank you for selecting the Extech EasyView Digital Light Meter which measures light level (luminance). This device measures up to 40,000 Fc and 400,000 Lux. This device is shipped fully tested and calibrated and, with proper use, will provide years of reliable service. Please visit the Extech Instruments website (www.extech.com) to check for the latest version of this User Guide. Extech Instruments is an ISO-9001 certified company.

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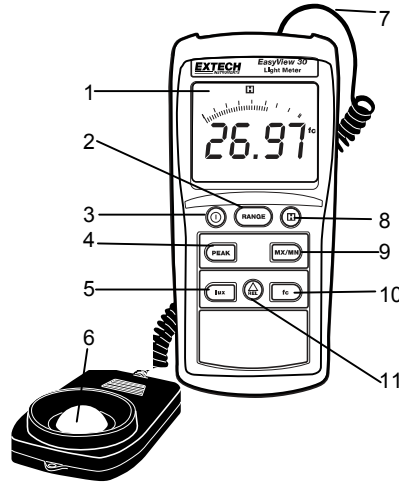
Note: Battery compartment is located on the rear of the instrument

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 captures light level changes that occur in as little time as 100🔳. 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.

You, as the end user, are legally bound (**EU Battery ordinance**) to return all used batteries, **disposal in the household garbage is prohibited!** You can hand over your used batteries / accumulators at collection points in your community or wherever batteries / accumulators are sold!

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

Specifications

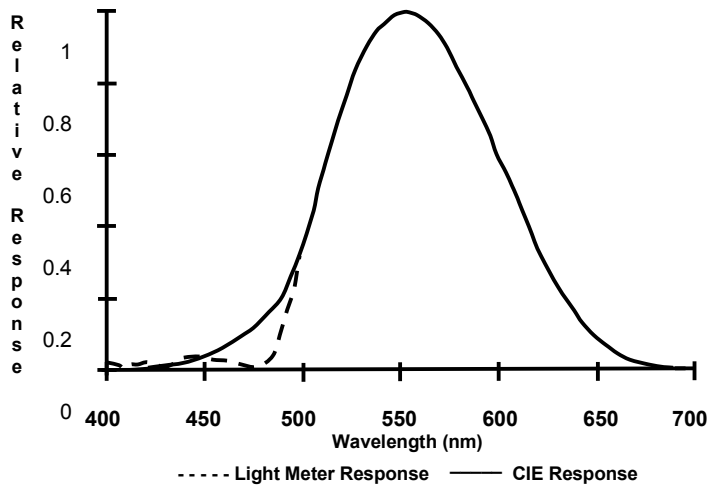| Ranges	Resolution	Accuracy
Lux		
40.00,	0.01	± (3% Reading + 0.5% Full Scale)
400.0	0.1	
4000	1	
40.00k,	0.01	if > 10,000 lux
400.0kLux	0.1	±(4% Reading + 0.5%Full Scale)
Foot candles		
40.00	0.01	± (3% Reading + 0.5% Full Scale)
400	0.1	
4000,	1	if > 1,000 fc
40.00kfc	0.01	±(4% Reading + 0.5%Full Scale)

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 function (f_1 6%)
Measure Repeatability	±2%
Temperature coefficient	±0.1% per ^{o}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: 0 to 40°C (32 to 104°F); Humidity: < 80% RH
Storage conditions	Temperature: -10 to 50°C (14 to 140°F); Humidity: < 80% RH
Dimensions	150 x 72 x 33mm (5.91 x 2.8 x 1.4")
Weight	Approx. 320g (11.3 oz.) with battery
Low battery indication	"BT" appears on the LCD
Power supply	6 'AAA' cells; Battery life approx 400 hours

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	150-2000	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

Relative Response vs Wavelength (nm)

- - - - - Light Meter Response ——— CIE Response