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## CEM DT-1308

# CEM DT-1308 Handheld Digital Light Meter User Manual

Model: DT-1308 | Brand: CEM

## 1. INTRODUCTION

The CEM DT-1308 is a high-precision digital light meter designed for measuring illuminance in Lux (lx) or Foot-Candle (FC) units. It features a large 4-digit LCD display with a 41-segment analog bargraph, capable of measuring up to 400,000 Lux. This device is suitable for various applications including photography, environmental monitoring, and industrial settings. Its lightweight design and durable construction ensure reliable and accurate measurements.

## 2. SAFETY INFORMATION

Please read this manual thoroughly before operating the device to ensure safe and proper use. Keep this manual for future reference.

- Do not expose the device to extreme temperatures, humidity, or direct sunlight.
- Avoid dropping the device or subjecting it to strong impacts.
- Do not attempt to open or modify the device; this will void the warranty and may cause damage.
- Remove batteries if the device will not be used for an extended period to prevent leakage.
- Dispose of batteries and the device according to local regulations.

## 3. PACKAGE CONTENTS

Verify that all items are present and in good condition upon unpacking:

- CEM DT-1308 Digital Light Meter
- Protective Sensor Cover
- Heavy Duty Pouch
- User Manual
- Batteries (if included)



Figure 3.1: The CEM DT-1308 light meter shown with its packaging and included protective pouch.

## 4. FEATURES

- Large 4000 counts LCD display with 41-segment analog bargraph.
- Measurement range up to 400,000 Lux.
- User selectable units: Lux (lx) or Foot-Candle (FC).
- High accuracy and rapid response.
- Peak Hold function to capture maximum readings.
- Relative mode for differential measurements.
- Data Hold function to freeze the displayed reading.
- Automatic Power Off to conserve battery life.
- Low battery indication.

- Long life silicon photo diode sensor.
- Over-range indication.

## 5. DEVICE LAYOUT

Familiarize yourself with the components of your DT-1308 light meter:



Figure 5.1: Rear view of the DT-1308, highlighting the battery compartment and the coiled cable connecting to the light sensor.

1. **Light Sensor:** Detachable sensor with a protective cover, connected via a coiled cable. This is the component that detects light.
2. **LCD Display:** Shows measurement readings, units, and various indicators.
3. **Function Buttons:**
  - **POWER button:** Turns the device ON/OFF.
  - **RANGE button:** Manually selects measurement range.
  - **UNIT button:** Toggles between Lux and Foot-Candle units.
  - **HOLD button:** Freezes the current reading on the display.
  - **PEAK button:** Captures and displays the maximum light intensity.
  - **REL (Relative) button:** Sets the current reading as a reference for subsequent measurements.
4. **Battery Compartment:** Located on the rear of the device, holds the required batteries.

## 6. SETUP

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### 6.1 Battery Installation

1. Locate the battery compartment cover on the back of the device (refer to Figure 5.1).
2. Slide or unscrew the cover to open the compartment.
3. Insert the required AA batteries, ensuring correct polarity (+/-).
4. Replace the battery compartment cover securely.

### 6.2 Initial Power-On

1. Press the **POWER** button to turn on the light meter.
2. The LCD display will illuminate and show a brief self-test before displaying a reading.
3. Ensure the protective cover is removed from the light sensor before taking measurements.

## 7. OPERATING INSTRUCTIONS

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### 7.1 Taking a Measurement

1. Turn on the device using the **POWER** button.
2. Remove the protective cap from the light sensor.
3. Position the light sensor at the desired measurement point, ensuring it faces the light source directly.
4. Read the illuminance value on the LCD display. The measurement rate is approximately 1.5 times per second.

### 7.2 Unit Selection (Lux/FC)

Press the **UNIT** button to toggle between Lux (lx) and Foot-Candle (FC) measurement units. The selected unit will be indicated on the display.

### 7.3 Data Hold Function

Press the **HOLD** button to freeze the current reading on the display. Press it again to release the hold and resume live measurements.

### 7.4 Peak Hold Function

Press the **PEAK** button to capture and display the maximum light intensity detected since the function was activated. This is useful for measuring transient light peaks. Press it again to exit Peak Hold mode.

### 7.5 Relative Mode

Press the **REL** button to enter Relative mode. The current reading will be stored as a reference value, and subsequent measurements will be displayed as the difference from this reference. Press **REL** again to exit Relative mode.

### 7.6 Range Selection

The device typically operates in auto-ranging mode. However, you can manually select a measurement range by pressing the **RANGE** button. Cycle through available ranges as needed. To return to auto-ranging, press and hold the **RANGE** button.

### 7.7 Auto Power Off

The DT-1308 features an automatic power-off function to conserve battery life. If no buttons are pressed for a certain period (typically 10-15 minutes), the device will automatically shut down. Press the **POWER** button to turn it back on.

## 8. MAINTENANCE

### 8.1 Cleaning

Wipe the device and sensor with a soft, dry cloth. Do not use abrasive cleaners or solvents, as they may damage the casing or sensor. Keep the light sensor clean and free from dust or smudges for accurate readings.

### 8.2 Storage

When not in use, store the light meter in its protective pouch in a cool, dry place, away from direct sunlight and extreme temperatures. Ensure the protective cap is on the light sensor.

### 8.3 Battery Replacement

When the low battery indicator appears on the display, replace the batteries promptly to ensure continued accurate operation. Refer to section 6.1 for battery installation instructions.

## 9. TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on.	Dead or incorrectly installed batteries.	Check battery polarity and replace batteries if necessary.
Display shows "OL" or "OVER".	Measurement exceeds the current range.	Switch to a higher measurement range using the <b>RANGE</b> button, or move to a less intense light source.
Inaccurate readings.	Dirty sensor, sensor cover still on, or low battery.	Clean the sensor, remove the protective cover, or replace batteries. Ensure the sensor is positioned correctly.
Display is blank or flickering.	Low battery or internal fault.	Replace batteries. If the problem persists, contact customer support.

## 10. SPECIFICATIONS

- **Display:** 4000 counts LCD with 41-segment analog bargraph
- **Measurement Range:** Up to 400,000 Lux (or equivalent FC)
- **Units:** Lux (lx) / Foot-Candle (FC) selectable
- **Sensor:** Long life silicon photo diode
- **Measurement Rate:** 1.5 times per second (nominal)
- **Functions:** Data Hold, Peak Hold, Relative Mode, Auto Power Off, Over-range indication, Low battery indication
- **Power Supply:** 1 x AA battery
- **Operating Temperature:** 0°C to 50°C (32°F to 122°F)
- **Storage Temperature:** -20°C to 60°C (-4°F to 140°F)
- **Dimensions:** (Refer to product images for approximate size)
- **Weight:** (Lightweight, specific value not provided)

## 11. WARRANTY AND SUPPORT

CEM products are designed for reliability and performance. This product is covered by a standard manufacturer's warranty against defects in materials and workmanship. For specific warranty terms, please refer to the warranty card included with your product or visit the official CEM website.

For technical support, service, or inquiries, please contact your local distributor or CEM customer service. Contact information can typically be found on the CEM website or on the product packaging.