AMPROBE®

LM-200LED
LED Light Meter

Users Manual

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English

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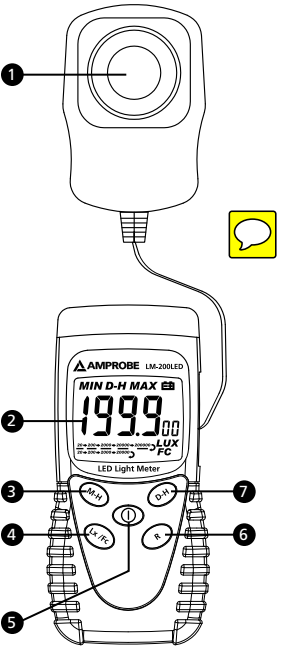
LM-200LED_Rev03

Limited Warranty and Limitation of Liability
Your Amprobe product will be free from defects in material and workmanship for 1 year from the date of purchase unless local laws require otherwise. This warranty does not cover fuses, disposable batteries or damage from accident, neglect, misuse, alteration, contamination, or abnormal conditions of operation or handling. Resellers are not authorized to extend any other warranty on Amprobe's behalf. To obtain service during the warranty period, return the product with proof of purchase to an authorized Amprobe Test Tools Service Center or to an Amprobe dealer or distributor. See Repair Section for details. THIS WARRANTY IS YOUR ONLY REMEDY. ALL OTHER WARRANTIES - WHETHER EXPRESS, IMPLIED OR STAUTORY - INCLUDING IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, ARE HEREBY DISCLAIMED. MANUFACTURER SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOSSES, ARISING FROM ANY CAUSE OR THEORY. Since some states or countries do not allow the exclusion or limitation of an implied warranty or of incidental or consequential damages, this limitation of liability may not apply to you.

Repair
All test tools returned for warranty or non-warranty repair or for calibration should be accompanied by the following: your name, company's name, address, telephone number, and proof of purchase. Additionally, please include a brief description of the problem or the service requested and include the test leads with the meter. Non-warranty repair or replacement charges should be remitted in the form of a check, a money order, credit card with expiration date, or a purchase order made payable to Amprobe® Test Tools.

In-Warranty Repairs and Replacement – All Countries
Please read the warranty statement and check your battery before requesting repair. During the warranty period any defective test tool can be returned to your Amprobe® Test Tools distributor for an exchange for the same or like product.

Non-Warranty Repairs and Replacement – US and Canada
Non-warranty repairs in the United States and Canada should be sent to a Amprobe® Test Tools Service Center. Call Amprobe® Test Tools or inquire at your point of purchase for current repair and replacement rates.



LM-200LED

1. Light Sensor
2. Display(LCD)
3. MAX HOLD
4. Lux / foot candles
5. Power Button: ON/OFF
6. Measurement Range Selection
7. DATA HOLD
8. Light sensor Zero Adjustment
9. Sensor Protective Cap

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SYMBOLS

⚠	Caution! Refer to the explanation in this Manual	CE	Complies with EU directives
	Conforms to relevant Australian standards.		Do not dispose of this product as unsorted municipal waste.

⚠ Warning and Precautions

- Do not operate the meter in explosive gas (material), combustible gas (material) steam or filled with dust.
- The light sensor is calibrated to CIE standard incandescent lamp at 2856 °K and may give different readings for spectrums from other lamp types.

UNPACKING AND INSPECTION

Your shipping carton should include:

1 LM-200LED LED light meter
1 9 volt battery
1 Users Manual
1 Carrying case

If any of the items are damaged or missing, return the complete package to the place of purchase for an exchange.

INTRODUCTION

The instrument measures light output of LED sources for all visible light ranges.

The lumen is a measure of total amount of visible lights emitted by a source. The lumen is defined as in relation to the candela as 1 lm = 1 cd.sr.

A foot-candle is the luminance cast on a surface by a one-candela source one foot away. One foot-candela is equal to one lumen per square foot or approximately 10.764 lux.

OPERATION

1. Press the ⏻ button to turn power on or off
2. Remove sensor protective cap and place the sensor perpendicular to the light.
3. Select the measurement unit (LUX or FC) by using (Lx/Fc) button.
4. Set the measurement range by using (R) button.

5. Press (M-H) button to obtain the maximum reading during measurement.
6. Press (D-H) button to freeze the present reading on the display.

⚠ **Always put the sensor protective cap back when the instrument is not in use.**

Lx / fc

Press (Lx/Fc) button to select the measurement unit.
1 foot-candle = 10.764 Lux and 1 Lux = 0.09290 foot-candle

Measurement Range (R)

Press (R) button to select the measurement range. An "OL." Symbol on display indicates over-range, select a higher range for measurement.

Maximum Hold

Press (M-H) button to obtain the maximum reading during measurement (MAX symbol shows on display).

Press (M-H) button again to exit maximum hold mode (MAX symbol disappears on display).

Data Hold

Press (D-H) button to freeze present reading on display (D-H symbol shows on display).

Press (D-H) button again to resume measurement (D-H symbol disappears on display).

Zero Adjustment

The instrument zero may change over time. To reset to zero follow the instructions:

1. Make sure the sensor protective cap is fully covered on the sensor.
2. Set the range at the lowest LUX or FC range
3. Using a small flat screwdriver to adjust zero control (0 ADJ) until display shows "0.00".

SPECIFICATIONS

General

Display:	2000 count LCD
Sensor:	Silicon photodiode and filter.
Environment:	Indoor operation
Altitude:	Up to 2000m.

Temperature / Humidity

Operating:	-10 °C to 40 °C (14°F to 104°F), 0 to 80 %RH.
Storage:	-10 °C to 50 °C (14°F to 122°F), 0 to 70 %RH.
Power Supply:	9V NEDA 1604, IEC 6F22, JIS 006P battery
Battery life:	typical 200 hours (Alkaline)
Auto Power Off:	approx 6 min
Dimension (Base):	130 x 63 x 38 mm (5.1 x 2.5 x 1.5")
Dimension (Sensor):	80 x 55 x 29 mm (3.2 x 2.2 x 1.1")
Weight:	220 g (.48 lb.) include battery

CE-EMC: EN61326-1 This product complies with requirements of the following European Community Directives: 89/336/EEC (Electromagnetic Compatibility) and 73/23/EEC (Low Voltage) as amended by 93/68/EEC (CE Marking). However, electrical noise or intense electromagnetic fields in the vicinity of the equipment may disturb the measurement circuit. Measuring instruments will also respond to unwanted signals that may be present within the measurement circuit. Users should exercise care and take appropriate precautions to avoid misleading results when making measurements in the presence of electronic interference.

Illumination:

Measuring Range: 200, 2000, 20000, 200000 Lux
20, 200, 2000, 20000 Foot candles

Accuracy: ±3% for white LED light (Calibrated to standard incandescent lamp 2856° K and corrected LED day white-light spectrum).
± 8% for other visible light sources
Angle deviation from cosine Characteristics
30 ° ± 2 %
60 ° ± 6 %
80 ° ± 25 %

Cosine Angular corrected per JIS C 1609:1993 and CNS 5119 general A class specifications.

MAINTENANCE AND REPAIR

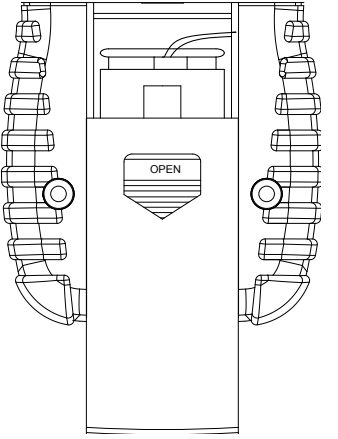
If there appears to be a malfunction during the operation of the meter, the following steps should be performed in order to isolate the cause of the problem.

1. Check the battery. Replace the battery immediately when the symbol "🔋" appears on the LCD.
2. Review the operating instructions for possible mistakes in operating procedure.

Except for the replacement of the battery, repair of the meter should be performed only by a Factory Authorized Service Center or by other qualified instrument service personnel. The front panel and case can be cleaned with a mild solution of detergent and water. Apply sparingly with a soft cloth and allow to dry completely before using. Do not use aromatic hydrocarbons or chlorinated solvents for cleaning.

Battery Replacement

1. Turn off the meter and slide out the battery cover. Replace the battery with a NEDA type 1604 or equivalent 9V alkaline battery. Replace the cover.
2. Remove battery when the instrument is not used for extended period.



Battery Replacement