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Back to Amprobe LM100 Digital Lightmeters



AMPROBE

LM-100

LM-120

Light Meters

Users Manual

- Mode d'emploi
- Bedienungshandbuch
- Manuale d'Uso
- Manual de uso
- Användarhandbok



LM-100 / LM-120

Light Meters

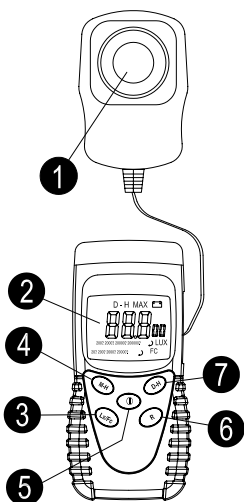
Users Manual

English

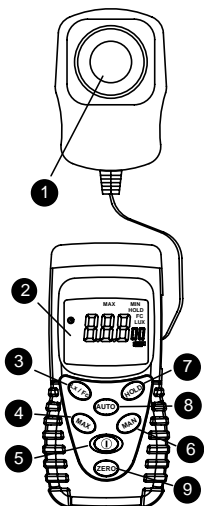
LM100_Rev001

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LM-100







LM-120

- ① Light sensor
- ② Display(LCD)
- ③ Lux / foot candles
- ④ MAX Lock up MIN and MAX value
- ⑤ Power Button: ON/OFF
- ⑥ Manual range selection
- ⑦ DATA HOLD button
- ⑧ AUTO ranging
- ⑨ Light sensor Zero Adjustment

CONTENTS

Symbols	5
Unpacking and Inspection	5
Introduction.....	5
Operation	5
Lx / fc.....	6
Data Hold	6
MAN Ranging (LM-100).....	6
AUTO / MAN Ranging (LM-120).....	6
MAX	6
Auto-Power Off	6
Zero (LM-120).....	6
Specifications	6
Maintenance and Repair	7
Battery Replacement	8

SYMBOLS

	Caution! Refer to the explanation in this Manual		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 2854 °K and may give different readings for spectrums from other lamp types.

UNPACKING AND INSPECTION

Your shipping carton should include:

- 1 LM-100 or LM-120 light meter
- 1 9 volt battery
- 1 Users Manual


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

INTRODUCTION

The LM-100 and LM-120 measure the visible light from fluorescent, metal halide, high-pressure sodium or incandescent sources.

One LUX (Lumen) is the illumination from a one candela lamp perpendicular to a surface one meter squared at a distance of one meter. One foot-candle (Fc) is the illumination from a one candela lamp perpendicular to a surface one foot squared at a distance of one foot.

OPERATION

1. Press the  button to turn power on or off
2. Remove sensor cap and place the sensor perpendicular to the light.
3. Select Illuminance scale and range for reading.
4. When done testing, replace the sensor cover to protect the filter and sensor.

Lx / fc

Illuminance scales. 1 foot-candle = 10.764 Lux and 1 lux = 0.09290 foot-candles.

Data Hold

Freezes the reading present on the LCD at the moment the button is pressed. Press HOLD again to disable Data Hold.

MAN Ranging (LM-100)

Press the MANual ranging button for useable reading.

AUTO / MAN Ranging (LM-120)

Press the AUTO or MANual ranging button for useable reading. AUTO ranging is the default operation.

MAX

The MAX MIN feature reads and updates the display to show the maximum or minimum value measured after you press the MAX MIN button. Pressing the MAX MIN button for less than 1 second will put the meter into a mode of displaying the maximum, minimum, or actual readings. Each time the MAX button is pressed, the meter will cycle from MAX \square MIN \square off. Press the MAX MIN button for more than 1 seconds to disable this feature.

Select the proper measurement range before enabling the MAX MIN feature.

Auto-Power Off (LM-120)

In order to save battery life, your light meter powers down automatically after approximately 6 minutes of inactivity. You can turn it back on by pressing the $\text{\textcircled{1}}$ button. You can disable Auto Power Off by pressing and holding the HOLD button while turning the meter ON.

Zero (LM-120)

The light sensor will change the null point over time. To reset the null point, cover the sensor, press the ZERO button. The display will show "ADJ". When the null reset is done, the display will read '00.0'.

SPECIFICATIONS

General:

Sampling Rate:	2.5 times per second for digital display.
Display:	3 1/2 digit, 1999 count LCD
Sensor:	Silicon photodiode and filter.
Environment:	Indoor operation
Altitude:	Up to 2000m.
Temperature / Humidity:	
Operating:	-10 °C to 50 °C, 0 to 80 %RH.

Storage:	-10 °C to 50 °C, 0 to 70 %RH.
Power Supply:	9V NEDA 1604, IEC 6F22, JIS 006P battery
Battery life:	200 hours
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:	20, 200, 2000, 20000, 200000 Lux 20, 200, 2000, 20000 Foot candles
Accuracy:	± 3 % (Calibrated to standard incandescent lamp at 2854 °K) 6% 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.

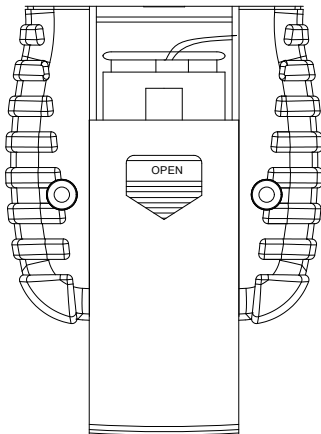
1. Check the battery. Replace the battery immediately when the symbol " " appears on the LCD.
2. Review the operating instructions for possible mistakes in operating procedure.

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 LM-100 / LM-120 is not used for extended period.



Battery Replacement



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Back to Amprobe LM100 Digital Lightmeters