



**L-50 LUXMETER  
INSTRUCTION MANUAL**

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## STANDARDS

Luxmeter **L-50** fulfills recommendations of International Commission On Illumination (CIE), published in publication no. 69-1987: „*Methods of characterizing illuminance meters and luminance meters: Performance, characteristics and specifications*”.

Device was approved by Polish Central Office of Measures (decision no. **RP T 96 381**).

Luxmeter **L-50** fulfills requirements of EMC standards:

- |              |                                                                                                                                            |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| EN 61326     | „Electrical equipment for measurement, control and laboratory use. EMC requirements ”.                                                     |
| EN 61000-6-2 | „Electromagnetic compatibility (EMC). Generic standards. Immunity standard for industrial environments ”                                   |
| EN 61000-6-3 | „Electromagnetic compatibility (EMC). Generic standards. Emission standard for residential, commercial and light-industrial environments ” |

### METER CHARACTERISTICS

Luxmeter L-50 is designed to measure illuminance of natural and artificial light, in the range  $5.0 \div 199\,900$  lx. It can be used in home, light industrial and heavy industrial environment, both indoors and outdoors. It is a universal device of wide use (e. g. work safety, environmental protection, laboratory measurements). Thanks to a very good matching spectral characteristics of detector to the spectral sensitivity of the human eye for photopic vision, using color correction factors for light sources other than tungsten is unnecessary. Photometric probe is equipped with a very good angular correction, matching the directional characteristic to cosine curve.



Reading of measured value is done on the LCD, directly in lux or kilolux. Exceeding the measuring range (overload) is indicated by one on the first digit and extinguishing of remaining digits.

Luxmeter is equipped with **HOLD** function, which temporary suspends measuring process. In that case, last measured illuminance result is displayed on the LCD. In that mode, changing of measuring range is not possible.

**WARNING: Luxmeter and measuring probe are a complete set which should be calibrated together.**

Meter has a foil keyboard consisting of four keys:

- on/off** - turning on / off the meter,
-  - changing measuring range to directly higher,
-  - changing measuring range to directly lower,
- hold** - turning on / off **HOLD** function.

Selected measuring range is indicated by measuring unit selection (**lx** or **klx**) and appropriate placement of the decimal point on the display.

The device turns off automatically after about 10 minutes after last keystroke.

**TECHNICAL SPECIFICATION**

- accuracy class A (CIE)
- accuracy  $\leq 2.5\%$  (CIE)
- spectral matching:  $f_1' \leq 2\%$  (CIE)
- cosine correction matching:  $f_2 \leq 1.5\%$  (CIE)
- reading range: 0 ÷ 199 900lx
- measuring range: 5.0 ÷ 199 900lx in subranges:
  - (200lx) 5.0 ÷ 199.9lx (resolution 0.1lx)
  - (2000lx) 50 ÷ 1999lx (resolution 1lx)
  - (20klx) 0.5 ÷ 19.99klx (resolution 10lx)
  - (200klx) 5.0 ÷ 199.9klx (resolution 100lx)
- changing of measuring range: manual
- power supply: Battery 9V (IEC: 6F22)
- current consumption: ca 3mA
- weight with battery: ca 300g
- dimensions: 152 x 83 x 33mm
- operating temperature: 0 ÷ 40°C
- operating relative humidity  $\leq 80\%$

#### **BASIC ACCESSORIES**

- photometric probe,
- carrying case,
- warranty card,
- battery,
- instruction manual,
- photometric probe relative spectral sensitivity chart.

#### **ADDITIONAL ACCESSORIES**

- photometric probe handle.

#### **OPERATION**

- Connect covered photometric probe to the luxmeter. Make sure that cover on the probe is completely sealed
- Turn luxmeter on using **on/off** key. Measuring range 2000lx will be chosen automatically.
- Check and if necessary correct zero on the lowest measuring range (use screwdriver on the hole located on the right side of the instrument).
- Uncover photometric probe and select appropriate measuring range using keys ▲▼ .
- Read measured value.

- To freeze reading use **hold** key. Continue of the measure is possible after next pressing of that key.

**WARNING: Calibration knob is located on the left side of the instrument. Changing calibration adjustment will void calibration certificate.**

**RECOMENDATIONS FOR INSTRUMENT USE**

- Glass surface of photometric probe should be clean. In case of dirt, clean up gently using soft cloth. Uncover photometric probe only for the time of measurement. Protect the probe from excessive moisture and temperature. Do not expose it to prolonged exposure of strong sunlight. Continuous measure is permitted only to illuminance value of 150klx. Above this value, measure time should be reduced to no more than 30s.
- Do not use the instrument at too low supply voltage. Battery voltage drop below limit value is signaled by **bat** indicator.
- For long term storage, remove the battery.
- The instrument with measuring probe should be stored and transported only in the factory carrying case.
- Keep the device with measuring probe away from factors that can cause mechanical damage.

### **BATTERY REPLACEMENT**

To open the battery compartment, remove the two screws from bottom of the instrument case.

### **MAINTENANCE AND REPAIRS**

Luxmeter L-50 does not require any special maintenance except to follow the recommendations for instrument use. User only need to check the condition of the battery. **All repairs of the instrument are performed by manufacturer.**

### **CE MARKING AND CONFORMANCE TO EU COUNCIL DIRECTIVES**

The product described in this instruction conforms to following EU Council Directives:  
2004/108/EC Electromagnetic Compatibility.



The conformance to above-mentioned requirements is confirmed by CE mark.



This product cannot be thrown away with household waste. Deposit the product in an authorized electrical and electronic waste collection area for recycling. Contact local Municipal Bureau or nearest waste disposal company to get more detailed information.