

Q1270A - DIGITAL LIGHT METER INSTRUCTION MANUAL

INSTRUCTIONS

Congratulations on your purchase of the Q1270A Digital Light Meter. The digital light meter is a precision instrument used to measure light levels in the field. It is fully cosine corrected for the angular incidence of light. It is a compact device, easy to use and constructed of tough materials. The light meter boasts a light sensor that is both stable and sensitive.

FEATURES

- Light measuring level ranges are from 1Lux to 199,999Lux or 1FC to 19,999FC respectively.
- High accuracy and rapid response.
- Data-Hold function for holding measured values.
- Max-Hold function for holding peak values.
- Unit and sign display for easy reading.
- Automatic zeroing.
- Auto power off.
- Meter corrected for luminous efficiency function.
- Correction factor need not be manually calculated for non-standard light sources.
- Short rise and fall time.

OPERATING INSTRUCTIONS

- 1> Set the Mode switch from OFF position to the desired unit of measure; LUX or FC.
- 2> Press MAX so that the meter captures and holds the maximum luminance noise level.
- 3> Press the RANGE button to select the most suitable LUX scale from three ranges: up to 2000 LUX, up to 20 kLUX, up to 200 kLUX, and then rotating back again. FC mode has two ranges: up to 2000FC, up to 20,000FC.
- 4> Remove the photo detector cover and face it toward the light source in a horizontal position.
- 5> Read the luminance value on the LCD. If the meter only displays “OL” on the LCD, the input signal is too strong and a higher range should be selected.
- 6> Data-Hold mode: Press the HOLD button to activate the HOLD mode to suspend all further readings and freeze what is displayed on the screen at that moment. Press the HOLD button again to resume measuring.
- 7> When the measurement is completed, replace the light sensor cover and turn the power off

NOTE: Back Light: Press the light icon button for two seconds to activate the backlight. Press HOLD to turn it off.

BATTERY CHECK-UP & REPLACEMENT

- 1> When the battery power is low, LCD will display “low-battery” symbol.
- 2> Turn off the meter, disconnect the battery cover with a screw driver.
- 3> Disconnect the exhausted battery from the meter and replace it with a new battery.
- 4> Screw the battery cover back into place.

MAINTENANCE

- 1> The white plastic disc on the top of the detector should be cleaned with a damp cloth when necessary. When not in use, please keep the sensor disc covered by the plastic cap.
- 2> Do not store the instrument where temperature or humidity is excessively high.
- 3> The reference level, as marker on the face plate, is the tip of the photo detector globe
- 4> The calibration interval for the photo detector will vary according to operational conditions, but generally the sensitivity decreases in direct proportion to the product of luminous intensity by the operational time. In order to maintain the basic accuracy of the instrument, periodic calibration is recommended.

NOTE: On-screen marks include: “LUX”, “KLUX”, “FC”, “KFC”, “DATA-HOLD”, “HOLD”, “MAX-HOLD”, “MAX”, low battery icon.

SPECIFICATIONS

GENERAL SPECIFICATIONS:

Display:	3½ digit back light LCD display (reads 0 to 1999)
Over range indication:	OL (Over Load) is displayed when the luminance exceeds that range setting
Measurement rate:	2.0 readings per second approximately
Power supply:	One 9V battery (NEDA 1604/JIS 006P/IEC6F22)
Battery life:	200 hours typical
Low battery indication:	Battery symbol is displayed when the battery power drops below the operating voltage
Operation condition:	Temperature: 0°C to 60°C (or 32°F to 104°F) Humidity: 10 to 80%RH
Storage condition:	Temperature: -10°C to 60°C (or 14°F to 140°F) Humidity: 10 to 70%RH
Dimension:	224(L) x 73.6(W) x 32(H) mm
Weight:	215g
Accessories:	Instruction manual, battery

ELECTRICAL SPECIFICATIONS:

Measuring ranges:	2000, 20,000 and 200,000 Lux (3 ranges <=2kLux – 200kLux) or 2000FC, 20,000FC (2 ranges <=2kFC – 20kFC) [LUX is SI Metric, FC is Imperial]
Accuracy:	±3% rdg ±5%
Spectral response:	CIE photo optic Note: The CIE photo optic curve is an international standard for the color response of the average human eye. The CIE standard illuminant ‘A’ is defined as a gas-filled Tungsten filament lamp operating at a correlated color temperature of 2856K.
Cosine response:	$f^2 \leq 6\%$
Repeatability:	±2%
Temperature character:	±0.1%/°C