



## ILLUMINANCE METERS

Minolta Illuminance Meters offer excellent light-measuring capabilities with superb accuracy and simple operation. This is achieved by combining a silicon photocell with a microprocessor for compact, lightweight design. Their convenience and portability are invaluable for the control of lighting in industrial and recreational areas, as well as in laboratory and environmental control applications.

Measuring time can be adjusted for accurate readings of both continuous and flickering light sources. Illuminance deviation between sources can also be determined, or integrated illuminance over a period of time can be calculated. Three models are available, offering different features to meet any user requirement.

### Features

- Three modes of operation:
  1. Illuminance metering of continuous or flickering light sources possible by adjusting response time.
  2. Illumination can also be integrated over a period of time, with both the total illuminance and time period displayed.
  3. Two different sources of illumination can be compared by using the meter's memory.
- Illuminance can be measured in either lux or ft-cd.
- Range can be automatically selected by meter, or user can select one of five fixed ranges.
- Zero calibration is quick and convenient, and display reminds user that calibration is necessary.
- Custom-designed liquid-crystal display clearly shows meter readings and other essential information.
- Minolta Illuminance Meters are extremely portable, weighing only 220g (not including battery) and requiring only one 9v battery.
- Additional features include an instruction plate on the back of the meter listing basic operational steps; an analog output jack for connection to a separate data recorder; and an external power socket allowing use of commercially-available 9v DC power supplies for extended measuring times.

- Receptor head can be detached from the meter body and connected to one of four optional Minolta Adapter Cards for remote metering of controlled lighting setups.



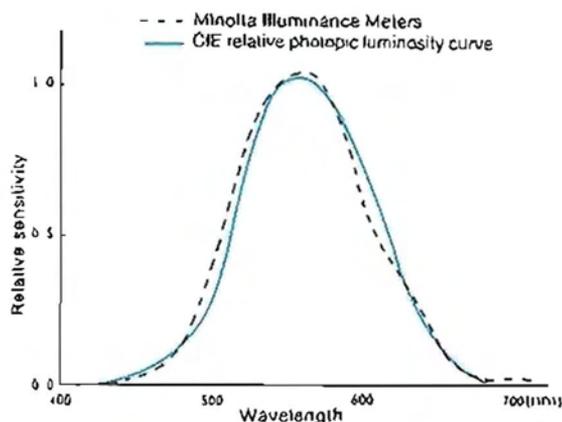
### Applications

Minolta Illuminance Meters are ideal for measuring illumination and exposure levels in a wide variety of industrial, recreational, and scientific applications. To best meet user requirements, Minolta offers three different models:

- Model T-1, with a metering range of 0.01 to 99,900 lux (0.001 to 9,990 ft-c), is ideal for measurements in most situations.
- Model T-1M, with the same metering range as Model T-1, is equipped with a 14mm diameter remote receptor for use in small areas.
- Model T-1H has an increased metering range, from 0.1 to 999,000 lux (0.01 to 99,900 ft-c), for measuring very high illumination levels.

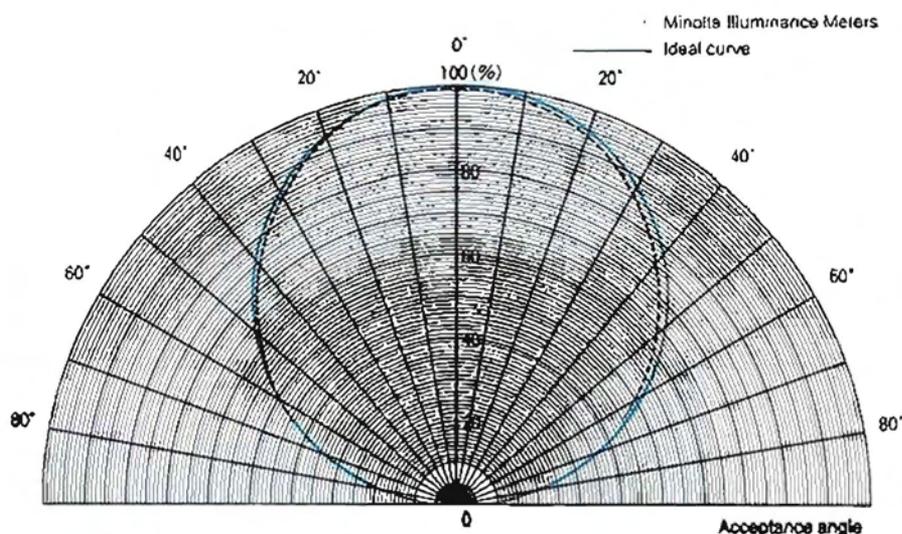
### Spectral response

As indicated in the graph at right, the spectral response of Minolta Illuminance Meters is within 2 percent of the CIE (Commission Internationale de l'Eclairage) relative photopic luminosity curve.



### Acceptance angle characteristics

The incident light acceptance characteristics of Minolta Illuminance Meters are compared with the ideal acceptance curve in the graph at right. The difference is within 2 percent at a 30° angle of acceptance, 7 percent at 60°, and 25 percent at 80°.



## TECHNICAL DETAILS

**Type:** Multi-function illuminance meter with microprocessor and liquid-crystal display for continuous and flickering light sources

**Receptor:** Silicon photocell; receptor head detachable

**Spectral response:** 400 to 760 nm within  $\pm 2\%$  (integrated) of CIE photopic luminosity curve

**Response time:** "FAST" setting: 1msec. (0.001 sec.) "SLOW" setting: 1 sec.

**Measuring functions:** Illuminance in lux (lx) or footcandles (ft-c); integrated illuminance in lux-hours (lx·h) or footcandle-hours (ft-c·h); integration time in hours (h)

**Measuring ranges:**

T-1/T-1M:

Illuminance: 0.01 to 99,900 lx (0.01 to 300,000 lx\*)  
0.001 to 9,990 ft-c (0.001 to 30,000 ft-c\*)

\* analog-output ranges

5 ranges in Manual mode

Integrated illuminance: 0.01 to 999,000 lx·h  
0.001 to 99,900 ft-c·h

Integration period: 0.01 to 999 hours

T-1H:

Illuminance: 0.1 to 999,000 lx (0.1 to 3,000,000 lx\*)  
0.01 to 99,900 ft-c (0.01 to 300,000 ft-c\*)

\* analog-output ranges

5 ranges in Manual mode

Integrated illuminance: 0.1 to 9,990,000 lx·h

0.01 to 999,000 ft-c·h

Integration period: 0.01 to 999 hours

**Accuracy:**  $\pm 2\%$  of recording,  $\pm 1$  digit in last changing display position (based on Minolta standard)

**Analog output:** 1mv per digit; 3v at maximum reading; 10 kilo ohms impedance

**Power source:** One 9v battery (Eveready 216 or equivalent) or external 9v 7mA DC source

**Standard accessories:** Receptor cap, web neck strap, analog-output plug, belt case

**Optional accessories:** Adapter Cord MA-1 (2m or 6.6ft.), MA-2 (1m or 3.3ft.)

**Dimensions:**

Meter body: 170 x 72 x 33mm (6-11/16 x 2-13/16 x 1-5/16 in.)

T-1M: Receptor head:  $\phi 16.5 \times 12$ mm ( $\phi 5/8 \times 1/2$  in.)

Receptor surface:  $\phi 14$ mm ( $\phi 9/16$  in.)

Cord: 1m (3 ft. 3-3/8 in.)

**Weight:** 220g (7-3/4 oz.) without battery

Specifications subject to change without notice