Illuminance meters that conform to JIS AA Class and DIN Class B requirements. Compatible with new, next-generation light sources including PWM-controlled sources.

Can be used for simple, inexpensive multi-point measurements. Mini receptor model also available to enable illuminance measurements even in narrow spaces.
For simple but accurate illuminance measurements. Makes creating illuminance measurement systems such as multi-point measurement systems easy!

Reliable, worry-free illuminance meters that conform to JIS AA Class and DIN Class B

Illuminance Meters T-10A and T-10MA conform to Class AA of JIS C 1609-1: 2006 "Illuminance meters Part 1: General measuring instruments" and DIN 5032 Part 7 Class-B "Photometry; classification of illuminance meters and illuminance meters" requirements to provide high accuracy, high reliability, worry-free measurements. Illuminance meters conforming to these standards are required for measurements of general illumination light sources, while LED lamps for illumination, etc. in a variety of industrial fields.

Removable receptor

The receptor and main body can be detached from each other and then connected using a LAN cable, making it easy to install as part of an inspection system.

Compatible with PWM-controlled lighting. Enables measurements of next-generation light sources.

Conventional illuminance meters often cannot accurately measure PWM-controlled light sources, but the T-10A series of illuminance meters can be used to accurately measure even such light sources.

Easy, inexpensive multi-point measurement (2 to 30 points).

Illuminance distribution of a projector etc. can be easily measured with a single instrument and several receptors.

Multi-point illuminance measuring system

- 5-point example: Architectural lighting, etc.
- 9-point example: Projectors, etc.
- 25-point example: Street lighting, etc.

[T-10A 9-point measuring system composition]
- Illuminant Meter T-10A 1 unit
- T-10A Receptor head 8 units
- Adapter units for Main Body T-A20 1 unit
- Adapter units for Receptor Head T-A21 9 units
- AC Adapter 1 unit
- Data Management Software T-S10w 1 set

Main applications

- Government testing organizations
- Research/inspection at illumination equipment makers
- Maintenance at factories, offices, hospitals, etc.
- Illuminance control of security lighting, street lighting, etc.
- As sensor for equipment measuring light-distribution characteristics, etc.

Can be used for general measurements of illuminance.

Can be used for illuminance measurements in narrow spaces where the standard receptor won’t fit. It can also be easily installed on various kinds of equipment or jigs for measuring light levels such as illumination.

The mini receptor and cord are both waterproof, so they can be used for measurements in water. They can be used for illuminance control for fishery-related applications (such as fish farming, etc.) or for measuring outdoor illuminance on rainy days.

Conforms to JIS AA Class and DIN class B

Enables illuminance measurements of small areas.

Can be used for illuminance measurements in narrow spaces using the standard receptor. It can also be easily installed on various kinds of equipment or jigs for measuring light levels such as illumination.
multi-point measurement systems easy!

Data Management Software T-S10w (Optional accessory)
Convenient, easy-to-use Excel® add-in software
Reads measurement data from T-10A series Illuminance Meters directly into Excel®. Further processing of data can then be performed easily using the various functions of Excel®.

Main specifications of Data Management Software T-S10w

<table>
<thead>
<tr>
<th>Type</th>
<th>Add-in for Excel® (Excel® is required to use the add-in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating environment</td>
<td>For details on system requirements for above versions of Windows™, refer to their respective specifications.</td>
</tr>
<tr>
<td>Not compatible with</td>
<td>Not compatible with 64-bit versions of Excel®.</td>
</tr>
<tr>
<td>Compatible instruments</td>
<td>T-10A, T-10MA, T-10WA, T-10LA, T-10, T-10M, T-10ML, T-10MLA, T-10LA, T-10MLA, T-10LA, T-10MLA.</td>
</tr>
</tbody>
</table>

Relative Spectral Responsivity

Ideally, the relative spectral responsivity of the illuminance meter should match V (f) of the human eye for photopic vision. As shown in the graph above, the relative spectral responsivity of Konica Minolta Illuminance Meters T-10A/10MA is within 6% (f) of the CIE spectral luminous efficiency V (f) of the human eye.

CIE: Commission Internationale de l’Eclairage
f: The degree to which the relative spectral responsivity matches V (f) of the human eye.

Cosine Correction Characteristics

Since the brightness at the measurement plane is proportional to the cosine of the angle at which the light is incident, the response of the receptor must also be proportional to the cosine of the incidence angle. For Konica Minolta Illuminance Meters T-10A/10MA, the cosine response f2 is within 3%.

PWM-controlled lighting

PWM is the abbreviation of Pulse Width Modulation, and refers to the method of controlling signal intensity by controlling the ratio between the ON period and OFF period of a pulse signal. A pulse signal is a signal which repeatedly alternates between ON and OFF, and the percentage of ON period during a single cycle is referred to as the "duty cycle". PWM-controlled lighting is a method for controlling the brightness of a lamp by controlling the duty cycle (lit time) of light from a pulse-emission source. As the lit time becomes longer, the light becomes brighter, and conversely, as the lit time becomes shorter the light becomes darker.

Konica Minolta’s Illuminance Measurement Trio

Konica Minolta’s line of instruments for measuring illuminance includes not only the Illuminance Meter T-10A which can measure PWM-controlled light sources, but also the Chroma Meter CL-200A which can measure color temperature and the Illuminance Spectrophotometer CL-500A which can measure color-rendering properties.

Illuminance Spectrophotometer CL-500A

The first illuminance spectrophotometer to conform to both JIS AA Class and DIN Class B requirements. Compact and lightweight, with an extendable receptor for easily measuring illuminance in narrow spaces.

Illuminance meter that can handle PWM-controlled lighting

Conforms to DIN Class B and JIS AA Class. Can also perform measurements of next-generation lamps including PWM-controlled lighting. Multiple receptors can be used for easy, low-priced, multi-point measurement, and a miniature receptor model is also available for easy illuminance measurement in narrow spaces.

Measures color temperature

Conforms to DIN Class B and JIS AA Class. Measures color temperature for easily measuring illuminance in narrow spaces.

Measures color-rendering properties

The Chroma Meter CL-200A can also perform illuminance measurements (JIS AA Class). Includes simple, convenient PC software as standard accessory. Also includes a compact, handheld-type Chroma Meter CL-500A which can measure color rendering properties.

Konica Minolta’s Illuminance Measurement Trio

Our top-of-the-line CS-2000 is used for measuring various types of high-definition displays, and received the 13th Advanced Display of the Year 2008 Grand Prize in the Display Testing Equipment Category.
**Main Specifications of T-10A**

**Model**
- Illuminance Meter T-10A (Standard receptor head)
- Illuminance Meter T-10MA (Mini receptor head)
- Illuminance Meter T-10WA (Waterproof mini receptor head)
- Illuminance Meter T-10LWA (Waterproof mini receptor head)

**Type**
- Multi-function digital illuminance meter with detachable receptor head (Multi-point measurements of 2 to 30 points possible)

**Illuminance meter class**
- Conforms to requirements for Class AA of JIS C 1609-1: 2006 *1
- Conforms to DIN 5032 Part 7 Class B

**Receptor**
- Silicon photocell

**Relative spectral responsivity**
- Within 6% (f1') of the CIE spectral luminous efficiency V(

**Cosine correction characteristics**
- Within 3% (f2)
- Within 10%

**Temperature/ humidity drift**
- Within ±3%

**Linearity**
- Within ±2% ±1 digit of displayed value

**Measurement speed**
- 2 times/sec. (continuous measurement with 1 receptor head)

**Power**
- 2 AA-size batteries / AC adapter AC-A308 (optional; for 1 to 10 receptors)
- AC adapter AC-A311 (optional; for 1 to 30 receptors)

**Operation temperature/humidity range**
- 0 to 55°C, relative humidity of 85% or less

**Storage temperature/humidity range**
- -10 to 40°C, relative humidity 85% or less

**Illuminance**
- 0.01 to 299,900 lx; 0.001 to 29,990 fcd
- 1.00 to 299,900 lx; 0.1 to 29,990 fcd

**Integrated illuminance**
- 0.01 to 999,900 lx·h; 0.001 to 999,900 fcd·h

**Measuring function**

**User calibration function**
- CCF (Color Correction Factor) setting function: Measurement value x 0.500 to 2.000

**Data management using computer**
- PC (commercially available)

**Data management software**
- T-10MA (including T-1A5)
- USB Cable T-A15

**Additional receptors (sold separately; Product includes 1 receptor according to model purchased)**
- T-10A Receptor Head

**For multi-point and cable extension measurement**
- Adapter Unit for Main Body T-A20
- Adapter Unit for Receptor Head T-A21

**Example of multi-point System**
- For multi-point measurement requires use of optional AC adapter.

**SAFETY PRECAUTIONS**
- For correct use and for your safety, be sure to read the instruction manual before using the instrument.
- Always connect the instrument to the specified power supply voltage. Improper connection may cause a fire or electric shock.
- Do not use the specified batteries. Using improper batteries may cause a fire or electric shock.

**KONICA MINOLTA, Inc.**
- Osaka, Japan
- KONICA MINOLTA Sensing Americas, Inc.
- New Jersey, U.S.A.
- European Headquarters/ B&K Precision
- Germany
- French Office
- UK Office
- Italian Office
- Swiss Office
- Nordic Office
- Polish Office
- Turkish Office

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- Wuhan Office

**Konica Minolta Sensing Singapore Pte Ltd.**
- Singapore

**Konica Minolta Sensing Korea Co., Ltd.**
- Goyang-si, Korea
- Address and telephone numbers are subject to change without notice. For the latest contact information, please refer to the KONICA MINOLTA Worldwide Offices web page.

**Dimensions (Units: mm)**
- Center of receptor window: 174 ± 11.5
- Reference plane: 161.5 ± 3.5
- Center of tripod socket: 35 ± 0.8

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*1 Conforms to requirements for Class AA of JIS C 1609-1: 2006 for all items except cosine response (f 2).

*2 Although measurements below 1.00 lx are possible, they may not be stable due to the effects of electrical noise.

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*3 Complies with corresponding Provisions of "Illuminance meters of JIS C 1609-1: 2006 *1 Conforms to requirements for special illuminance meters of JIS C 1609-1: 2006 *1

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*4 Conforms to DIN 5032 Part 7 Class B

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*5 General measuring instruments”

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*6 Conforms to DIN 5032 Part 7 Class B