Illuminance Meter
T-10A series

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.
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 luminance 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, white LED lamps for illumination, etc. in a variety of industrial fields.

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.

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.

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.

Multi-point illuminance measuring system

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

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.
- Checking light sources for construction
- Lighting control at LED-lit factory farms
- As sensor for equipment measuring total flux or light-distribution characteristics, etc.
Data Management Software T-S10w (Optional accessory)

Convenient, easy-to-use Excel® add-in software

Reads measurement data from T-10 series illuminance Meters directly into Excel®. Further processing of data can then be performed easily using the various functions of Excel®.

Data transfer using buttons on main body

When using T-S10w, measurements can be taken and data sent to Excel® by using not only the computer keys but also by using the buttons on the T-10A main body.

Multi-point measurement and CCF calibration possible

Measurements of up to 30 points can be controlled. A CCF (Color Correction Factor) function is also provided to enable calibration to user standards.

Main specifications of Data Management Software T-S10w

<table>
<thead>
<tr>
<th>Type</th>
<th>Add-in for Excel (Excel® is required to use this add-in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating environment</td>
<td>One of the following environments with Excel® installed:</td>
</tr>
<tr>
<td></td>
<td>Languages in parenthesis ( ) are the OS language.</td>
</tr>
<tr>
<td></td>
<td>* Windows® XP + Excel® 2003 (English, Japanese, or Simplified Chinese)</td>
</tr>
<tr>
<td></td>
<td>* Windows® 7 + Excel® 2010 (English, Japanese, or Simplified Chinese)</td>
</tr>
<tr>
<td></td>
<td>* For details on system requirements for above versions of Windows® and/or Excel®, refer to their respective specifications.</td>
</tr>
</tbody>
</table>

| Compatible instruments      | T-10A, T-10MA, T-10WSA, T-10WLA, T-10, T-10M, T-10WS, T-10WL, T-10W 

About 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.
T-10A

Conforms to JIS AA Class and DIN class B

Can be used for general measurements of illuminance.

T-10MA (Cord length: 1 m)

Conforms to JIS AA Class and DIN class B

Enables illuminance measurements of small areas.

T-10WSA (Cord length: 5 m)

T-10WLA (Cord length: 10 m)

Conforms to JIS requirements for special illuminance meters

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.

T-10A

<Standard receptor>

T-10MA/T-10WSA/T-10WLA

<Mini receptor>

Receptor diffuser window: Ø 25 mm

Receptor diffuser window: Ø 14 mm

Waterproof

Custom order
Measurements of spectral irradiance are made possible by using the illuminance adapter. This makes it ideal for illuminance evaluation of projectors and LED or EL lighting. This single instrument can be used for measuring both spectral radiance and spectral irradiance.

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.

Conforms to DIN Class B and JIS AA Class. Capable of accurately measuring 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 easily measuring illuminance in narrow spaces.

A de facto industry standard for color-temperature measurement. Can also perform illuminance measurements (JIS AA Class). Compact and lightweight with removable receptor connectable with extension cables. Includes simple, convenient PC software as standard accessory.

The first illuminance spectrophotometer to conform to both JIS AA Class and DIN Class B requirements. Compact, handheld type can easily be installed in inspection equipment and is ideal for evaluating color-rendering properties. Includes simple, convenient PC software as a standard accessory.

Spectral bandwidth: 5 nm or less (half bandwidth)
Measurable illuminance range:
1° measuring angle: 0.01 to 75,000 lx
0.1° measuring angle: 1.00 to 7,500,000 lx
Main Specifications of T-10A

<table>
<thead>
<tr>
<th>Model</th>
<th>Illuminance Meter</th>
<th>Illuminance Meter</th>
<th>Illuminance Meter</th>
<th>Illuminance Meter</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-10A</td>
<td>T-10A</td>
<td>T-10MA</td>
<td>T-10W,A</td>
<td>T-10W,A</td>
<td>Multi-function digital illuminance meter with detachable receptor head (Multi-point measurements of T-10A)</td>
</tr>
<tr>
<td>T-10MA</td>
<td>T-10MA</td>
<td>T-10W,A</td>
<td>T-10W,A</td>
<td>T-10W,A</td>
<td>Multi-function digital illuminance meter with detachable receptor head (Multi-point measurements of T-10W,A)</td>
</tr>
<tr>
<td>T-10W,A</td>
<td>T-10W,A</td>
<td>T-10W,A</td>
<td>T-10W,A</td>
<td>T-10W,A</td>
<td>Multi-function digital illuminance meter with detachable receptor head (Multi-point measurements of T-10W,A)</td>
</tr>
</tbody>
</table>

Illuminance meter class

- Conforms to requirements for Class AA of JIS 1609-1: 2006 "Illuminance meters Part 1: General measuring instruments" Inconforms to DIN 5032 Part 7 Class B
- Conforms to requirements for special illuminance meters of JIS C 1609-1: 2006

Receptor

Silicon photocell

Cosine response

Within 6% (f1) of the CIE spectral luminous efficacy V(λ)

Measuring range

- Auto range (5 manual ranges at the time of analog output)

Measuring function

Illuminance (lx). illuminance difference (lx). illuminance ratio (%). integrated illuminance (lx·h).

Measuring range

- Auto range (5 manual ranges at the time of analog output)

Linearity

±2% ±1 digit of displayed value

Temperature/humidity drift

Within ±3%

Cosine response

Within 3% (f1) Within 10%

Measurement range

- 0.01 to 999,990 lx: 0.001 to 99.99 lx: 0.01 to 9.999 lx: 0.1 to 99.99 lx
- 0.01 to 999,990 lx: 0.001 to 99.99 lx: 0.01 to 9.999 lx: 0.1 to 99.99 lx

Cosine response (f2)

Within 3% Within 10%

Cosine response

Within ±3%

Cosine response

Within ±3%

Cosine response

Within ±3%

Cosine response (f2)

Within 3% Within 10%

Measuring range

- 20 to 55°C, relative humidity 85% or less at 35°C with no condensation
- 0 to 55°C, relative humidity 85% or less at 35°C with no condensation
- 0.01 to 999,990 lx: 0.001 to 99.99 lx: 0.01 to 9.999 lx: 0.1 to 99.99 lx
- 0.01 to 999,990 lx: 0.001 to 99.99 lx: 0.01 to 9.999 lx: 0.1 to 99.99 lx

Dimensions (Units: mm)

- Main Body: Ø16.5 x 13.8 mm
- Receptor: Ø16.5 x 13.8 mm
- Receptor head: Ø16.5 x 13.8 mm

Weight

- With/without battery: ±200 g (±7.0 oz.)
- ±205 g (±7.2 oz.)

Safety Precautions

- Always use the specified batteries. Improper batteries may cause a fire or electric shock.
- Be sure to use the specified batteries. Improper batteries may cause a fire or electric shock.

Konica Minolta Sensing Americas, Inc.
New Jersey, U.S.A.

Konica Minolta Sensing Singapore Pte Ltd.
Singapore

Konica Minolta Sensing Europe B.V.
The Netherlands, Europe

Konica Minolta Sensing China (CHINA) Investment Ltd.
China

Konica Minolta Sensing Worldwide Offices Web page

©2012 KONICA MINOLTA SENSING, INC.
9242-4871-12 BCBAPK

http://konica-minolta.com/instruments/about/network

Registration Date : March 3, 1995
Certificate No : LRQ 0960094/A

Registration Date : March 12, 1997
Certificate No : LRQ 0960094/A