

Illuminance spectrometer

# **IM-1000**

*IM-1000 is suitable for measuring next generation illumination such as LED and OLED.*

*Easy operation for measuring Color rendering property, Color temperature, and Illuminance.*



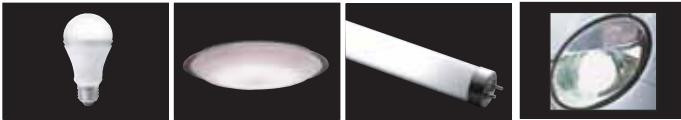
*IM-1000 is suitable for evaluating Color rendering property.*

## Future

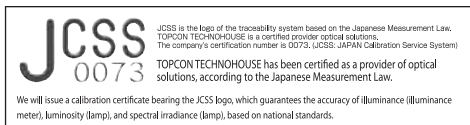
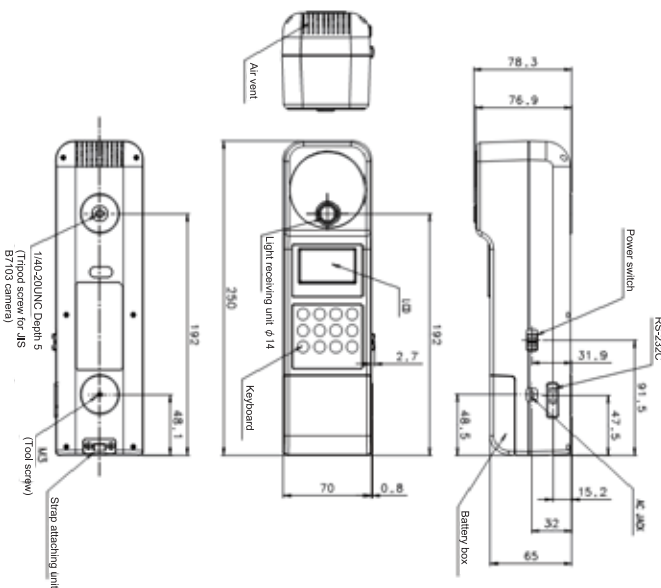
- Color rendering index, Spectral distribution, and Color temperature can be measured with simple operations.
- From low to very high luminance (2 to 1,000,000 lx) can be measured.
- IM-1000 provides Illuminance, Chromaticity, Color temperature, and Color-rendering index data with high accuracy.
- Timer function prevent measurement result from reflect light and shade.
- Wireless LAN simplify the connection between IM-1000 and PC (for Domestic only).
- IM-1000 Covers wide range of usage such as design and line inspection in illumination manufacturer and construction companies.
- IM-1000 comply with Class AA in JIS C1609-1.
- Application software enable to control IM-1000 and process measured data.

## Usage

- LED (for checking illumination, Interior panel in automobile)
- Organic EL (for checking illumination)
- Performance and quality check of illumination Measuring interior illumination.
- For Biotechnology and other academic investigation.



## EXTERNAL DIMENSIONS DIAGRAM



- \*Some screens are simulated.
- \*The specifications and external appearances of product in this catalogue may be changed without prior notice due to improvements.
- \*The catalogue includes products that are sold separately.
- \*The actual color of products may differ slightly from the catalogue due to lighting and printing conditions.

## TOPCON TECHNOHOUSE CORPORATION

75-1 Hasunuma-cho, Itabashi-ku, Tokyo 174-8580  
 Phone: 03-3558-2666 Fax: 03-3558-4661  
 E-mail: techno-info@topcon.co.jp

**Note** Make sure to carefully read the "User's Manual" to ensure that you use the product properly and safely.

## Specifications

JIS class	Conforms to the general AA class illuminance meter (JIS C 1609-1: 2006).
Spectral method	LVF (Linear Variable Filter)
Photo detector	Silicone photo diode array
Measurable wavelength range	380 to 780 nm
Output wavelength resolution	1nm
Measurable illuminance range *1	2 to 1,000,000 lx
Accuracy *1	Illuminance Ev : $\pm 2\%$ $\pm 1$ digit
	Chromaticity xy : $\pm 0.0020$ (50 lx or more)
	xy : $\pm 0.0035$ (10 to 50 lx)
Repeatability *1, *2, *3	Illuminance Ev : 0.5% + 1 digit
	Chromaticity xy : 0.0020 (50 lx or more)
	Chromaticity xy : 0.0035 (5 to 50 lx)
Visible range relative spectral sensitivity characteristics (Difference from spectral relative luminous efficiency: f1)	2% or less
Systematic difference of angular incident light characteristics: f2	3% or less
Temperature characteristics: fT	Within $\pm 3\%$ (-10 to 40°C with 23°C as reference)
Humidity characteristics: fH	Within $\pm 3\%$ (without dew condensation)
Measurement range mode	AUTO (AUTO FULL / AUTO FIRST / AUTO ADJUST) / MANUAL (MANUAL RANGE)
Display mode	XYZ / Ev / xy / u'v' / Dominant wavelength $\lambda_d$ / Excitation purity Pe / Correlated color temperature Top / Average color rendering property evaluation Ra / Special color rendering indexes Ri (i=1 - 15) / Spectral radiation illuminance graph / $\Delta(XYZ)$ / $\Delta(Ev, xy)$ / $\Delta(Ev, u'v')$
	Approx. 0.2 seconds
Measurement time *4	(When the measurement range is "MANUAL", 100ms is fixed as the integral time and the "STRZ" command is used)
	Approx. 0.5 to 50 seconds (Measurement range: AUTO)
Display	Liquid crystal display unit with 128×64 dots and back light ON/OFF function
Interface	RS-232C : Baud rate : 9600 / 19200 / 38400bps, Parity : Odd number (ODD), Data length : 7bit, Stop bit : 1bit
	Wireless LAN : IEEE802.11b / 2.4GHz band (1-13ch) / 38400bps / Security (WEP / WPA / WPA2) (exclusively for Japan)
Power supply	Nickel hydride AA battery : 4 pcs. (Standard accessory) / Exclusive AC adapter (optional accessory) *Battery life (Operable time): Approx. 7 hours
Operating conditions	Temperature -10 to +40°C, Humidity 85%R.H. or less (without dew condensation)
External dimensions	Approx. 70 (W) × 250 (D) × 78 (H) mm (Without beam detector cap and power switch)
Weight	Approx. 640g (including the batteries)
Measurement reference surface	Edge of beam detector

- \*1: Standard light A: In AUTO measurement range
- \*2: Illuminance Ev (2 $\sigma$ ): [2 standard deviation/average] in ten continuous measurements
- \*3: Chromaticity xy: [Maximum value - Minimum value] in ten continuous measurements
- \*4: The measurement time is sometimes longer due to the personal computer specification, the use environment and the command receiving timing.
- \*The wireless LAN module, which conforms to the Japanese technical standards, is built in the instrument. It is not possible to use the wireless LAN in any other country or area except Japan. If you use the instrument out of Japan, turn off the wireless LAN function.

### Standard Package

- IM-1000 instrument body..... 1ea.
- CD-ROM (Instruction manual / colorimetry program CS-900A)..... 1ea.
- Soft case..... 1ea.
- Hand strap..... 1ea.
- Beam detector cap..... 1ea.
- RS-232C cable..... 1ea.
- Nickel hydride battery charger set (with four nickel hydride batteries)..... 1ea.