Spectral Illuminance Meter / Lux Meter

Model **MSMT441SWISS** | Brand **Master Science** | Unit **Pc**



Spectral Illuminance Meter / Lux Meter

The MSMT441SWISS Spectral Illuminance Meter is a versatile and high-precision instrument designed to measure various lighting parameters including illuminance, UV index, flicker frequency, color temperature, CRI (Color Rendering Index), and more. It is ideal for applications in lighting design, environmental assessments, and testing of lamps and fixtures in various industries, such as outdoor, stage, greenhouse, and more.

KEY HIGHLIGHTS

- Multi-Parameter Measurement
- Human Eye Spectrum Compatibility
- Wide Measurement Range
- Flicker Measurement
- Precise Color Temperature and CRI Measurement

AT A GLANCE

0℃ to 40℃, Humidity: <85%RH
OPERATING ENVIRONMENTTEMPERATURE

Request a Quotation
Contact us for pricing, configuration options and delivery details.

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www.themsci.com

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Key Features

Multi-Parameter Measurement
Simultaneously measures illuminance, correlated color temperature (CCT), flicker frequency, UV index, CRI, SDCM (Standard Deviation of Color Matching), temperature, and humidity. Displays the spectral curve for detailed analysis.

Human Eye Spectrum Compatibility
The spectral sensor is specifically designed to match the V(λ) function for more accurate and reliable measurements.

Wide Measurement Range
Capable of measuring illuminance from 0 to 1,000,000 lux, making it suitable for both high and low light environments.

Flicker Measurement
Evaluates flicker frequency and percentage, helping determine whether the lighting complies with industry standards and regulations.

Precise Color Temperature and CRI Measurement
Measures Correlated Color Temperature (CCT) from 1000K to 100,000K with an accuracy of ±5%, and also measures CRI and SDCM to assess the color quality of light sources.

Blue Light Hazard Evaluation
Displays the blue light hazard ratio, allowing users to assess the potential risk associated with exposure to blue light.

Additional Information
Measures temperature (-20℃ to 80℃) and humidity (0%RH to 90%RH), essential for evaluating lighting conditions in plant growth or specific environmental conditions. This high-precision and versatile instrument is designed for professionals and researchers who require comprehensive and reliable measurements of light parameters in various environmental conditions.

Technical Specifications

GENERAL	
General	Instant ResponseFast refresh time of less than 0.7 seconds for real-time analysis.
General	Illuminance Wavelength Range400nm to 700nm
General	Illuminance Measurement Range0 to 1,000,000 Lx
General	Illuminance Resolution0.1 Lx
General	Correlated Color Temperature Range1000K to 100,000K (±5% accuracy)
General	UV Index Measurement Range0.0 to 15.0 (±0.5 accuracy)
General	Flicker Frequency Measurement Range10Hz to 500Hz (±5% accuracy)
General	Temperature Measurement Range-20℃ to 80℃ (±0.5℃ accuracy)
General	Humidity Measurement Range0%RH to 90%RH (±4%RH accuracy)
General	Response Time<0.7s
General	Test Aperture Diameterφ21mm
General	Display240*160 Dot Matrix LCD
General	Power Supply2 AA Alkaline Batteries
General	Size188.5mm (L) x 75.2mm (W) x 30.3mm (H)
General	Weight232g (including batteries)
General	Spectral Curve DisplayHelps identify the light source's spectral gaps and blue light protection capabilities, providing more detailed insights into the lighting characteristics.
General	High Precision and Authoritative Metrology ApprovalEnsures high precision in measurements, with all illuminance and color temperature measurements passing authoritative inspections.
General	Convenient and Energy-EfficientPowered by 2 AA alkaline batteries, with auto-off functionality to save battery life.
General	Illuminance Accuracy≤±(3%H + 2Lx) (H is the standard value, calibrated under CIE standard A light source)
Operating EnvironmentTemperature	0℃ to 40℃, Humidity: <85%RH

Applications

For evaluating lamps, lanterns, stage lighting, and environmental lighting.

Environmental Monitoring
Ideal for testing UV exposure, temperature, and humidity in different settings.

Plant Lighting
Suitable for evaluating greenhouse and plant growth lighting systems.

Research & Development
Assists in the development and testing of lighting fixtures and their efficiency.

Standard Accessories Included

- Spectral Illuminance Meter – 1 pcs
- AA Batteries – 2 pcs
- User Manual – 1 pcs