**CM-10M**

Luminance Colorimeter

**High Speed | High Accuracy | High Sensitivity**

**CHARACTERISTIC**

- **HIGH SENSITIVE COLORIMETER**
  - High Transmittance Filter
  - High Sensitive Photo Diode
  - Low Noise, High Sensitive Board Design

- **HIGH SPEED • HIGH ACCURACY**
  - Iterative Precision: \( \pm 0.5\% (L_v), 0.001(x,y) \)
  - Accuracy: \( \pm 3\% (L_v), 0.003(x,y) \)
  - \(( \leq 5\text{cd/m}^2\), Tack Time 0.5sec\)

**ADVANTAGE**

- **DARK(ZERO) CALIBRATION**
  - Measurement Dark(Zero) automatically
  - Imperviousness to temperature and humidity

- **WIDE LUMINANCE MEASUREMENT RANGE**
  - \( 0.01\text{cd/m}^2 \sim 20,000\text{cd/m}^2 \)
  - Fast measurement during radical change of Luminance through smart auto-gain Algorithm

- **FLICKER MEASUREMENT**
  - Accurate Measurement with High Frequency
  - Provide Flicker and Luminance Measurement

- **SPECTRAL CHARACTERISTIC**
  - The filter response curves are based on the CIE1931 standard
  - Spectral tolerance of filter curve: \( \leq \pm 1\% \lambda \)

*Specifications and appearance are subject to change without prior notice without prior notice.*
## SPECIFICATION

<table>
<thead>
<tr>
<th>Model</th>
<th>CM-10M</th>
<th>CM-10</th>
<th>CM-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receptor</td>
<td>Silicon photo cell (CIE 1931 XYZ filter)</td>
<td></td>
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<tr>
<td>Measurement area</td>
<td>Ø10mm</td>
<td>Ø10mm</td>
<td>Ø10mm or Ø20mm</td>
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<tr>
<td>Working Distance</td>
<td>30 ± 5mm</td>
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<tr>
<td>Acceptance angle</td>
<td>5º</td>
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<tr>
<td>Expose time</td>
<td>1msec~5sec</td>
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<tr>
<td>A/D resolution</td>
<td>16bit</td>
<td></td>
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<tr>
<td>Display Range</td>
<td>0.0001 to 20,000cd/m²</td>
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</table>

### Luminance
- **Accuracy**
  - 0.1~5cd/m²: ±3% (5sec)
  - ≥5cd/m²: ±2% (0.5sec)
- **Repeatability (σ)**
  - 0.1~5cd/m²: 1% (5sec)
  - ≥5cd/m²: 0.5% (0.5sec)

### Chromaticity
- **Accuracy**
  - 0.1~5cd/m²: ±0.005 (5sec, at white)
  - ≥5cd/m²: ±0.003% (0.5sec, at white/mono)
- **Repeatability (σ)**
  - 0.1~5cd/m²: 0.005 (5sec)
  - ≥5cd/m²: 0.001 (0.5sec)

### Flicker
- **FMA**
  - Display Range: 0~1000%; Accuracy: ±1%
- **JEITA**
  - Measurement range: ≤10 cd/m²
  - Frequency range: 0~128 HZ
  - Accuracy: ±0.5 dB

### Measurement Speed
- 0.1~5cd/m²: 5sec
- ≥5cd/m²: 20/sec
- Flicker (JEITA or FMA): 1024/sec

### Interface
- USB2.0
- USB2.0

### Operating temperature
- 5 to 50°C

### Input Voltage
- USB 5V
- USB 5V
- AC220V

*1. Measurement of luminance and chrominance measurement in the Rayclouds conditions (using the standard LCD screen (6500K, 9300K)).