

Precise Luminance and
Chromaticity Measurements
**Spot-Luminance-Meter and
Colorimeter LXchroma** |



work-in-progress

The efficient solution

luminance and chromaticity measurements, e. g. of optical devices (LCDs, LEDs, PDPs, organic ELs and FEDs) |

LXchroma - *Luminance / Illuminance Meter + Colorimeter*

Extremely compact :

complete electronics, sensor and display in a single unit

+ easy to use

+ highly precise

= the ideal measuring device for high accuracy luminance and chromaticity measurements

Applications:

- Evaluation of the luminance and chromaticity of light sources
- Evaluation of luminance and chromaticity uniformity
- Contrast evaluation
- Simple measurement of object colors

The new **LXchroma**, the efficient successor of our well-known **LXplus** offers extensive improvements for luminance / illuminance measurements in handling and technical design as well as additional colorimetric measurements:

- The Bi-Tec-Sensor combines integral sensor and diode array technology for precise low level luminance and luminous colorimetric measurements of displays.
- Large display that shows readings and also supports alignment and adjustment of the measurement spot at the test monitor.
- An integrated camera, which is generating an image of the target on the display of the **LXchroma**: A visible circle symbolizes the measuring spot.
- Inclination sensor for precise user alignment of the **LXchroma** (color impressions of displays are viewing angle dependend).
- Contactless distance sensor (as soon as the recommended measuring distance of 50 cm is reached, this is indicated by the green color of the measuring spot).
- The new design of the **LXchroma** integrates the stray light tube, a camera and a display in a compact housing.
- The optic with a field of view of 1.6 ° is totally new constructed.

Overall

The **LXchromas** latest technology enable true colorimetric measurements in a compact, mobile luminance meter. All that for a very attractive price.

Technical specifications |

- ▶ Luminance measurements from 0.05 to 10000 cd/m² with F.O.V. ~ 1.6 °
- ▶ Photometric V(λ) Uncertainty ≤ 3 %
- ▶ Extra Low Stray-Light Rejection for High Contrast Ratio
- ▶ Distance and Imaging Sensor for Measurements at 50 cm
- ▶ External Illuminance Detector 0.1 to 10000 lx
- ▶ RS 232 and USB Interfaces
- ▶ Rechargeable Lithium Battery

Luminance Measurement Range:	0.05 to 10000 cd/m ²
Maximum Luminance Resolution	0.03 cd/m ²
f1*Uncertainty of V(λ) Response:	≤ 3 %
F.O.V Lens:	~ 1.6 °
Stray-Light-Baffle:	Integrated
Measurement Distance:	50 cm
Measurement Spot:	2 cm at 50 cm distance
Distance Sensor:	Ultrasonic
Inclination Sensor:	± 0.5 °
Colorimetric Measurement Data:	x,y; CCT
Colorimetric Measurement Range:	1 to 10000 cd/m ²
Measurement Accuracy x,y: ¹⁾²⁾	± 0.005
Measurement Accuracy CCT: ¹⁾²⁾	± 50 K
F.O.V Luminance Measurement:	~ 0.8 °
Illuminance Measurement Range: ³⁾	0.1 to 10000 lx
Display:	1.2" TFT (65K Color)
Control Buttons:	Three
Interface:	USB, RS 232
Battery rechargeable via USB:	Li-ION
Housing:	Al; Tripod Adapter
Dimensions:	215 x 80 x 45 mm
Weight:	500 g
Power consumption (use with USB):	approx. 450 mA
Expected operation time (battery use):	approx. 8 h

¹⁾ Standard Illuminant A

²⁾ at 10 cd/m²

³⁾ Optional Detector Head

Technical data are subject to change without prior notice.

The calibration of the measuring system is done in a calibration laboratory for optical radiant units and is traceable to national standards.

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