

## GL SPECTROLUX

An affordable solution to the majority of measuring requirements in lighting industry. Based on the heritage of successful GL Spectis series, spares little compromise on quality, while still economy friendly. Measurement head of class B available as standard puts this handy spectrometer in a class of its own. If you need to easily and quickly evaluate light qualities such as: lux, CRI, CCT, color and much more, our SPECTROLUX is your best choice.

### Features:

- Unmatched by any mass produced spectrometer  
Class B measurement head
- Completely portable device
- Color LCD screen
- Intuitive button operation
- USB connectivity
- Android based operating system
- Internal storage of more than 20.000 measurements
- Approx. 6 hours on battery



### APPLICATION

Application Natural light, LEDs, halogen light, etc.

### LED MEASUREMENT

|                                   |   |
|-----------------------------------|---|
| Illuminance (lux)*                | 10 – 100 000 lx (for white LED)             |
| Irradiance [W/m <sup>2</sup> ]    | 0.03 – 600 W/m <sup>2</sup> (for white LED) |
| Illuminance class                 | Class B – DIN 5032-7                        |
| Tolerance – cosine response (f2') | < 3 %                                       |
| Luminous intensity [cd]           | Calculated in SPECTROSOFT                   |
| Spectral range                    | 340 – 780 nm (UVa – VIS)                    |

### CALCULATED VALUES

|  |                              |
|--|------------------------------|
| CRI – Color rendering index according to CIE             | Ra, R1 – R15                 |
| CCT – Correlated color temperature according to CIE 13.3 | ✓                            |
| Color peak   | ✓                            |
| Color dominant   | optional with GL SPECTROSOFT |
| Color position coordinates [x,y] according to CIE 1931   | ✓                            |
| Color position coordinates [u',v'] according to CIE 1976 | ✓                            |
| Color position coordinates [u, v] according to CIE 1960  | ✓                            |
| PAR/PPFD   | ✓                            |
| Color coordinate error                                   | optional with GL SPECTROSOFT |
| Metameric index  | optional with GL SPECTROSOFT |
| Binning  | optional with GL SPECTROSOFT |
| Assessment in accordance with ISO 3664                   | optional with GL SPECTROSOFT |

# Technical Sheet

## GL SPECTROLUX

### PHOTOMETRY / RADIOMETRY

|  |  |
|--|--|
| Sensor CMOS image sensor                         | Back-thinned type CCD  |
| Number of pixels                                 | 256  |
| Physical resolution / datapoint interval         | ~ 1.7 nm   |
| Wavelength reproducibility                       | 0.5 nm   |
| Integration time                                 | 5 ms – 10 s  |
| A/D converter                                    | 16 bit   |
| Signal-to-noise ratio                            | 1000:1   |
| Stray light                                      | 2*10 E-3   |
| Optical resolution / FWHM                        | 10 nm  |
| Radiometric accuracy**                           | 5 % within range 340 – 500 nm<br>4 % within range 500 – 780 nm |
| Flicker compensation                             | ✓  |
| Temperature sensor and dark current compensation | ✓  |
| Uncertainty of color coordinates**               | 0.0015   |

### GENERAL PROPERTIES

|                                |   |
|--------------------------------|---|
| Operating System               | Linux   |
| Power supply via USB connector | < 640 mA  |
| Power adapter                  | Power supply unit 100...240 V (50/60 Hz) 0.15 A   |
| Battery / Power pack           | Li-ion battery 1350 mAh                           |
| Automatic shut-off             | ✓   |
| Battery life                   | < 6 h   |
| Operating temperature          | 5 – 35 °C   |
| Dimensions [H x W x D]         | 155 mm x 72 mm x 25.3 mm (with standard diffusor) |
| Weight                         | 221 g   |
| Tripod adapter                 | ✓   |

### INTERFACE & MEMORY

|                            |                        |
|----------------------------|------------------------|
| USB                        | USB 2.0                |
| Measurement result storage | Auto / Internal memory |
| Data format XML            | XML                    |

### DISPLAY & OPERATION

|           |                                 |
|-----------|---------------------------------|
| Display   | 2.8" color LCD (240 x 320px)    |
| Operation | Membrane buttons, PC / Notebook |

### SOFTWARE

|           |   |
|-----------|---|
| Software  | Optional GL SPECTROSOFT Basic / Pro / Lab |
| USB cable | ✓   |

### ORDERING INFORMATION

|                         |        |
|-------------------------|--------|
| Battery                 | ✓      |
| USB cable               | ✓      |
| Power supply            | ✓      |
| Display protection foil | ✓      |
| Part number             | 201338 |

\* Dynamic range is spectrum related and should be calculated separately for any light source. Estimated dynamic range for typical 4000 K white LED. Range estimated for optical system made to default specification. Alterations of that are often possible. Please consult technical support if you are looking for specific parameters.

\*\* Absolute measurement uncertainty immediately after calibration. The expanded uncertainty corresponds to a coverage probability of 95% and the coverage factor  $k = 2$ . Parameters valid in laboratory conditions 25deg C, relative humidity 45%.

**Note:** Instrument, firmware and software specification are subject to change without prior notice. All information included in GL OPTIC datasheets and product information available in any form are carefully prepared and included information believed to be true. Please note that discrepancies may occur due to text and/or other errors or changes in the available technology. We advise to contact GL Optic before the use of the product to obtain the latest product specification.

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Light quality control