

## GL SPECTIS 6.0

### Rack mounted laboratory grade spectrometer module.

With the new GL SPECTIS 6.0, we expand our high-end spectrometers into mass production and large laboratory setups for high speed measurement of SSL products (IESNA LM-79-08, CIE S 025/E:2015), LED wafers, large streetlamps and luminaries.



### Features:

- Hardware & Software trigger, USB 2.0 connection, 16 bit, A/D conversion
- Can be combined with current sources, powers supplies and TEC controllers
- A variety of spectral ranges available from 200 – 1050 nm
- Temperature monitored sensor with automatic dark current correction
- Very high resolution: ~2.5 nm optical and 0.5 nm data point
- OSR system for Stray Light Reduction

### APPLICATION

Application High precision laboratory and industrial measurements

### LED MEASUREMENT

|                                   |  |  |
|-----------------------------------|--|--|
| Illuminance (lux)*                | 5 lx – 150 000 lx  | Standard diffusor  |
| Luminance [cd/m <sup>2</sup> ]    | Available with optional GL OPTI PROBE  |  |
| Luminous flux [lm]                | Available with optional GL OPTI SPHERE   |  |
| Luminous intensity [cd]           | Calculated in SPECTROSOFT  |  |
| Illuminance class                 | Class B – DIN 5032-7; Class A on demand<br>Class AA – JIS C 1609-1:2006                              |  |
| Tolerance – cosine response (f2') | < 3 % (1,9 %)  |  |
| Spectral range**                  | 340 – 850 nm (VIS)<br>200 – 800 nm (UV-VIS)<br>380 – 1050 nm (VIS-NIR)<br>200 – 1050 nm (UV-VIS-NIR) | GL SPECTIS 6.0 VIS<br>GL SPECTIS 6.0 UV-VIS<br>GL SPECTIS 6.0 VIS-NIR<br>GL SPECTIS 6.0 UV-VIS-NIR |

### GL OPTIC Polska Sp. z o.o. Sp.k

ul. Poznańska 70, 62-040 Puszczykowo, Poland  
Phone: +48 61 819 40 03 | E-mail: office@gloptic.com  
[www.gloptic.com](http://www.gloptic.com)



Light quality control

# Technical Sheet

## GL SPECTIS 6.0

### CALCULATED VALUES

|  |                              |
|--|------------------------------|
| CRI – Color rendering index according to CIE             | Ra, R1-R14                   |
| CRI according to TM-30-15                                | 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   | ✓                            |
| 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 |

### PHOTOMETRY / RADIOMETRY

|  |  |
|--|--|
| Sensor   | Back-thinned type CCD image  |
| Number of pixels                                 | 2048   |
| Physical resolution / datapoint interval         | ~ 0.5 nm   |
| Wavelength reproducibility                       | 0.5 nm   |
| Integration time                                 | 10 ms – 10 s   |
| A/D converter                                    | 16 bit   |
| Signal-to-noise ratio                            | 1000:1   |
| Stray light                                      | 2*10 E-3   |
| Optical resolution / FWHM                        | 2.5 nm   |
| Radiometric accuracy**/***/****                  | 6 % within range 200 – 220 nm<br>5 % within range 220 – 500 nm<br>4 % within range 500 – 1050 nm |
| Flicker compensation                             | ✓  |
| Temperature sensor and dark current compensation | ✓  |
| Uncertainty of color coordinates***              | + – 0.0015   |
| Automatic accessory detection                    | ✓  |
| Operating System                                 | Android  |
| Power adapter                                    | Power supply unit 100...240 V (50/60 Hz)<br>0.15 A   |
| Operating temperature                            | 5 – 35 °C  |
| Dimensions [H x W x D]                           | 2U 19"   480 mm x 262 mm x 88.9 mm   |
| Weight   | 2500 g   |

#### GL OPTIC Polska Sp. z o.o. Sp.k

ul. Poznańska 70, 62-040 Puszczykowo, Poland  
Phone: +48 61 819 40 03 | E-mail: office@gloptic.com  
[www.gloptic.com](http://www.gloptic.com)



Light quality control

# Technical Sheet

## GL SPECTIS 6.0

### INTERFACE & MEMORY

|                            |                                |
|----------------------------|--------------------------------|
| USB                        | USB 2.0                        |
| Trigger                    | Pluggable terminal block 4-pin |
| SD Card slot               | microSD                        |
| Measurement result storage | Auto / 4 GB microSD            |
| Data format                | XML                            |
| Fiber optic connector      | Optional SMA905D               |

### DISPLAY & OPERATION

|           |                              |
|-----------|------------------------------|
| Display   | 3.5" color LCD (240 x 320px) |
| Operation | Touch Screen, PC / Notebook  |

### SOFTWARE

|          |                                    |
|----------|------------------------------------|
| Software | GL SPECTROSOFT Basic / Pro / Lab / |
|----------|------------------------------------|

### ORDERING INFORMATION

|                         |   |
|-------------------------|---|
| Case                    | ✓ |
| USB cable               | ✓ |
| Power supply            | ✓ |
| Leash                   | ✓ |
| Display protection foil | ✓ |
| 4GB microSD card        | ✓ |

|              |                    |                                 |
|--------------|--------------------|---------------------------------|
| Part number: | GLX 6.0 no. 173906 | GL SPECTIS 6.0 touch VIS        |
|              | GLX 6.0 no. 173914 | GL SPECTIS 6.0 touch UV-VIS     |
|              | GLX 6.0 no. 173922 | GL SPECTIS 6.0 touch VIS-NIR    |
|              | GLX 6.0 no. 173930 | GL SPECTIS 6.0 touch UV-VIS-NIR |

- \* 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.
- \*\* Spectral range of the sensor. Actual spectral range of system may be reduced due to limitations of used optical accessory.
- \*\*\* 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%.
- \*\*\*\* Applies only within the spectral range of the given model.

**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.

### GL OPTIC Polska Sp. z o.o. Sp.k

ul. Poznańska 70, 62-040 Puszczykowo, Poland  
Phone: +48 61 819 40 03 | E-mail: office@gloptic.com  
[www.gloptic.com](http://www.gloptic.com)



Light quality control