### **Technical Sheet**

# **GL SPECTROLUX**

An affordable solution to the majority of measuring requirements in lighting industry. Based on the heritage of succesfull 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 it's own. If you need to easly 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/m²]	0.03 – 600 W/m² (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





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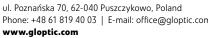
	PHOTOMETRY / RADIOMETRY	
Physical resolution / datapoint interval         −1.7 nm           Wavelengh reproducibility         0.5 nm           Integration time         5 ms − 10 s           AD Converter         16 bit           Signal-to noise ratio         1000.1           Stray light         2*10 e-3           Optical resolution / PWHM         10 nm           Radiometria accuracy**         5 % within range 340 − 500 nm           Ricker compensation         √           Temperature senser and darks current compensation         √           Uncertainty of color coordinates**         0.0015           GENERAL PROPERTIES         Unux           Power supply with USB connector         < 640 mA	Sensor CMOS image sensor	Back-thinned type CCD
Wavelength reproducibility         5.5 m. 10 s           A/D converter         16 bit           Stray light         210 E.3           Optical resolution / FVHM         10 m.           Radiometric accuracy**         5 % within range 540 – 500 nm           Ricker componsation         4 % within range 500 – 780 nm           Température sensor and doff current complexistion         7           Morentainy of action coordinates**         0.015           Operating System         Linux           Power supply via USB connector         6 40 m.           Power adapter         Power supply unit 100240 V (50/60 Hz) 0.15 A           Battery / Power pack         Li-in battery 1350 m/h           Automatic Aut-off         4           Sattery / Power pack         Li-in battery 1350 m/h           Depending temperature         5 – 35 °C           Dimensions (H x W x D)         155 mm x 7z mm x 25.3 mm (with standard diffusor)           Weight         221 g           Flipped adapter         Auto All control of the co	Number of pixels	256
Integration time         5 ms − 10 s           APD converter         16 bit           Signal-to-noise ratio         1000-1           Sirryal light         2*10 E-3           Optical resolution / FWHM         10 nm           Radiometric accuracy**         5 within range 340 − 500 nm           4 % within range 500 − 780 nm         1 memberature sensor and display to corresponsible of corresponsible of corresponsible of corresponsible of corresponsible of the	Physical resolution / datapoint interval	~ 1.7 nm
A/D converter         16 bit           Signat-Londisc ratio         1000-1           Stray light         2110 E-3           Onticid resolution / FWHM         10 nm           Radiometric accurasy**         5 94 within range 340 – 500 nm           Flicker compensation         ✓           Lemperature sensor and disk current compensation         ✓           Uncertainty of color coordinates**         0.0015           GEHERAL PROPERTIES         —           Power supply via U5B connector            Battery / Power pack         Li-ion battery 1350 m/h           Lilon battery 1350 m/m         Viotebook<	Wavelength reproducibility	0.5 nm
Signal-to-noise ratio         1000:1           Stray light         2*10 E-3           Optical resolution / PWHM         10 mm           Radiometric accuracy**         \$ 5 Within range 340 – 500 nm           4 Within range 500 – 780 nm           Flicker compensation         "           Temperature sensor and dark current compensation         "           Uncertainty of color coordinates**         0.0015           CEMERAL PROPERTIES           Operating System         Livin           Power supply via USB connector         - 640 mA           Power supply via USB connector         - 640 mA           Power supply via USB connector         - 6 b           Operating sementure         5 - 35 °C           Battery / Power pack         Li-lon battery 1350 mAh           Automatic shut-off         "           Operating sementure         5 - 35 °C           Dimensions JH x W x DJ         155 mm x 72 mm x 25.3 mm (with standard diffusor)           Weight         22 1 g           Tipped adapter         Auto / Internal memory           USB         USB 2.0           Measurement result storage         Auto / Internal memory           Display         2.8° color LCD (240 x 320px)           Operation         Membrane bu	Integration time	5 ms – 10 s
Stray light         2*10 E-3           Optical resolution / PWHM         10 mm           Radiometric accuracy**         5 % within range 360 – 780 nm           4 % within range 500 – 780 nm         4 % within range 500 – 780 nm           Flicker compensation         7           Temperature sensor and dark current compensation         0.0015           Uncertainty of color coordinates**         0.0015           CERIERAL PROPERTIES         Unux           Operating System         Linux           Power supply via USB connector         < 640 mA	A/D converter	16 bit
Optical resolution / RWHM         10 nm           Radiometric accuracy**         \$ Within range \$40 – \$00 nm           Flicker compensation         /           Temperature sensor and dark current compensation         Jo015           GENERAL PROPERTIES         0.0015           Operating System         Linux           Power supply via USB connector         <640 mA	Signal-to-noise ratio	1000:1
Radiometric accuracy**	Stray light	2*10 E-3
Radiomeric accuracy         4 96 within range 500 – 780 nm           Flicker compensation         V           Temperature sensor and dark current compensation         0.0015           CENERAL PROPERTIES         V           Operating System         Linux           Power supply via USB connector         < 640 mA	Optical resolution / FWHM	10 nm
Temperature sensor and dark current compensation and control c	Radiometric accuracy**	
dark current compensation         Vol05           GENERAL PROPERTIES         Unious           Operating System         Linux           Power supply via USB connector         < 640 mA	Flicker compensation	✓
GENERAL PROPERTIES           Operating System         Linux           Power supply via USB connector         < 640 mA		✓
Operating System         Linux           Power supply via USB connector         < 640 mA	Uncertainty of color coordinates**	0.0015
Power supply via USB connector         < 640 mA	GENERAL PROPERTIES	
Power adapter  Battery / Power pack  Li-lon battery 1350 mAh  Automatic shut-off  Automatic shut-off  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 A MEMORY  USB 2.0  Measurement result storage  Auto / Internal memory  Data format XML  DISSPLAY R OPERATION  Display A OPERATION  Operating Membane buttons, PC / Notebook  SOFTWARE  SOFTWARE  Optional GL SPECTROSOFT Basic / Pro / Lab  USB cable  OPOBERING INFORMATION  Battery  4  Automatic notes and part of the company of the	Operating System	Linux
Battery / Power pack Automatic shut-off Automatic shut-off Battery life	Power supply via USB connector	< 640 mA
Automatic shut-off  Battery life	Power adapter	Power supply unit 100240 V (50/60 Hz) 0.15 A
Battery life	Battery / Power pack	Li-ion battery 1350 mAh
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 271 y 25 y 27	Automatic shut-off	✓
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           Display ROPERATION         XML           Display & OPERATION         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         ✓           Power supply         ✓           Display protection foil         ✓	Battery life	<6h
Weight 221 g Tripod adapter  V NTERFACE & MEMORY  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  V ORDERING INFORMATION  Battery  V SOB cable  V Power supply  J Solyal y occupancy  V Solyal	Operating temperature	5 – 35 °C
Tripod adapter  INTERFACE & MEMORY  USB USB 2.0  Measurement result storage Auto / Internal memory  Data format XML XML  ISPLAY & 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   V   ORDERING Specific   V   ORDERING S	Dimensions [H x W x D]	155 mm x 72 mm x 25.3 mm (with standard diffusor)
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   VSB cable   VORDERING INFORMATION  Bower supply   Vower supply   Vower supply   Vower supply   Vower supply  VSB cable  VSB cab	Weight	221 g
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   Membrane buttons, PC / Notebook  Optional GL SPECTROSOFT Basic / Pro / Lab  USB cable   ORDERING SPECTROSOFT Basic / Pro / Lab  USB cable   ORDERING SPECTROSOFT Basic / Pro / Lab  USB cable   ORDERING SPECTROSOFT Basic / Pro / Lab	Tripod adapter	✓
Measurement result storage Auto / Internal memory  Diaf 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   4  Correct Substance   We will be a subst	INTERFACE & 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   V  Ower supply   Display protection foil   XML  ML  ML  ML  ML  MEMBRATION  AMBRATION  AMBRATION  V  MEMBRATION  AMBRATION  MEMBRATION  M	USB	USB 2.0
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   Software   We will be a selected of the support of th	Measurement result storage	Auto / Internal memory
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   2.8" color LCD (240 x 320px)  Membrane buttons, PC / Notebook  Demonstrate buttons, PC / Notebook  Amenbrane buttons, PC / Notebook  Demonstrate buttons, PC / Notebook  Membrane buttons, PC / Notebook  Demonstrate buttons, PC / Notebook  Membrane buttons, PC / Notebook  Membrane buttons, PC / Notebook  Demonstrate buttons, PC /		XML
Operation Membrane buttons, PC / Notebook  SOFTWARE  Software Optional GL SPECTROSOFT Basic / Pro / Lab  USB cable   ORDERING INFORMATION  Battery   USB cable   V  Power supply   Display protection foil   Membrane buttons, PC / Notebook  ORDERING INFORMATION  ### Company of the company of t	DISPLAY & OPERATION	
SOFTWARE  Software Optional GL SPECTROSOFT Basic / Pro / Lab  USB cable   ORDERING INFORMATION  Battery   USB cable   Ower supply   Display protection foil   Optional GL SPECTROSOFT Basic / Pro / Lab  A Company of the company   A Company	Display	2.8" color LCD (240 x 320px)
Software Optional GL SPECTROSOFT Basic / Pro / Lab  USB cable   ORDERING INFORMATION  Battery   VSB cable   Power supply   Display protection foil   Optional GL SPECTROSOFT Basic / Pro / Lab  VSP CABLED   VSP CABL	Operation	Membrane buttons, PC / Notebook
USB cable  ORDERING INFORMATION  Battery  USB cable  Vover supply  Display protection foil  Vover supply  Vover su	SOFTWARE	
ORDERING INFORMATIONBattery✓USB cable✓Power supply✓Display protection foil✓	Software	Optional GL SPECTROSOFT Basic / Pro / Lab
Battery  VSB cable  VSP comer supply  VSP comer	USB cable	✓
USB cable  Power supply  Display protection foil  V  V  V  V  V  V  V  V  V  V  V  V  V	ORDERING INFORMATION	
Power supply / Display protection foil /	Battery	✓
Display protection foil ✓	USB cable	✓
* **	Power supply	✓
Part number         201338	Display protection foil	✓
	Part number	201338

<sup>\*</sup> 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.

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.





<sup>\*\*</sup> 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%.