Technical Sheet

GL **SPECTIS 4.0**

USB controlled spectroradiometer with CCD Back-Thinned sensor and silica transmission grating delivering high resolution and increased sensitivity of the system. Based on modular design and available accessories could be customized for variety of laboratory or industrial applications.

Features:

- CCD Back-Thinned sensor, 16 bit A/D conversion
- Covers the range from 200 nm to 1050 nm, with reduced stray light impact
- USB 2.0 connection for PC connection with universal user friendly software
- Single instrument can be used with multiple optical accessories, calibrated for absolute readings
- DLL driver for development of customized software interface available
- Modular construction allows optical configuration appropriate to dedicated part of the spectrum
- Fixed fibre positioning system secures calibration while exchanging accessories

APPLICATION		
Application	High precision laboratory and industrial measurements	
LED MEASUREMENT		
Illuminance (lux)*	5 lx – 150 000 lx	GL Spectis 4.0 UV-VIS-NIR
Luminance [cd/m²]	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 Class AA – JIS C 1609-1:2006	
Tolerance – cosine response (f2')	< 3 % (1,9 %)	
Spectral range**	200 – 1050 nm (UV-VIS-NIR) 200 – 430 nm (UV-VIS)	GL Spectis 4.0 UV-VIS-NIR GL Spectis 4.0 UV

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PHOTOMETRY / RADIOMETRY		
Sensor	Back-thinned type CCD	
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	1000:1 500:1	GL Spectis 4.0 UV-VIS-NIR GL Spectis 4.0 UV
Stray light	2*10 E-4	
Optical resolution / FWHM	2.5 nm 0.3 nm	GL Spectis 4.0 UV-VIS-NIR GL Spectis 4.0 UV
Radiometric accuracy**/***/****	6 % within range 200 – 220 nm 5 % within range 220 – 500 nm 4 % within range 500 – 1050 nm	
Flicker compensation	✓	
Temperature sensor and dark current compensation	✓	
Uncertainty of color coordinates***	+- 0.0015	
Automatic accessory detection	N/A	
Operating temperature	5 – 35 °C	
Dimensions [H x W x D]	70 mm x 170 mm x 200 mm	
Weight	1660 g	
Tripod adapter	✓	
INTERFACE & MEMORY		
USB	USB 2.0	
Trigger	Pluggable terminal block 4 pin	
Data format	XML	
Fiber optic connector	SMA with fixed position system	
DISPLAY & OPERATION		
Operation	Dedicated PC software	
SOFTWARE		
Software	GL SPECTROSOFT Basic / Pro / Lab /	
Development kit	DLL driver	
ORDERING INFORMATION		
Case	✓	
USB cable	✓	
Part number:	GL Spectis 4.0 UV-VIS-NIR GL Spectis 4.0 UV	no. 202597 no. 202676

* 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.

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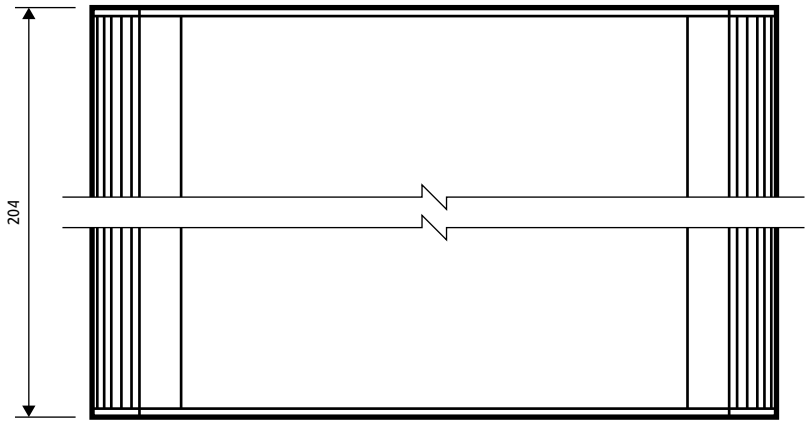

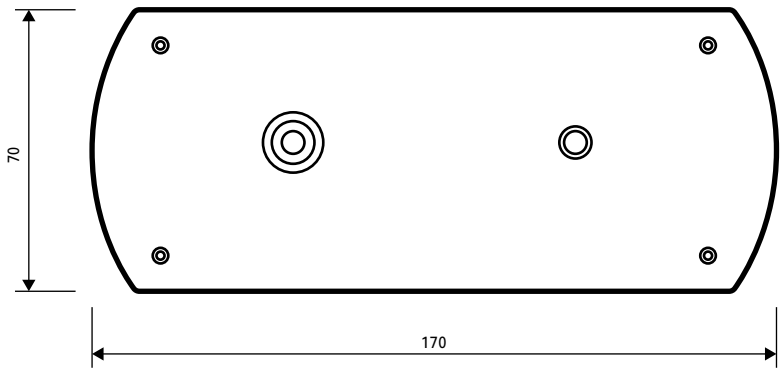

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