Technical Sheet

GL **SPECTIS 1.0 Touch**

The world's first smart spectrometer. Often copied but never duplicated this is a reliable and versatile device for accurate absolute spectral measurement.

GL SPECTIS 1.0 Touch is the world's first intuitively operated touch screen version of our successful SPECTIS 1.0 product line. If you need to measure lux, lumen, CRI, CCT, color, mW/m² and much more, our highly portable and precise GL SPECTIS 1.0 Touch is the perfect solution.

Features:

- Completely portable device
- Color LCD Touch screen
- Communication features: USB cable, SDcard slot
- Android based operating system
- Up to 4 hours on battery

APPLICATION		
Application	Natural light, LEDs, halogen light, etc.	
LED MEASUREMENT		
Illuminance (lux)*	10 – 100 000 lx (for white LED)	
Luminance [cd/m²]	Available with optional GL OPTI PROBE	
Luminous flux [lm]	Available with optional GL OPTI SPHERE	
Luminous intensity [cd]	Calculated in GL SPECTROSOFT	
Irradiance [W/m²]	0.03 – 600 W/m² (for white LED)	
Illuminance class	Class B – DIN 5032-7 Class AA – JIS C 1609-1:2006	
Tolerance – cosine response (f2')	< 3% (1.9%)	
Spectral range**	340 – 780 nm (UVa – VIS) 640–1050 nm (VIS–NIR) 340 – 750 nm (UVa – VIS)	SPECTIS 1.0 Touch UVa–VIS SPECTIS 1.0 Touch VIS–NIR SPECTIS 1.0 Touch LS
CALCULATED VALUES		
CRI – Color rendering index according to CIE	Ra, R1 – R14	
TM-30-15	Rf, Rg, Colour Vector Graphic	
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	✓	

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PHOTOMETRY / RADIOMETRY	
Sensor	CMOS image sensor
Number of pixels	256
Physical resolution / datapoint interval	~ 1.7 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	10 nm
Radiometric accuracy***/****	5 % within range 340 – 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	✓
GENERAL PROPERTIES	
Operating System	Android
Power supply via USB connector	< 640 mA
Power adapter	Power supply unit 100…240 V (50/60 Hz) 0,15 A
Battery / Power pack	lithium-polymer battery 3500 mAh
Automatic shut-off	✓
Battery life	up to 6 h*****
Operating temperature	5 – 35 °C
Dimensions [H x W x D]	74.5 mm x 145.5 mm x 36.6 (with standard diffusor)
Weight	349 g
Tripod adapter	✓
INTERFACE & MEMORY	
USB	USB 2.0
Trigger	Open collector, minijack 3.5mm, 3-pin
SD Card slot	microSD
Measurement result storage	Auto / 16 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	Optional GL SPECTROSOFT Basic / Pro / Lab

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ORDERING INFORMATION		
Case	✓	
Battery	✓	
USB cable	✓	
Power supply	✓	
Leash	✓	
Display protection foil	✓	
4GB microSD card	✓	
Part number	GLX 1.0t no. 106260	SPECTIS 1.0 touch UVa – VIS
	GLX 1.0t no. 200862	SPECTIS 1.0 touch VIS – NIR
	GLX 1.0t no. 202032	SPECTIS 1.0 Touch LS

* 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.

***** In moderate use – continuous measurements and WiFi significantly increase energy consumption.

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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