

## COLOR METER

### spectro-guide / color guide

Color and gloss measurement for basic applications

Visual colour sampling is subjective and depends on the environmental conditions. The spectro-guide and colour guide are easy-to-use instruments to objectively measure colour and gloss against physical standards and document the results in EXCEL. The S family has improved technical performance for gloss (< 10 GU), ideal for low gloss applications.

- Colour and 60° gloss measurement in one instrument
- Easy handling due to defined keys for standard and sample measurement
- Innovative LED technology ensures long-term and temperature-stable measurement results
- Stable calibration - only necessary every three months
- Low maintenance
- Data transfer to easy-link for simple documentation in EXCEL

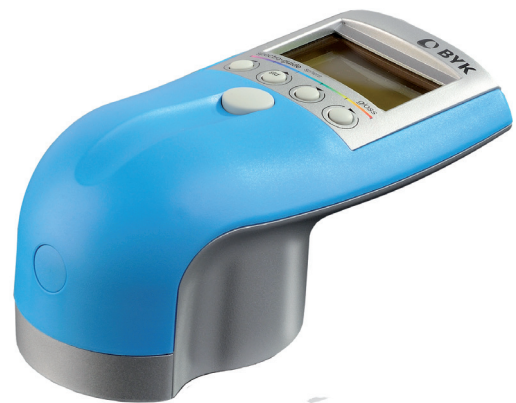


### spectro-guide 45/0 gloss (S)

- 45/0 Measuring geometry
- Complete appearance control - colour and gloss in one unit
- Highly repeatable results on textured surfaces thanks to patented true circumferential illumination
- S-version: Improved technical performance for 60° gloss < 10 GU

### spectro-guide sphere gloss (S)

- d/8 measurement geometry spin (gloss included)
- Complete appearance control - colour and gloss in one unit
- Highly repeatable results on textured surfaces thanks to diffuse sphere illumination
- S-version: Improved technical performance for 60° gloss < 10 GU



### color-guide 45/0

- 45/0 measurement area:
  - 4 mm aperture for small parts
  - 20 mm glass sealed aperture for granular and powdery material



### Standards

- Color: ASTM D 2244, E 308, E 1164 / DIN 5033, 5036, 6174 / DIN EN ISO 11664
- Gloss: ASTM D 523, D 2457 / DIN 67530 / ISO 2813, 7668

**easy-link Software**
**Features / Equipment:**

- Easy and direct data transfer from the spectro-photometer to predefined color control templates
- CIELab graph to show at one glance whether all parts are within specification
- Trend graph to monitor process changes over time
- CIELab graph for three illuminants
- Easy standard management:
  - Manual entry of spectral data if the physical standard is not longer available
  - Standard data back-up for download to the spectrophotometer
- Auto tolerancing function for assistance in setting up Pass/Fail limits

**Technical data:**

	spectro-guide 45/0 gloss	spectro-guide 45/0 gloss S	spectro-guide sphere gloss	spectro-guide sphere gloss S	color-guide 45/0 4 mm	color-guide 45/0 Glass panel
<b>Characteristics</b>						
Geometry colour	45/0	45/0	d/8 spin	d/8 spin	45/0	45/0
Geometry gloss	60°	60°	60°	60°	-	-
Measurement area color [mm]	Ø 11	Ø 11	Ø 11	Ø 11	Ø 4	Ø 20, Glas panel
Measurement area gloss [mm]	5x10	5x10	5x10	5x10	-	-
<b>Colour</b>						
Measuring range [nm]	400-700					
Repeatability	0.01 $\Delta E^*$ (10 consecutive measurements on white)					
Comparability	0.2 $\Delta E^*$ (average on 12 BCRA II tiles)					
Color systems	CIELab/Ch; Lab(h); XYZ; Yxy					
Color differences	$\Delta E^*$ ; $\Delta E(h)$ ; $\Delta E_{FMC2}$ ; $\Delta E_{94}$ ; $\Delta E_{CMC}$ ; $\Delta E_{99}$ ; $\Delta E_{2000}$					
Indices	YIE313; YID1925; WIE313; CIE; Berger; Color strength; Opacity; Metamerism					
Illuminants	A; C; D50; D55; D65; D75; F2; F6; F7; F8; F10; F11; UL30					
Observer	2°; 10°					
Memory	1500 Standards; 999 Samples	1500 Standards; 999 Samples	1500 Standards; 999 Samples	1500 Standards; 999 Samples	200 Standards; 999 Samples	200 Standards; 999 Samples
<b>Gloss</b>						
Measuring range	0 - 100 GU	0 - 10 GU 10 - 100 GU	0 - 100 GU	0 - 10 GU 10 - 100 GU	-	-
Repeatability	± 0,2 GU	± 0,1 GU ± 0,2 GU	± 0,2 GU	± 0,1 GU ± 0,2 GU	-	-
Comparability	± 1,0GU	± 0,5 GU ± 1,0 GU	± 1,0GU	± 0,5 GU ± 1,0 GU	-	-
Power supply	4 AA alkaline; NiCd or MH batteries					
<b>Dimensions</b>						
Width [cm]	9,5					
Height [cm]	8					
Depth [cm]	18					
Weight [kg]	0,5					

## spectro2go / spectro2guide / spectro2guide Pro

### spectro2go

Controlling the colour harmony of multi-component products within a global supply chain is a challenge. The outstanding technical performance of the spectro2go enables the use of digital standards. This ensures that everyone uses the same colour and gloss specifications.

- Colour and 60° gloss measurement in one instrument
- available in 45/0 geometry or as spherical spectrophotometer (d/8)
- Interchange of digital standards thanks to excellent instrument matching
- Balanced design with large, colour touch screen
- External test and calibration standards
- Live preview of the measurement spot with integrated camera
- Intelligent high-tech LED illumination with outstanding short-, long-term and temperature stability
- 10-year warranty on the LEDs - no lamp replacement necessary
- Professional data analysis with smart-chart combined with WiFi or USB connection

### spectro2guide

spectro2guide represents the next step in the evolution of colour measurement. The device combines a spectrophotometer with a fluorimeter in one portable device. For the first time, colour and 60° gloss are measured and light fastness is predicted.

- Colour, gloss and fluorescence measurement in one device
- Smart docking station with intelligent auto-diagnostics that tell you when to calibrate
- Smart high-tech LED lighting with outstanding short-, long-term and temperature stability



### spectro2guide Pro

with increased accuracy for measuring the black count of deep black colours (jetness)



#### Standards

- Color: ASTM D 2244, E 308, E 1164 / DIN 5033, 5036, 6174 / DIN EN ISO 11664
- Gloss: ASTM D 523, D 2457 / DIN 67530 / ISO 2813, 7668

**smart-lab Software**
**Features / Equipment:**

- Powerful standards management for setting tolerances and limits
- Export and import of digital standards within the supply chain ensures smooth communication
- Customised colour scales are predefined
- Simultaneous display of results as data table and graph: Lab graph, line/travel graph and spectral curves
- Easily switch measurement conditions such as illuminants and colour difference methods
- Pass/fail tolerances based on common colour difference formulas or custom colour scales
- Exchange of standard and sample guarantees highest flexibility
- Calculation of the mean value from a series of samples and use as a new standard

**Technical data:**

	<b>spectro2go 45/0</b>	<b>spectro2go d/8</b>	<b>spectro2guide 45/0</b>	<b>spectro2guide d/8</b>	<b>spectro2guide Pro 45/0</b>
<b>Characteristics</b>					
Geometry colour	45/0	d/8 (spin/spex)	45/0	d/8 (spin/spex)	45/0
Geometry gloss	60°	60°	60°	60°	60°
Measurement area color [mm]	Ø 12	Ø 12	Ø 12	Ø 12	Ø 12
Measurement area gloss [mm]	5x10	5x10	5x10	5x10	5x10
<b>Colour</b>					
Measuring range [nm]	400-700				
Repeatability <sup>1)</sup>	0.01 ΔE* (10 consecutive measurements on white)				
Comparability <sup>1)</sup>	0.1 ΔE* (average on 12 BCRA II tiles)				
Color systems	CIELab/Ch; Lab(h); XYZ; Yxy				
Color differences	ΔE*; ΔE(h); ΔEFMC2; ΔE94; ΔEcmc; ΔE99; ΔE2000				
Indices	YIE313; YID1925; WIE313; CIE; Berger; Color strength; Opacity; Metamerism				
Illuminants	A; C; D50; D55; D65; D75; F2; F6; F7; F8; F10; F11; UL30				
Observer	2°; 10°				
Memory	4000 Standards; 10.000 Samples				
<b>Gloss</b>					
Measuring range	0 - 10 GU 10 - 100 GU	0 - 10 GU 10 - 100 GU	0 - 10 GU 10 - 100 GU	0 - 10 GU 10 - 100 GU	0 - 10 GU 10 - 100 GU
Repeatability	± 0,1 GU ± 0,2 GU	± 0,1 GU ± 0,2 GU	± 0,1 GU ± 0,2 GU	± 0,1 GU ± 0,2 GU	± 0,1 GU ± 0,2 GU
Comparability	± 0,2 GU ± 1,0 GU	± 0,2 GU ± 1,0 GU	± 0,2 GU ± 1,0 GU	± 0,2 GU ± 1,0 GU	± 0,2 GU ± 1,0 GU
Power supply	integrated accu, 7.2 V, 2350 mAh 16.92 Wh, 100 - 240 V, 50/60 Hz				
<b>Fluoreszenz</b>					
Measuring range [nm]	-	-	340 - 760	340 - 760	340 - 760
Fluoreszent Indices	-	-	ΔE FI, ΔEzero	ΔE FI, ΔEzero	ΔE FI, ΔEzero
Jetness Indices	-	-	-	-	My, Mc, dM, Gy, Gc, dG
Repeatability Jetness	-	-	-	-	± 0,003 (for Y<0,5)
<b>Dimensions</b>					
Width [cm]	11				
Height [cm]	18,8				
Depth [cm]	8,7				
Weight [kg]	0,7				