

# spectro2guide

## Three in One Color. Gloss. Fluorescence.

The spectro2guide spectrophotometer represents the next step in the evolution of color measurement. Just like its predecessor, color and 60° gloss are measured simultaneously. Completely new is the quantification of fluorescence by measuring like a fluorimeter with monochrome illuminations. Colorful graphs show the fluorescent results on the display and new fluorescent indices are calculated for easy analysis.

## Perfectly formed Design Approachable. Balanced. Upfront.

The new instrument follows a very simple rule, which is not so easy to put into practice: "Form follows function". Due to its balanced and upfront design, the display is always in the right position and easy-to-read, whether on horizontal, vertical, large or small surface areas – even true for overhead work. You no longer need to bend out of shape for measurement and data reading. The display flips around for you.

## Brilliant Color Display Swipe. Touch. Measure.

As for mobile phones, there is a trend towards ever-larger displays. The new spectro2guide is completely in line with this trend offering a 3.5" color touchscreen – the largest on the market. An icon-based menu, colorful data tables and graphics ensure an intuitive smart phone like operation. As you are used to, you can touch or swipe with your fingers – it even works when wearing gloves. Alternatively, you also can use a stylus, which is enclosed in the housing – always handy.



## Preview with Camera Strike. Score. Save.

An integrated camera shows a live preview of the measurement spot. To ensure precise positioning and to prevent false readings on imperfections or scratches, the measurement spot is magnified by a factor of 4.5:1. It is so easy – just press the measurement button halfway and the live preview is active.

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## Tricky Fluorescence Excited. Emitted. Shifted.

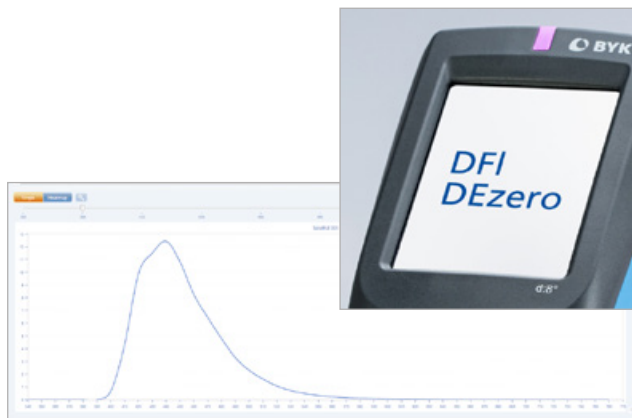
To quantify fluorescence two new indices,  $\Delta FI$  and  $\Delta Ezero$  are calculated. The index  $\Delta FI$  (delta Fluorescence) indicates whether and how much fluorescent light is emitted by the standard and the sample – important for everybody who wants to avoid any fluorescent ingredients in the product material. The index  $\Delta Ezero$  calculates how the color will change when the fluorescence has degraded.

In addition, the spectro2guide calculates how fluorescent specimens will look like under different illuminants (“Fluorescence Metamerism”).



## Smart Docking Station Park. Charge. Control.

As first spectrophotometer on the market, the spectro2guide offers auto diagnosis and an automatic calibration function. The spectro2guide with the docking station make a perfect couple – the white calibration standard is always protected and a reliable calibration is guaranteed. The docking station automatically charges the instrument. You only have to park the spectro2guide, the rest happens automatically. The smart docking station offers you a 2-in-1 advantage: Be ready at any time, be safe at any time – do not lose time with charging and daily calibration by hand.



## BYK LED Technology High-tech. Smart. Experienced.

Like the predecessor, the spectro2guide uses innovative, high-tech LED technology as light sources. Smart testing combined with our long-standing experience guarantees an outstanding performance of the LEDs. Short-term, long-term and temperature stability as well as a homogeneous illumination spot are unsurpassed in the industry. As a result, a superior accuracy and excellent inter-instrument agreement allow use of digital standards. One binding reference eliminates sources of error and physical standards no longer need to be exchanged.



## Flexible Data Transfer Wireless. Boundless. Flawless.

Adaptable to your situation and specific location, the spectro2guide offers three possibilities to transfer data: Via docking station or directly connected with USB cable or wireless with Wi-Fi function. Your data transfer is now guaranteed flawless and not tied down by a cable length.



In compliance with:

### Standards

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

### Ordering Information

| Cat. No. | Description         |
|----------|---------------------|
| 7070     | spectro2guide, d/8  |
| 7075     | spectro2guide, 45/0 |

#### Comes complete with:

spectro2guide, spectrophotometer  
 Docking station with built-in calibration standard  
 Additional calibration standard  
 Certificate for both calibration standards  
 Software: smart-chart with 2 licenses  
 USB cables and WiFi function for data transfer  
 Protection cap and hand strap  
 Operating manual  
 Carrying case  
 Installation training included

**Note:** After installation both software packages, smart-lab Color and smart-process Color, can be used for 30 days free trial. Thereafter, the user needs to decide and register for one software package.

#### System Requirements:

Operating system: Windows® 7 SP1, 8.1 or 10  
 Microsoft® .NET Framework 4 SP1  
 Hardware: Core 2 Duo, 2.2 GHz, i7 recommended, or equivalent  
 Memory: 4 GB RAM, 8 GB recommended  
 Free hard-disk capacity: 2 GB during installation  
 Monitor resolution: 1280 x 1024 pixel or higher  
 Interface: free USB-port

**Note:** smart-chart licence fee for more than two installations is quantity dependent. Please contact your local BYK-Gardner representative.

### Technical Specifications

| Color Geometry   | Gloss Geometry | Color Aperture | Gloss Aperture |
|------------------|----------------|----------------|----------------|
| d:8° (spin/spex) | 60°            | 12 / 8 mm      | 5 x 10 mm      |
| 45°c:0°          | 60°            | 12 / 8 mm      | 5 x 10 mm      |

| Color                              |  |                  |
|------------------------------------|--|------------------|
| <b>Spectral Range Color</b>        | 400 - 700 nm, 10 nm resolution   |                  |
| <b>Spectral Range Fluorescence</b> | 340 - 760 nm, 10 nm resolution   |                  |
| <b>Repeatability</b>               | 0.01 ΔE* (10 consecutive measurements on white)  |                  |
| <b>Reproducibility</b>             | 0.1 ΔE* (average on 12 BCRA II tiles)  |                  |
| <b>Color Systems</b>               | CIE Lab/Ch; Lab(h); XYZ; Yxy   |                  |
| <b>Color Differences</b>           | ΔE*; ΔE(h); ΔEFMC2; ΔE94; ΔECMC; ΔE99; ΔE2000  |                  |
| <b>Indices</b>                     | YIE313; YID1925; WIE313; CIE; Berger; Color Strength; Opacity; Metamerism; Grayscale; Jetness; ΔF1; ΔEzero |                  |
| <b>Illuminants</b>                 | A; C; D50; D55; D65; D75; F2; F6; F7; F8; F10; F11; UL30   |                  |
| <b>Observer</b>                    | 2°; 10°  |                  |
| Gloss                              |  |                  |
| <b>Measurement Range</b>           | <b>0-10 GU</b>   | <b>10-100 GU</b> |
| <b>Repeatability</b>               | ± 0.1 GU   | ± 0.2 GU         |
| <b>Reproducibility</b>             | ± 0.5 GU   | ± 1.0 GU         |
| General Data                       |  |                  |
| <b>Memory</b>                      | 5000 Standards and samples   |                  |
| <b>Languages</b>                   | English, German, French, Italian, Spanish, Russian, Japanese, Chinese                                      |                  |
| <b>Battery</b>                     | 7.2 V, 2350 mAh, 16.92 Wh  |                  |
| <b>Power supply</b>                | Input 100 - 240 V, 50 - 60 Hz, max. 1 A Output 12 V, max. 3 A  |                  |
| <b>Operating Temperature</b>       | 10 °C to 40 °C<br>(50 °F to 104 °F) for operation<br>0 °C to 60 °C<br>(32 °F to 140 °F) for storage        |                  |
| <b>Humidity</b>                    | Up to 85 % non-condensing at 35 °C (95 °F)   |                  |
| <b>Dimensions</b>                  | 87 x 110 x 188 mm (3.4 x 4.3 x 7.4 in)   |                  |
| <b>Weight</b>                      | 707 g (d/8), 690 g (45/0)  |                  |

## spectro2guide Training

BYK-Gardner offers you more than just an instrument. We train you on color theory, how to operate spectro2guide and data analysis with smart-chart. Therefore, the instrument comes with a 1-day training course including:

### 1. Color, Gloss and Fluorescence Theory

- Building blocks of color and gloss:
  - illuminant, observer, object
- Color differences with interpretation
- Fluorescent Measurement and data analysis

### 2. spectro2guide Operation

- Set-up of instrument
- Operation

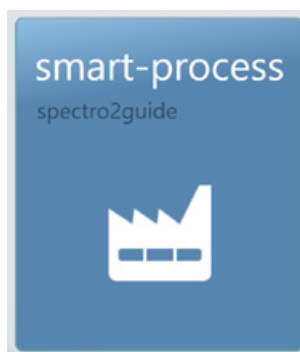
### 3. smart-lab Color training

- Standard management
- Data analysis using standard reports:
  - Scatter graph for P/F color analysis
  - Metamerism graph to judge color match under different illuminants
  - Fluorescence Slider for detailed fluorescence analysis by each excitation range
- Create your own reports in Excel®:
  - Transfer data from the database to Excel®



### 4. smart-process Color training

- Standard management
- Set-up an “organizer” to create a routine measurement procedure
- Send Organizer to instrument
- Data transfer to smart-chart and saving in a database
- Data analysis using standard reports
  - Test Report of a single test series
  - Scorecard: Executive summary (selected time range)
  - Trend Report of a specific color/ product over specified time range
- Create your own reports in Excel®:
  - Transfer data from the database to Excel®



### Ordering Information

| Cat. No. | Description                                 |
|----------|---|
| 7079     | Stylus, spectro2guide (10pcs)               |
| 7076     | Protective Cap, spectro2guide               |
| 7077     | USB Interface Cable                         |
| 7078     | Online Cable, spectro2guide                 |
| 7083     | Software smart-lab Color, spectro2guide     |
| 7084     | Software smart-process Color, spectro2guide |

### Accessories

|  |
|--|
| For touchscreen navigation   |
| Snap on to protect optics and interior components                      |
| To connect the docking station to the PC, USB-A plug                   |
| To connect the instrument directly to the PC                           |
| Software for professional analysis and documentation in the laboratory |
| Process QC Software for analysis of multi-component products           |