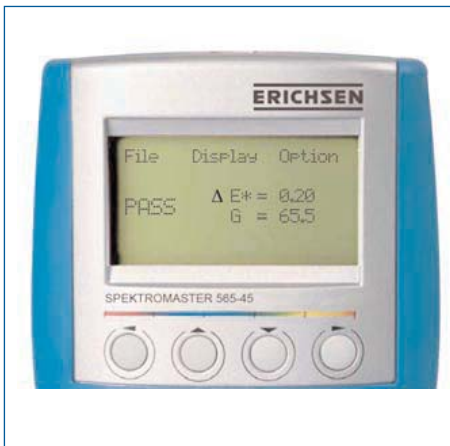


**Color and
Gloss Unit
SPEKTROMASTER
565**



testing equipment for quality management

ERICHSEN

Technical Description

Color

DIN 5033 / 5036 / 6174
ISO 7724
ASTM D 2244 / E 308 / E 1164

Gloss

DIN 67530
ISO 2813 / 7668
ASTM D 523 / D 2457

**For simultaneous
measurement of
color and gloss**

Purpose and Application

The overall appearance of a product is influenced by color and gloss. A sample of the same color but higher gloss level is visually perceived darker and more saturated than a low gloss sample. In order to get a uniform appearance, both attributes need to be controlled. The Spectrometers of the very most other suppliers are only able to measure the color value. In comparison with this, the **SPEKTROMASTER 565 is able to measure color and gloss both simultaneously!** Thus, the cause of a mismatch can be clearly defined in any situation.

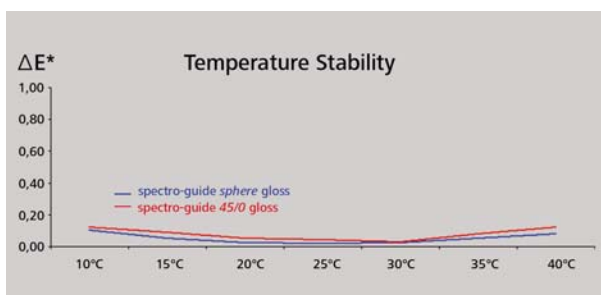
For color measurement, there have been two different methods established, each specifically preferred by the users due to the concerning desired application:

45°/0°	For measurements due to the allusion to a visually valued impression. Also for a lot of Automotive relevant applications as well as oftentimes for measurements within the final inspection.
8°/d	(Sphere acc. to Ullbricht) For color matching/recipe matters, pigment testing, measurements of color alternation after weathering exposure. Generally also for reception control.

The **SPEKTROMASTER 565** is available in two versions, each attached with one of the two measuring geometries.

- Color (45/0 or sphere) and 60° gloss are displayed at the same time
- In compliance with international specifications
- Tolerances for color and gloss allow quick pass/fail decisions in production

With the new **SPEKTROMASTER** you can measure any color: dark - brilliant - steep reflectance curves. The 10 nm spectral resolution not only ensures highly precise color results, but also an excellent agreement with competitive color instruments - even bench-top units.

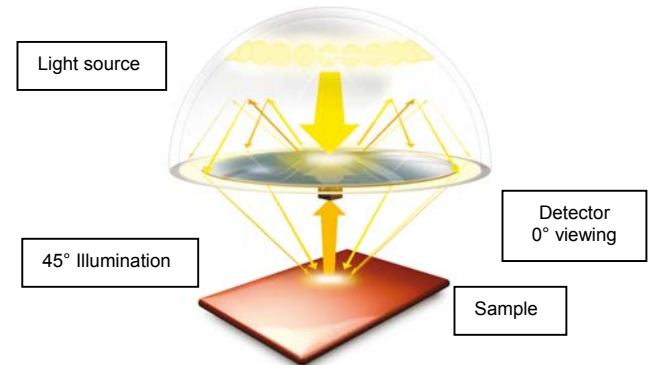


Additionally, a patented illumination control provides temperature independent results - even in extreme conditions.

Design and Function

The **SPEKTROMASTER 565** makes quality control simple and secure - even for color beginners. Thanks to the intuitive pulldown menu and the four-cursor button operation quality control has never been easier.

- Light weight and small size - weights only 500 g
- Ergonomic design - can easily measure difficult to access areas
- Designated buttons for standard and sample readings
- Customization of the display to your needs



True circumferential illumination for best repeatability on textured samples.

The key criterion for a 45/0 instrument is a circumferential illumination. The **SPEKTROMASTER 565/45** is using a unique, patented measurement principle to achieve a 100 % circumferential illumination. A white coated hemisphere acts as a mixing chamber and guarantees completely uniform illumination. Thus, any influence of measurement direction is eliminated and excellent repeatability even on highly textured surfaces is guaranteed.

Special Features

Economical and reliable operation of a color instrument is often taken as given. The **SPEKTROMASTER** guarantees superior accuracy for many years and low maintenance efforts.

- Long lasting standard AA batteries - up to 8,000 readings per set
- 10 year warranty on the light source - no lamp changes needed
- Rugged and compact design
- Stable, long-term calibration - needed only every three months

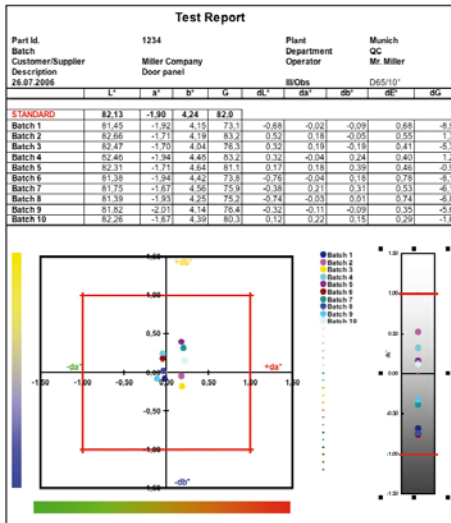


Accessory

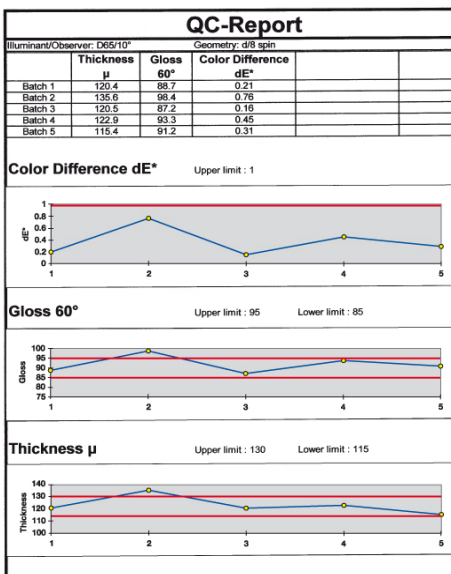
Software easy-link

No matter whether you want to compare a batch to a defined standard or monitor process changes over time, **easy-link**, included with **SPEKTROMASTER 565**, offers all of the necessary tools (Hardware Requirements: Operating system Windows® 95 or higher Microsoft Excel® 97 or higher, including VBA - Visual Basic for Applications; Free Serial Interface).

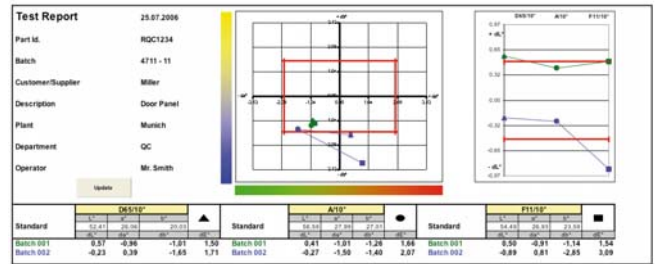
Direct data transfer from the instrument into predefined QC templates make you ready for routine color control.



The CIELab-Graph charts differences in color and lightness together with production tolerances.



All data are summarized in a trend graph: Color, gloss, film thickness and your own product specific information.



Color differences are displayed simultaneously for three illuminants to control metamerism.

Manual entry of standards

If you have to match colors and the physical sample is no longer available, you can easily enter the spectral data in easy-link. The standards can then be transferred to **SPEKTROMASTER** for color QC.

Back-up your standard data

For safety reasons, it is recommended to store your complete database of standards on the PC. They can be downloaded with the individual tolerances to the **SPEKTROMASTER** – whenever needed.

Establish your tolerances

The auto tolerancing function assists you in setting up the tolerances for Pass/Fail control. Measure at least 20 visually accepted production trials, transfer the readings to Excel®, and have the tolerances automatically calculated for you – saving time and headaches.



Technical Data

Color

Spectral Range:	400-700 nm, 10 nm resolution
Repeatability:	0,01 ΔE^* , 1 σ (10 consecutive measurements on white)
Reproducibility:	0.2 ΔE^* , 1 σ (average on 12 BCRA II tiles)
Color Systems:	CIELab/Ch; Lab(h); XYZ; Yxy
Color Differences:	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°

Gloss:	0 - 100 GU
Repeatability:	± 0.2 GU
Reproducibility:	± 1.0 GU

Memory:	1500 Standards; 999 Samples
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Languages:	English; German; French; Italian; Spanish; Japanese; Chinese
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Power Supply:	4 AA alkaline; NiCd or MH batteries
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Operating Temperature:	10 °C - 42 °C (50 °F - 110 °F)
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Humidity:	< 85% relative humidity, non-condensing / 95 °F (35 °C)
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Dimensions:	9.5 x 8 x 18 cm
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Weight: (complete scope of supply)	approx. 2.5 kg
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Order Informations	
Ord.-No.	Product-Description
0287.01.31	SPEKTROMASTER 565-45 for simultaneous measurement of color (geometry 45/0, aperture 11 mm) and gloss (geometry 60°, aperture 5 x 10 mm)
0288.01.31	SPEKTROMASTER 565-D for simultaneous measurement of color (geometry 8/d, aperture 11 mm) and gloss (geometry 60°, aperture 5 x 10 mm)
<p>The scope of supply includes:</p> <ul style="list-style-type: none"> - Black calibration standard - White calibration standard with certificate - Green checking reference - High-gloss standard - Sample area locator - Software easy-link - Interface cable - AA batteries (4 pcs.) - Hand strap - Carrying case - Operating instructions 	

The right of technical modifications is reserved.
Group 17/18 - TBE 565 – X/2009