

Measuring principle

Color meter works according to the tristimulus absorption and imitates human vision. It does this by means of 3 color sensors with almost identical spectral sensitivity in the areas of red, green and blue. The color values determined in this way are represented as X, Y and Z values on the display and automatically converted to other color spaces.

Applications

This instrument can be used to measure the color of no lighting and non-fluorescent samples such as textile, paper, leathers, painting materials, etc. It can also be used for calculating color differences between two color in any of the six color spaces. It is a useful tool for quality control and wide industrial applications.

Features

- Six color spaces for measurement and comparison : (L*,a*,b*), (L*, C*ab, hab), (Y, x, y), (X, Y, Z), (Rs, Gs, Bs) or (WI, YI, Tw).
- Statistics of max, min, avg and standard deviation displayed.
- Color difference tolerance can be set for PASS/WARN/FAIL tests.
- 9 different color targets can be stored for comparison.
- User calibration function.
- Data storage and recall.
- Low battery indication and auto power off.



Technical Specifications

Model	Metrix+ COL 45
Display	Triple 4-digit LCD display
Measuring geometry	45° / 0° ; Illumination at 45°, measurement at 0°
Color space measurement	(L*,a*,b*), (L*, C*ab, hab), (Y, x, y), (X, Y, Z), (Rs, Gs, Bs) or (WI, YI, Tw).
Color difference measurement	$\Delta(L^*, a^*, b^*)$, $\Delta(E^*ab, C^*ab, H^*ab)$, $\Delta(Y, x, y)$, $\Delta(X, Y, Z)$, $\Delta(Rs, Gs, Bs)$ or $\Delta(WI, YI, Tw)$
Illuminant	White LED lamp
Measuring area	approx. \varnothing 10 mm
Measuring range	L* : 5 to 100
Target color memory	9 values, can be set by measurement or manually entered values
Measurement conditions	Observe : CIE 2° standard observer
Repeatability	Standard deviation within ΔE^*ab 0.5 (measurement conditions: avg of measurements of standard white plate)
Min. interval between measurements	approx. 2 seconds

Data storage	99 sets (direct reading from LCD display)
Operating conditions	Temperature : 0 ~ 40°C, Humidity : <85% RH
Storage conditions	Temperature : -10 ~ 40°C, Humidity : <70% RH
Power	4 x 1.5V AAA (UM-4) batteries
Size and weight	140 x 73 x 35mm; approx. 220g(with batteries)
Standard accessories	Main unit, measuring head(sensor), white calibration card, operational manual, batteries, carrying case
Optional accessories	PC interface