

# CR-10 Plus Colour Reader

The CR-10 PLUS colour reader is an affordable handheld, portable colorimeter for quick and easy colour control on almost any samples and materials. Just measure the target followed by the sample to compare the colour difference in objective CIELAB colour difference values displayed on the LCD screen. Despite the simple operation, the CR-10 PLUS is a true colorimeter in full compliance with CIE, ISO and DIN standards.

The CR-10 PLUS represents the entry point to objective colour measurement. Compared to many other entry level devices, the CR-10 PLUS is a true colorimeter in full compliance with CIE, ISO and DIN 5033 standards. Extremely simple to use, the CR-10 PLUS allows fast colour difference measurements between a target colour and a sample in just 2 steps. On the LCD screen colour difference are shown in CIELAB  $L^*a^*b^*$  and  $dE^*$  or  $L^*C^*H^*$  and  $dE^*$  values.

The 8 mm measuring area (illuminated area 11 mm) and the sphere geometry ( $8^\circ:di$ ) suits almost any sample size or surface; for those applications needing a smaller spot size, the optional small spot set can decrease this measurement spot to 5 mm. The illumination by Xenon lamp, according to CIE standard illuminant D65 and  $10^\circ$  observer assure repeatable and correct colour measurements. Data can be stored internally and transferred to a PC using the USB connection, or printed out using an external printer.

You can set a tolerance on the CR-10 PLUS. Then, if the colour difference exceeds the tolerance the CR-10 PLUS warns you that the sample exceeds tolerance by highlighting the over tolerance value in the display, and giving a different sound than for those that pass, so you know immediately whether the sample has passed or failed.



Illumination/ Viewing geometry	$8^\circ:di$ ( $8^\circ$ illumination angle/diffuse viewing, specular component included (SCI); DIN5033 Teil7, JIS Z 8722 condition d, ISO7724/1, CIE No.15、ASTM E 1164)
Light source	Pulsed Xenon Lamp
Receptors	6 silicon photocells (3 for measurement, 3 to control illumination)
Measuring/Illumination area	$\varnothing$ 8 mm /11 mm, (Optional $\varnothing$ 5 mm /5 mm)
Display modes	Absolute Colour values ( $L^*a^*b^*$ or $L^*C^*h^\circ$ ; for targets only). Colour difference values ( $\Delta L^*$ , $\Delta a^*$ , $\Delta b^*$ , $\Delta C^*$ , $\Delta H^*$ , $\Delta E^*_{ab}$ )
Memory	1,000 (Target data and measurement data)
Measuring range	$L^*$ : 10 to 100
Illuminant/observer condition	D65 / $10^\circ$
Repeatability	Standard deviation within $\Delta E^*_{ab}$ 0.1 (Measurement conditions: average of standard white plate measurements)
Dimensions ( W x H x D), Weight	66 x 158 x 85 mm , Approx. 420 g without batteries
Standard accessories	Target mask, Soft case, Protective cap, Wrist Strap, AA size batteries, USB cable