



COLOR TARGET COMPARATOR

MODEL NO. - ACM- 52305-J



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In 1931, the CIE (Commission Internationale De L'E'clairage) set up a series of visible spectrum color space standards. The basic CIE color space standards is CIE_XYZ. It is built on standard visual observers on the basis of ability to see, and it reflects the standards scope of color by eye. Based on CIE_XYZ there are CIE_xyY, CIE_Lab, CIE_Lch standard color space, etc.

At present, the CIE lab color space is the most commonly used in the industry. In CIE Lab color space, L value stands for color brightness and a value stands for the Green-on-red value, and b value stands for the blue-on-yellow color value. If determine a value of color by only a group Lab, it will be not practical. However, we can determine the differences among them by comparing two groups of Lab values.

FEATURES

- Easy operation make you use it easily.
- Widely applied to quality control of plastic and printing industries'.
- Display directly color difference by ΔE^*ab , ΔL^*a^*b ,
CIE_L^*a^*b,CIE_L^*c^*h
- Standard deviation within $\Delta E^*ab0.2$ (test condition:choose average values by 12pcs white tabula)
- It can be connected with computer to do the inspection by software with USB expansion interface.
- Inter instrument agreement better than 0.3D E (matched instruments are available on request).



IT MAKES YOU EFFICIENT, ACCURATE AND COLORFUL

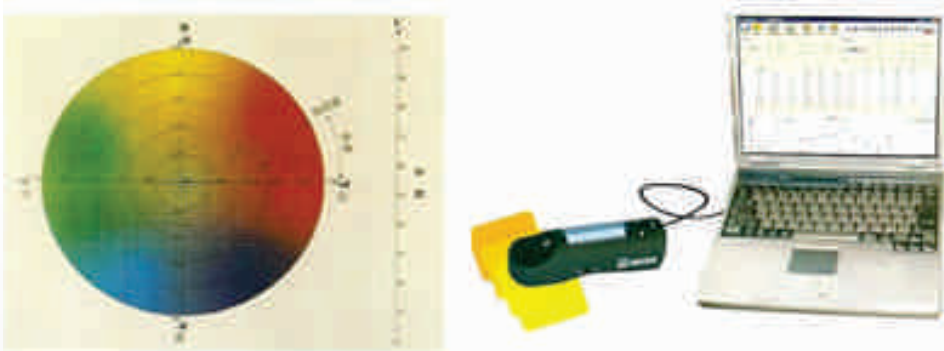


TECHNICAL FEATURES

Test accuracy	Within $0.2 \Delta E^*_{ab}$
Display	ΔE^*_{ab} , CIE_Lab, ΔL , Δa , Δb , CIE_Lch
Test swpe	L: 0-100 a: -128- -127 b: -128- -127
Test time	About 3 seconds.
Test Interval	2 seconds.
Test aperture	8mm
Automatic shutdown	Automatic shutdown after 5 minutes waiting
Light source	C light source
Sensor	Correct silicon photodiode carrays
Power	DC/5V (1.5A) ,2pcs 1.5V (AAA) batteries
Size	171 *50*48. 8mm
Weight	203. 6g (Exclusive battery)
Operated temperature scope	0-400 C (32-1040 f) : lower than 85% relative humidity.
Standard accessories	1pc manual/ softwbag/ 9v battery/5v external power supply/USB
Storage temperature range	connecting cable/cd
Application	Measure any color of smooth surface.

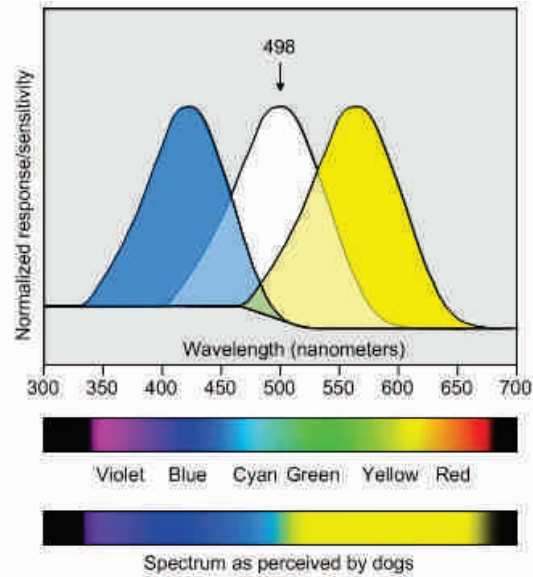
CIE COLOR SPACE COORDINATE CHART

COLOR DIFFERENCE FORMULA $\Delta E_{ab} = [(\Delta a^*)^2 + (\Delta b^*)^2 + (\Delta L^*)^2]^{1/2}$
 $\Delta L^* = L^*_{\text{sample}} - L^*_{\text{standard}}$ (lightness difference)
 $\Delta a^* = a^*_{\text{sample}} - a^*_{\text{standard}}$ (red/ green difference)
 $\Delta b^* = b^*_{\text{sample}} - b^*_{\text{standard}}$ (yellow/blue difference)



WORKING THEORY

- Compare the color difference between sample and the measured subject. Then output CIE_Lab 3 groups' data, and the 4 groups of ΔE , ΔL , Δa , Δb data after comparison.
- ΔE stands for the total color difference.
- $\Delta L+$ stands for partial white, $\Delta L -$ stands for partial black (comparing with prototype)
- $\Delta a+$ stands for partial red, $\Delta a-$ stands for partial green (comparing with prototype)
- $\Delta b+$ stands for partial yellow, $\Delta b-$ stands for partial blue (comparing with prototype)



Evolution of visual systems: modern mammalian dichromats (blue and yellow cones – plus rod cells)

MORE WORKING THEORY SPECIFICATION

Color dif. scope	Color dif. Anylysis
0 - 0.25 ΔE	Very small or no;very perfect matching
0.25 – 0.5 ΔE	Small; acceptable matching
0.5 – 1.0 ΔE	Small to medium; acceptable in some areas.
1.0 – 2.0 ΔE	Medium; acceptable in some areas.
2.0 – 4.0 ΔE	Has distance; acceptable in special applications
4.0 ΔE	Very big; not acceptable in most applications



An ISO 9001 : 2208 | ISO 14001 : 2008 | ISO 13485
WHO: GMP Products | GLP Compliant Products

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