

CMF Color Analyzer PW0049

The module PW0049 is a stand-alone measuring device which is conceived for the absolute measurement of self-illuminating objects. The internal Tristimulus measuring values X, Y, Z form the basis of most of the common color spaces used today and serve for the conversion into other color spaces. Some of them are already covered by the module. By means of the integrated three-sector color sensor and additional procedures, the visual sensation of the human eye is imitated with an accuracy that can be compared to decidedly more elaborate spectrometric procedures. The adaptation of the test objects to module is carried out via light guides.

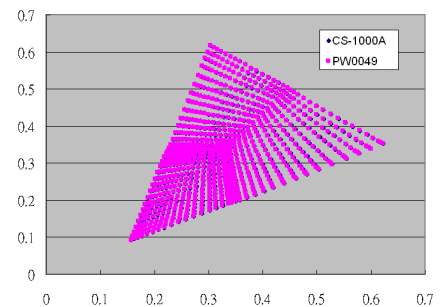
The function „Color Controller“ can additionally be activated via the software tool included in the scope of delivery. Color and intensity values are forced via 3 analog outputs for the controlling of a light source. The module itself controls the forced values and keeps them constant.

By means of the integrated three-sector color sensor and additional procedures, the raw sensor values are enhanced in a way that an imitation of the CIE 1931 2° CMF is produced as precisely as possible. Through the accurate reproduction of the CIE1931 2° CMF, an evaluation of the luminance perception (v(λ), photopic) is also feasible.



Software for display calibration compatible with WIN98/WIN-NT/WIN-XP.

Measuring range	Luminance : 0.1 ~ 300,000 cd/m ²
	Chromaticity : 0.1 ~ 300,000cd/m ²
Accuracy	Luminance : ± 2%±1 digit (10 ~300,000cd/m ²)
	Chromaticity : ± 0.002 A CCT
	Chromaticity : ± 0.002 CCT 4000~15000*
Available light sources	Chromaticity : ± 0.0065 for any color
	CCFL, LED white, LED colored, red optimized LED's, RGB Backlight, white LED Backlight, RGB light source, RGB and white. Additional light sources possible.
Acceptance angle	± 2.5°
Measurement distance	30 (01±10 mm ; 02±5 mm)
Measurement range	01 - Ø20 mm ; 02 - Ø 10 mm
Calibration	Trace NIST
Calibration data	Selectable



Test with 810 colors with CCFL Backlight Display

Technical data:

- Output of the color values in X, Y, Z according to CIE1931 2° (Tristimulus values)
- Output of the color values in x, y, Y according to CIE1931 2° (Chromaticity)
- Output of the color values in Lab according to CIELab – reference illuminant to be selected
- Output of the color values in RGB
- ΔE output against a definable reference
- All results over serial interface and three analog channels 0-10V – 10 bit
- Operational mode Standard, signal bandwidth 25Hz, operational mode and Enhanced, signal bandwidth 15Hz
- The standard light guide plastic 2mm diameter, 1000mm length is considered in the calibration and the correction
- dynamic range >120 db
- wavelength from 400 to 700nm, with synchronous sampling of all color channels
- Temperature compensation between 20 and 55 °C
- Serial interface RS 232C
- Indication of the dominant wavelengths in nanometers in connection with the PC tool
- Indication of the color temperature in Kelvin in connection with the PC tool

Dimensions (without connectors)

- Length: app. 205mm
- Breadth: app. 156mm
- Height: app. 75mm

Power supply

- 24 VDC; 0,5 A

Weight: app. 500g