

MTCS-C2 Colorimeter Board

MTCS-C2 Colorimeter Board – The Hi-Tech Sensor ‘Like Human Eyes’

In addition to its True Color IC solutions, MAZeT offers a series of colorimeter boards, supplemented by software and drivers, based on the MAZeT MTCS series. These boards are targeted at OEM customer solutions for color measurement and control.

The **MTCS-C2 ‘Colorimeter 2’ True Color Sensor Board is a standard production board**, which in addition to the color sensor IC also integrates the complete signal amplification and processing as well as a microcontroller including the interface.

Along with the sensor hardware, MAZeT provides a USB driver and user software for:

- calibration of the measuring system on the basis of color targets
- control of the sensor
- visualization and logging of the measurement values in XYZ, Lab or similar.

The board's optical channel is provided with a mechanical aperture to comply with 10° measuring geometry requirements. Calibration of the board as a measuring system is performed at the factory. The sensor can be used immediately for measuring functions after connection to a PC and installation of the software. The user can set up his own light source or as an alternative he can use the modEVA from MAZeT.

The Colorimeter 2 is recommended for general color detection and measurement tasks according to DIN ISO 13655 and DIN 5033 (CIELAB standard). With relatively simple preparation, this sensor solution definitively meets the accuracy of the human eye in any application and is, therefore, ideally suited for color testing or recognition - ‘Like Human Eyes’.

The following components are integrated on the MTCS-C2 board:

- True Color Sensor **MTCSiCS**
- Transimpedance amplifier **MTI04CQ**
- Microcontroller C8051F321 with 10-bit A/D converter and USB interface
- EEPROM – available data memory for compensation and correction data

Items included:

The MTCS-C2 package includes:

- MTCS-C2 (µC Version 0.1x)
- documentation
- optional USB cable
- optional PC software ‘colorimeter2.exe’ (with USB driver as SYS and MTCSApi.dll)
(sensor calibration, display and output of measured values, for example in the CIELAB color space)
- optional macro function library (API Application Programming Interface MTCSApi.DLL with test software)
- optional 2° optic aperture