

CROMLAVIEW®

The natural view of color sensing!

Compact Color Sensor CR100



- **Memory for up to 350 colors**
- **Fast response time of 50µs**
- **Long-term stable color recognition without new teach-in by CROMLASTAB® technology**
- **Resolution for finest color differences ($E < 1$)**
- **Reliable detection of very dark objects**
- **Simple adjustment to the recognition task by optical fibers and focus optics**
- **Triggering the color detection by trigger input**
- **Signal settings and color teach-in via a 3 button interface**
- **PC software CRTTool for parameter setting and checking of the color detection**

The detection of finest color shades on all types of surfaces is the strength of the CROMLAVIEW® CR100 color sensor. Thanks to a fiber optic connector, the sensor can be adapted to a variety of applications. Thus spot size and distance to the object are variable.

Through a sophisticated concept of operation, the sensor can be configured via a three button interface comfortably. For more complex tasks a PC software (CRTTool) is available, that displays all the settings and manages the 350 colors stored in the sensor, and exports them in a CSV file (Excel) if necessary.

The sensor, equipped with a powerful LED, is very compact with dimensions of 50X50X21mm³. The integrated stabilization channel technology CROMLASTAB® ensures reliable operation during the entire life cycle. Moreover, it compensates temperature drifts.

Applications

AUTOMOTIVE



Applications for automotive manufacturers and -suppliers: color control of inside lining, check the correct fit of assembly parts, testing of LEDs in instrument boards, switches and automotive lighting for brightness, color temperature and correct "color binning"

CHEMISTRY



In chemical industry the coloration of a liquid indicates the state of a substance or the succession of a chemical reaction. An example is the nitrite concentration of water or the chemical reaction of chromic acid (orange color)

PRINTING



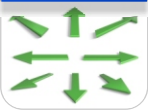
Online color monitoring at high speeds (50µs scan interval) for sheet- and web offset printing; detection of print marks for controlling the register control, automatic print mark recognition (special edition) without "teach-in" of the respective colors

ASSEMBLY



Presence check of assembly parts by resulting color effect: the correct position and mounting angle can be checked; when using color-coded assembly parts, such as car fuses or coil bobbins, assembly of the correct part can be assured

SORTING



Sorting of color components for all possible processes in which the product color is a distinguishing factor; sorting of color-coded assembly parts, whose identity is indicated by color

Technische Daten | Technical Data

| | |
|--|---|
| Abtastkanäle <i>Sensing channels</i> | 1 Messkanal <i>1 Sensing channel</i> 1 Interner Stabilisierungskanal <i>1 Internal stabilization channel</i> |
| Driftstabilisierung <i>Drift stabilization</i> | CROMLASTAB® abschaltbar <i>Can be switched off</i> |
| Empfangsdetektor <i>Receiving detector</i> | Dreibereichsfotodiode <i>Three range photo diode</i> |
| Empfindlichkeit <i>Sensitivity</i> | Vom Benutzer einstellbar <i>Adjustable by user</i> |
| Empfindlichkeitsstufen <i>Sensitivity steps</i> | 8 (1x, 4x, 20x, 40x, 80x, 200x, 400x, 800x) |
| Empfangs-Signalauflösung <i>Receiving signal resolution</i> | 3 x 4096 Stufen <i>3 x 4096 steps</i> |
| Objektbeleuchtung <i>Object illumination</i> | - Leistungs-Weißlicht-LED <i>Power white</i> - Einstellbar (4096 Stufen) <i>Adjustable (4096 steps)</i> |
| Fremdlichtkompensation <i>Ambient light compensation</i> | Abschaltbar <i>Can be switched off</i> |
| Standardschnittstellen <i>Standard interfaces</i> | - 4 Ausgänge, 2 Eingänge <i>4 outputs, 2 inputs</i> - Serial (RS232) |
| Anzeigen <i>Displays</i> | 9 LEDs für Schaltausgänge und Status <i>9 LEDs for outputs and status</i> |
| Tasten <i>Buttons</i> | 3 Tasten für Teach-In <i>3 Buttons for Teach-In</i> |
| Farbauflösung (L*a*b*) <i>Color resolution</i> | E _{lab} = 1 |
| Ansprechzeit <i>Response time</i> | >50 µs |
| Farbwertspeicherplätze <i>Color value memory cells</i> | 350 |
| Farbausgangskanäle <i>Color output channels</i> | 4 (bis zu 15 bei binärer Kodierung) <i>4 (up to 15 at binary encoding)</i> |
| Schutzart <i>Protection standard</i> | IP54 |
| Stromversorgung <i>Power supply</i> | 18...28 VDC, max. 500 mA |
| Gehäusetemperatur im Betrieb <i>Case temperature for operation</i> | -10...55°C |
| Messsignalkopplung <i>Coupling in signal path</i> | Mittels Lichtwellenleiter <i>Via optical fiber</i> |
| Lichtwellenleiteradaption <i>Optical fiber adaptation</i> | M18x1 |
| Maße <i>Housing size</i> | 50x50x21 mm ³ |

Drawings

