



# TL46

954600004

TL46-WH-815-PZ

HIGH PERFORMANCE CONTRAST SENSOR FOR COLORED  
REGISTRATION MARK DETECTION

## OVERVIEW

- Fastest and accurate low jitter model (TL46-WJ)
- Color mode enhanced model (TL46-WE)
- Wide-spectrum RGB or white LED emission
- 5 different models: basic, standard, enhanced, low jitter, color mode
- Automatic, manual and dynamic settings
- 10, 15, 20, 30 or 50 kHz switching frequencies
- Very low jitter down to 7 $\mu$ s (TL46-WJ...)
- NPN/PNP and analog outputs
- Standard mounting, M12 connector rotatable to 5 positions

## TECHNICAL FEATURES

### Detection properties

Nominal sensing distance	12mm
Spot dimension	0,8 x 4mm
Sensitivity adjustment	Teach-in

### Application

Function Principle	Color / contrast mark detection
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Description	Standard case - vertical spot
Optic position	axial
Functions	Color / contrast mark detection

#### Outputs

Output type	NPN/PNP - IO-LINK
Switching frequency	10kHz (Color mode) 70kHz
Response time	0,007 (70kHz low jitter)

#### Electrical data

Operating Voltage	10...30VDC
No-Load supply current	≤ 30mA
Load current	≤100mA
Output voltage drop	≤2V
Max ripple content	≤ 2Vpp
LED indicators	Yellow (output state) 4 digit display/delay/keylock
Short-circuit protection	YES
Reverse Polarity Protection	Yes
Emission	LED RGB
Interference to external light	according to EN 60947-5-2 : 2020

Impulsive Overvoltage Protection	Yes
Insulation resistance	>20 MΩ 500 Vdc, between electronics and housing
Contact resistance	500 Vac 1 min., between electronics and housing

#### Mechanical data

Dimensions	32x60x82
Material	
Housing material	Metal - Aluminium / Glass
Connections	M12 plug
Active Head Material	Glass
Storage temperature	- 20°C...+70°C
Diameter/Dimension	Cubic

#### Test/Approvals

Approvals	CE cULus
Shocks and vibrations	0.5 mm amplitude, 10 ... 55 Hz frequency, for every axis (EN60068-2-6)

#### Generical Data

Dimensions	32x60x82
Operating Temperature	- 10°C...+ 55°C
Mechanical Protection	IP67

**Datasensing**  
**S.r.l.**

Strada S.Caterina, 235  
41122 Modena (MO)  
Tel. 059 420411  
Fax 059 253973  
E-mail  
[info@datasensing.com](mailto:info@datasensing.com)

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