



# TL46

954601000

TL46-W-815

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	1,5 x 5mm
Sensitivity adjustment	Teach-in

### Application

Function Principle	Contrast mark detection
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Description	Standard case - vertical spot
Optic position	axial
Functions	Contrast mark detection

#### Outputs

Output type	NPN/PNP - Dark/Light sel., 0-5 V
Switching frequency	15kHz
Response time	0,033 (15kHz)

#### Electrical data

Operating Voltage	10...30VDC
No-Load supply current	$\leq 50\text{mA}$
Load current	$\leq 100\text{mA}$
Output voltage drop	$\leq 2\text{V}$
Max ripple content	$\leq 2\text{V}_{\text{pp}}$
LED indicators	Yellow (output state) Green (Ready) orange (delay or 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 / PMMA
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

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