



# WT27L-2F430A

W27-2 Laser

COMPACT PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
WT27L-2F430A	1016247

Other models and accessories → [www.sick.com/W27-2\\_Laser](http://www.sick.com/W27-2_Laser)

Illustration may differ



### Detailed technical data

#### Features

<b>Sensor/ detection principle</b>	Photoelectric proximity sensor, Background suppression
<b>Dimensions (W x H x D)</b>	24.6 mm x 80 mm x 53.5 mm
<b>Housing design (light emission)</b>	Rectangular
<b>Sensing range max.</b>	100 mm ... 800 mm <sup>1)</sup>
<b>Sensing range</b>	100 mm ... 800 mm
<b>Type of light</b>	Visible red light
<b>Light source</b>	Laser <sup>2)</sup>
<b>Light spot size (distance)</b>	Ø 2 mm (400 mm)
<b>Wave length</b>	650 nm
<b>Laser class</b>	2 (EN 60825-1), low power. Eyes are normally protected by averting reaction and eyelid closing reflex.
<b>Adjustment</b>	Potentiometer
<b>Special applications</b>	Detecting small objects

<sup>1)</sup> Object with 90 % reflectance (referred to standard white, DIN 5033).

<sup>2)</sup> Average service life: 50,000 h at T<sub>U</sub> = +25 °C.

#### Mechanics/electronics

<b>Supply voltage</b>	10 V DC ... 30 V DC <sup>1)</sup>
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<sup>1)</sup> Limit values when operated in short-circuit protected network: max. 8 A.

<sup>2)</sup> May not exceed or fall below U<sub>V</sub> tolerances.

<sup>3)</sup> Without load.

<sup>4)</sup> Signal transit time with resistive load.

<sup>5)</sup> With light/dark ratio 1:1.

<sup>6)</sup> A = V<sub>S</sub> connections reverse-polarity protected.

<sup>7)</sup> C = interference suppression.

<sup>8)</sup> D = outputs overcurrent and short-circuit protected.

<sup>9)</sup> Reference voltage: 50 V DC.

<b>Ripple</b>	$\leq 5\% \text{ }^{2)}$
<b>Power consumption</b>	35 mA <sup>3)</sup>
<b>Switching output</b>	PNP
<b>Output function</b>	Complementary
<b>Switching mode</b>	Light/dark switching
<b>Output current <math>I_{\max.}</math></b>	$\leq 100 \text{ mA}$
<b>Response time</b>	$< 500 \text{ } \mu\text{s} \text{ }^{4)}$
<b>Switching frequency</b>	1,000 Hz <sup>5)</sup>
<b>Connection type</b>	Male connector M12, 4-pin
<b>Circuit protection</b>	A <sup>6)</sup> C <sup>7)</sup> D <sup>8)</sup>
<b>Protection class</b>	II <sup>9)</sup>
<b>Weight</b>	100 g
<b>Housing material</b>	Plastic, ABS
<b>Enclosure rating</b>	IP67
<b>Ambient operating temperature</b>	-10 °C ... +45 °C
<b>Ambient storage temperature</b>	-10 °C ... +75 °C

1) Limit values when operated in short-circuit protected network: max. 8 A.

2) May not exceed or fall below  $U_V$  tolerances.

3) Without load.

4) Signal transit time with resistive load.

5) With light/dark ratio 1:1.

6) A =  $V_S$  connections reverse-polarity protected.

7) C = interference suppression.

8) D = outputs overcurrent and short-circuit protected.

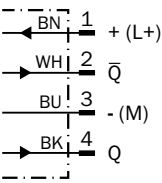
9) Reference voltage: 50 V DC.

## Classifications

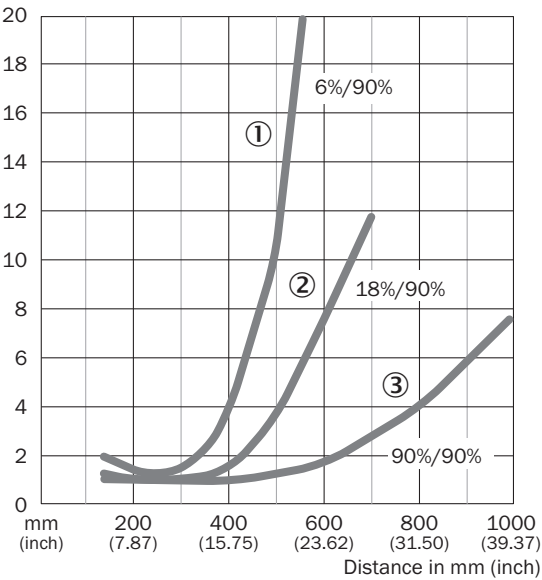
<b>ECI@ss 5.0</b>	27270904
<b>ECI@ss 5.1.4</b>	27270904
<b>ECI@ss 6.0</b>	27270904
<b>ECI@ss 6.2</b>	27270904
<b>ECI@ss 7.0</b>	27270904
<b>ECI@ss 8.0</b>	27270904
<b>ECI@ss 8.1</b>	27270904
<b>ECI@ss 9.0</b>	27270904
<b>ECI@ss 10.0</b>	27270904
<b>ECI@ss 11.0</b>	27270904
<b>ETIM 5.0</b>	EC002719
<b>ETIM 6.0</b>	EC002719
<b>ETIM 7.0</b>	EC002719
<b>UNSPSC 16.0901</b>	39121528

Connection diagram

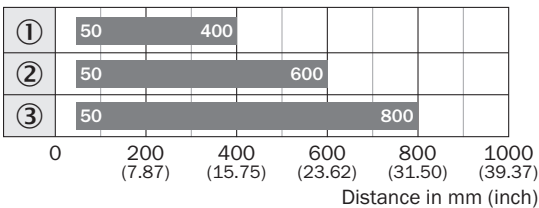
Cd-083



Characteristic curve



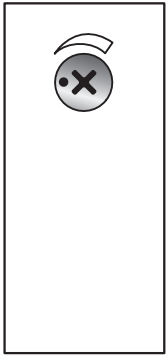
Sensing range diagram



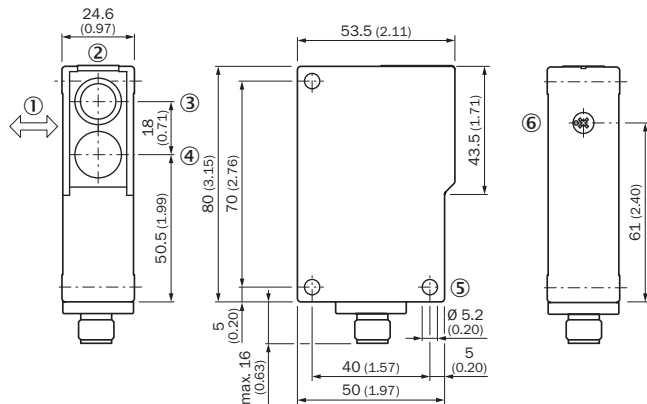
■ Sensing range

## Adjustments possible

Potentiometer





## Dimensional drawing (Dimensions in mm (inch))



- ① Standard direction
- ② LED signal strength indicator
- ③ Optical axis, sender
- ④ Optical axis, receiver
- ⑤ Mounting hole, Ø 5.2 mm
- ⑥ Sensing range adjustment: potentiometer

## Recommended accessories

Other models and accessories → [www.sick.com/W27-2\\_Laser](http://www.sick.com/W27-2_Laser)

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14-050VB3XLEAX	2096235
	Head A: male connector, M12, 4-pin, straight Head B: - Cable: unshielded	STE-1204-G	6009932

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

**For us, that is “Sensor Intelligence.”**

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)