



# WLA26P-24116100ZZZ

## W26

COMPACT PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

| Type               | Part no. |
|--------------------|----------|
| WLA26P-24116100ZZZ | 1222792  |

Other models and accessories → [www.sick.com/W26](http://www.sick.com/W26)

### Detailed technical data

#### Features

|                                        |                                                                                                                                       |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b>Sensor/ detection principle</b>     | Photoelectric retro-reflective sensor, autocollimation                                                                                |
| <b>Dimensions (W x H x D)</b>          | 24.6 mm x 82.5 mm x 53.3 mm                                                                                                           |
| <b>Housing design (light emission)</b> | Rectangular                                                                                                                           |
| <b>Sensing range max.</b>              | 0 m ... 18 m <sup>1)</sup>                                                                                                            |
| <b>Type of light</b>                   | Visible red light                                                                                                                     |
| <b>Light source</b>                    | PinPoint LED <sup>2)</sup>                                                                                                            |
| <b>Light spot size (distance)</b>      | Ø 100 mm (10 m)                                                                                                                       |
| <b>Wave length</b>                     | 635 nm                                                                                                                                |
| <b>Indication</b>                      |                                                                                                                                       |
| LED indicator blue                     | BluePilot: Alignment aid                                                                                                              |
| LED indicator green                    | Operating indicator<br>Static: power on                                                                                               |
| LED indicator yellow                   | Status of received light beam<br>Static: object not present<br>Static off: object present<br>Flashing: Below the 1.5 function reserve |
| <b>Special applications</b>            | Detecting objects wrapped in film                                                                                                     |

<sup>1)</sup> Reflector PL80A.

<sup>2)</sup> Average service life: 100,000 h at T<sub>U</sub> = +25 °C.

## Mechanics/electronics

|                                       |                                                                                                                                |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>Supply voltage</b>                 | 10 V DC ... 30 V DC <sup>1)</sup>                                                                                              |
| <b>Ripple</b>                         | < 5 V <sub>pp</sub>                                                                                                            |
| <b>Current consumption</b>            | 30 mA <sup>2)</sup><br>50 mA <sup>3)</sup>                                                                                     |
| <b>Switching output</b>               | Push-pull: PNP/NPN                                                                                                             |
| <b>Output function</b>                | Factory setting: Pin 2/white: health, Pin 4 / black: NPN normally open (dark switching), PNP normally closed (light switching) |
| <b>Switching mode</b>                 | Light switching                                                                                                                |
| <b>Signal voltage PNP HIGH/LOW</b>    | Approx. V <sub>S</sub> – 2.5 V / 0 V                                                                                           |
| <b>Signal voltage NPN HIGH/LOW</b>    | Approx. V <sub>S</sub> / < 2.5 V                                                                                               |
| <b>Output current I<sub>max</sub></b> | ≤ 100 mA                                                                                                                       |
| <b>Response time</b>                  | ≤ 500 µs <sup>4)</sup>                                                                                                         |
| <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><br>B <sup>7)</sup><br>C <sup>8)</sup><br>D <sup>9)</sup>                                                       |
| <b>Protection class</b>               | III                                                                                                                            |
| <b>Weight</b>                         | 80 g                                                                                                                           |
| <b>Polarisation filter</b>            | ✓                                                                                                                              |
| <b>Housing material</b>               | Plastic, VISTAL®                                                                                                               |
| <b>Optics material</b>                | Plastic, PMMA                                                                                                                  |
| <b>Enclosure rating</b>               | IP66 (According to EN 60529)<br>IP67 (According to EN 60529)<br>IP69 (According to EN 60529) <sup>10)</sup>                    |
| <b>Ambient operating temperature</b>  | –40 °C ... +60 °C                                                                                                              |
| <b>Ambient storage temperature</b>    | –40 °C ... +75 °C                                                                                                              |
| <b>UL File No.</b>                    | NRKH.E181493 & NRKH7.E181493                                                                                                   |

<sup>1)</sup> Limit values.

<sup>2)</sup> 16 V DC ... 30 V DC, without load.

<sup>3)</sup> 10 V DC ... 16 V DC, without load.

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

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

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

<sup>7)</sup> B = inputs and output reverse-polarity protected.

<sup>8)</sup> C = interference suppression.

<sup>9)</sup> D = outputs overcurrent and short-circuit protected.

<sup>10)</sup> Replaces IP69K with ISO 20653: 2013-03.

## Safety-related parameters

|                         |           |
|-------------------------|-----------|
| <b>MTTF<sub>D</sub></b> | 693 years |
| <b>DC<sub>avg</sub></b> | 0%        |

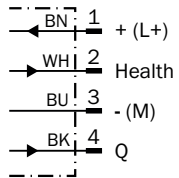
## Classifications

|                   |          |
|-------------------|----------|
| <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

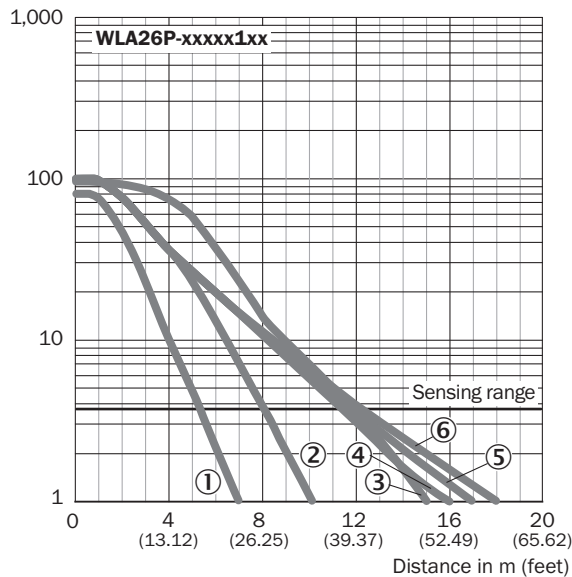
Cd-104



## Characteristic curve

### Standard reflectors

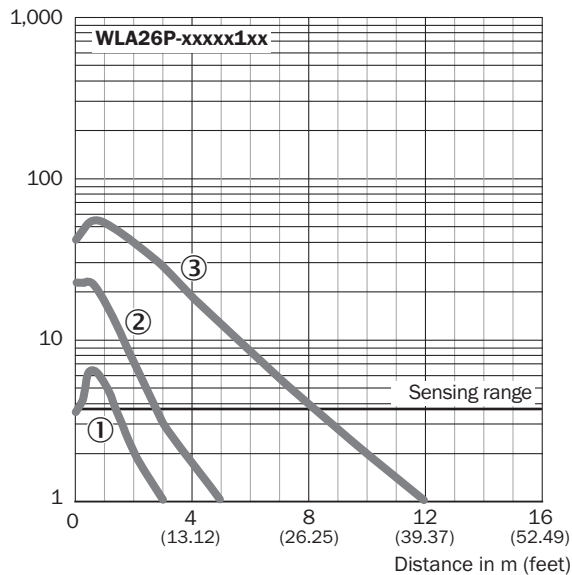
Function reserve



- ① Reflector PL20A
- ② Reflector PL22
- ③ Reflector PL250
- ④ Reflector PL30A
- ⑤ Reflector PL40A
- ⑥ Reflector PL80A, C110A

### Reflective tape

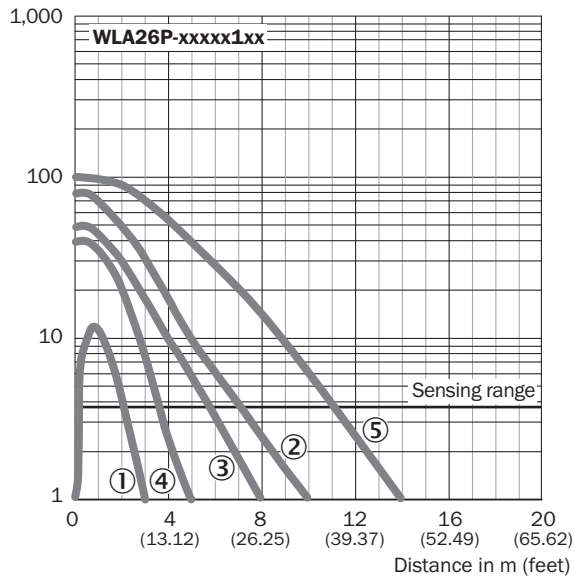
Function reserve



- ① Reflective tape REF-DG (50 x 50 mm)
- ② Reflective tape REF-IRF-56 (50 x 50 mm)
- ③ Reflective tape REF-AC1000 (50 x 50 mm)

### Chemical-resistant reflectors

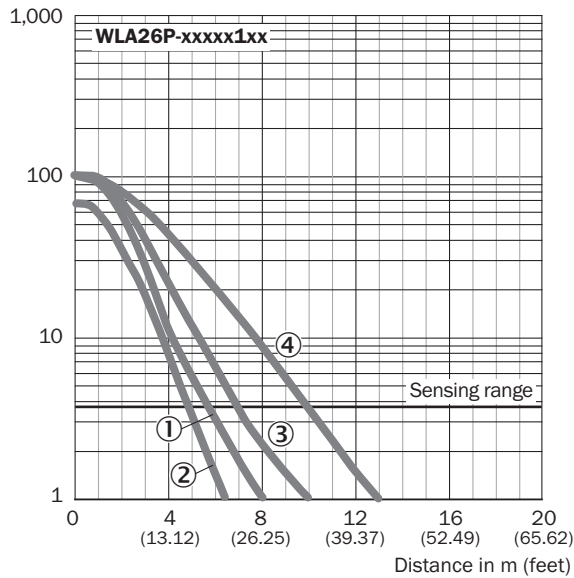
Function reserve



- ① PL10F CHEM reflector
- ② Reflector P250H
- ③ Reflector P250 CHEM
- ④ Reflector PL20 CHEM
- ⑤ Reflector PL40A Antifog

### Fine triple reflectors

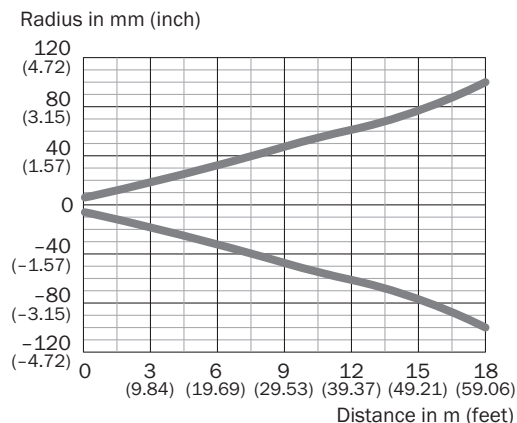
Function reserve



- ① PL10FH-1 reflector
- ② PL10F reflector
- ③ Reflector PL20F
- ④ Reflector P250F

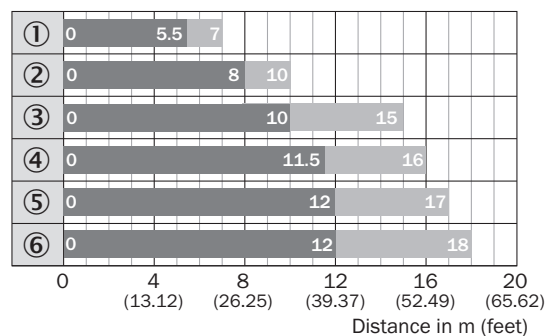
## Light spot size

WLA26P-xxxxx1xx



## Sensing range diagram

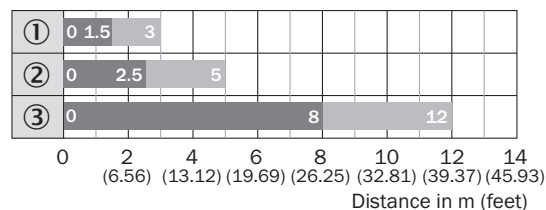
Standard reflectors



■ Sensing range      ■ Sensing range typ. max.

- ① Reflector PL20A
- ② Reflector PL22
- ③ Reflector P250
- ④ Reflector PL30A
- ⑤ Reflector PL40A
- ⑥ Reflector PL80A, C110A

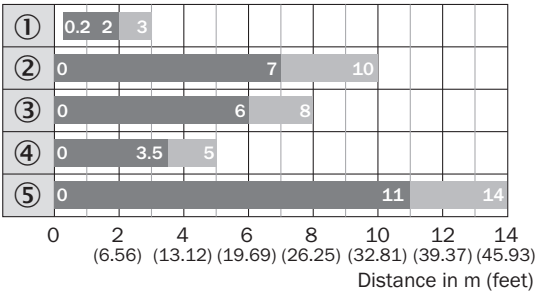
Reflective tape



■ Sensing range      ■ Sensing range typ. max.

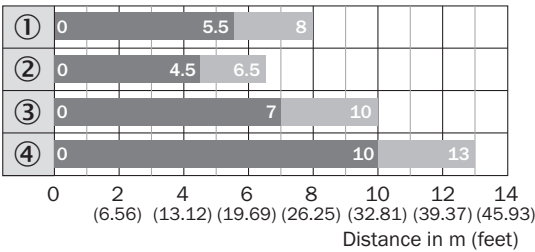
- ① Reflective tape REF-DG (50 x 50 mm)
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- ③ Reflective tape REF-AC1000 (50 x 50 mm)

Chemical-resistant reflectors



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  - ④ Reflector PL20 CHEM
  - ⑤ Reflector PL40A Antifog

Fine triple reflectors



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- ① PL10FH-1 reflector
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  - ③ Reflector PL20F
  - ④ Reflector P250F

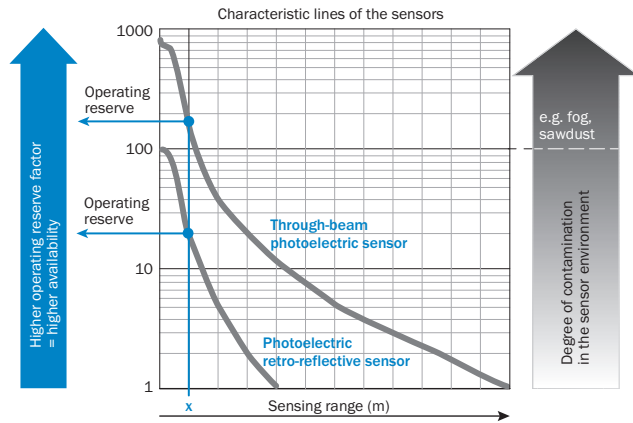
Functions

Operation note

BluePilot: Blue indicator LEDs with double benefits

|                                                                                                                                                                                                                                                                                                             |                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| <p>Easy and quick sensor alignment with the help of the LED indicator</p> <p>All blue LEDs illuminate</p> <ul style="list-style-type: none"><li>- optimum alignment</li><li>- highest possible operating reserve</li></ul>                                                                                  | <p>WLA photoelectric retro-reflection sensor alignment</p> |
| <p><b>Service note</b></p> <p>A reduction in sensor availability is displayed by a decrease of the blue LEDs.</p> <p>Possible causes:</p> <ul style="list-style-type: none"><li>a) insufficient alignment</li><li>b) contamination of the optical surfaces</li><li>c) particles in the light beam</li></ul> |                                                            |

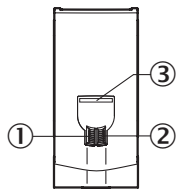
## Operation note



At a sensing range of „x“ the photoelectric retro-reflective and through-beam photoelectric sensors have different operating reserves (see blue arrow). The higher the operating reserve factor, the better the sensor can compensate the contamination in the air or in the light beam and on the optical surfaces (front screen, reflector), i.e. the sensor has the maximum availability, otherwise the sensor switches due to pollution although there is no object in the path of the light beam.

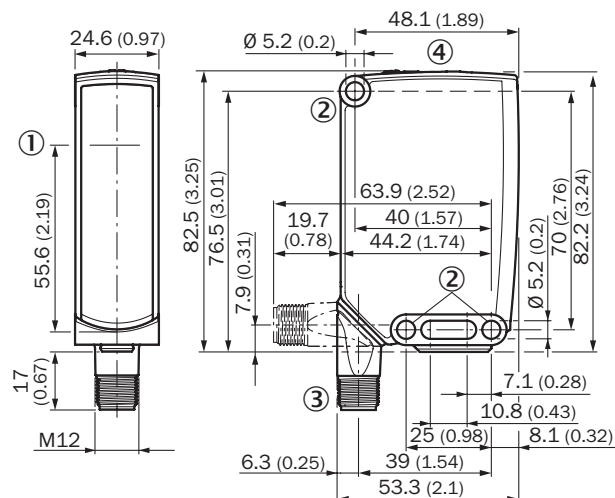
## Adjustments

### Display and adjustment elements



- ① LED indicator green
- ② LED indicator yellow
- ③ LED indicator blue

## WLA26, connector



- ① Center of optical axis
- ② Mounting hole,  $\varnothing 5.2$  mm
- ③ Connection
- ④ Display and adjustment elements

Other models and accessories → [www.sick.com/W26](http://www.sick.com/W26)

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## 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)