



# WL9G-3N1132P11

W9-3 Glass

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	Part no.
WL9G-3N1132P11	1054637

Other models and accessories → [www.sick.com/W9-3\\_Glass](http://www.sick.com/W9-3_Glass)

### Detailed technical data

#### Features

<b>Sensor/detection principle</b>	Photoelectric retro-reflective sensor, autocollimation
<b>Dimensions (W x H x D)</b>	12.2 mm x 50 mm x 23.6 mm
<b>Housing design (light emission)</b>	Rectangular
<b>Mounting hole</b>	M3
<b>Sensing range max.</b>	0 m ... 5 m <sup>1)</sup>
<b>Sensing range</b>	0 m ... 3 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 45 mm (1.5 m)
<b>Wave length</b>	650 nm
<b>Adjustment</b>	Single teach-in button
<b>AutoAdapt</b>	✓

<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> <sup>2)</sup>
<b>Power consumption</b>	≤ 20 mA <sup>3)</sup>
<b>Output type</b>	NPN <sup>4)</sup>
<b>Output function</b>	Complementary
<b>Switching mode</b>	Light/dark switching <sup>4)</sup>
<b>Output current I<sub>max.</sub></b>	≤ 100 mA <sup>5)</sup>
<b>Response time</b>	< 0.5 ms <sup>6)</sup>
<b>Switching frequency</b>	1,000 Hz <sup>7)</sup>
<b>Connection type</b>	Cable, 4-wire, 2 m <sup>8)</sup>
<b>Cable material</b>	PVC
<b>Conductor cross-section</b>	0.14 mm <sup>2</sup>
<b>Circuit protection</b>	A <sup>9)</sup> B <sup>10)</sup> C <sup>11)</sup>
<b>Protection class</b>	III
<b>Weight</b>	80 g
<b>Polarisation filter</b>	✓
<b>Special device</b>	✓
<b>Housing material</b>	Plastic, VISTAL®, Plastic, PMMA
<b>Optics material</b>	Plastic, PMMA
<b>Enclosure rating</b>	IP66 IP67 IP69K
<b>Items supplied</b>	Reflector PL40, 1 mounting bracket BEF-WN-W9-2
<b>Special feature</b>	Detecting transparent objects
<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

<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>y</sub> tolerances.

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

<sup>4)</sup> Q = light switching.

<sup>5)</sup> At and above T<sub>u</sub> 50 °C, a max. load current of I<sub>max.</sub> = 50 mA is permitted.

<sup>6)</sup> Signal transit time with resistive load.

<sup>7)</sup> With light/dark ratio 1:1.

<sup>8)</sup> Do not bend below 0 °C.

<sup>9)</sup> A = V<sub>S</sub> connections reverse-polarity protected.

<sup>10)</sup> B = inputs and output reverse-polarity protected.

<sup>11)</sup> C = interference suppression.

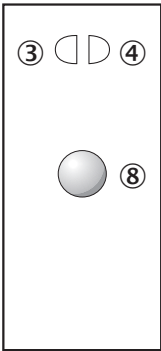
## Classifications

<b>ECI@ss 5.0</b>	27270902
<b>ECI@ss 5.1.4</b>	27270902

<b>ECl@ss 6.0</b>	27270902
<b>ECl@ss 6.2</b>	27270902
<b>ECl@ss 7.0</b>	27270902
<b>ECl@ss 8.0</b>	27270902
<b>ECl@ss 8.1</b>	27270902
<b>ECl@ss 9.0</b>	27270902
<b>ETIM 5.0</b>	EC002717
<b>ETIM 6.0</b>	EC002717
<b>UNSPSC 16.0901</b>	39121528

Adjustments possible

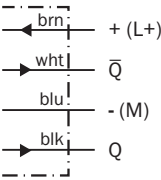
Single teach-in button



- ③ LED indicator yellow: Status of received light beam
- ④ LED indicator green: power on
- ⑧ Teach-in button

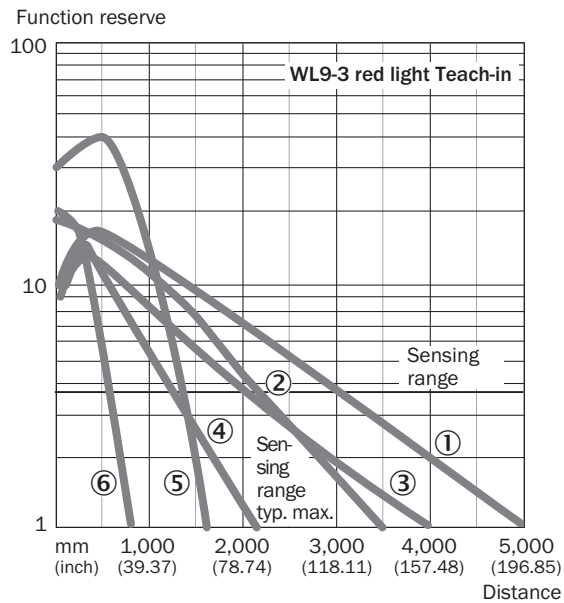
Connection diagram

Cd-094



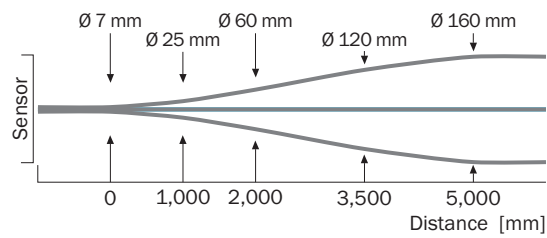
## Characteristic curve

WL9G-3



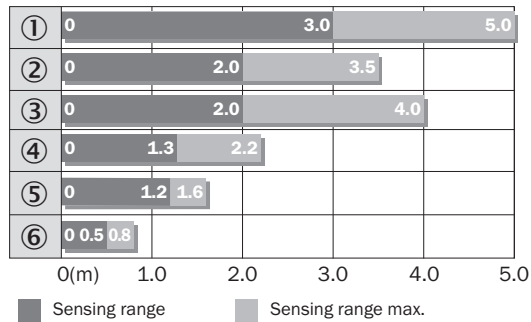
- ① Reflector PL80A
- ② Reflector P250F
- ③ Reflector PL40A
- ④ Reflector PL20F
- ⑤ PL10F reflector
- ⑥ Reflective tape REF-IRF-56

## Light spot size



### Sensing range diagram

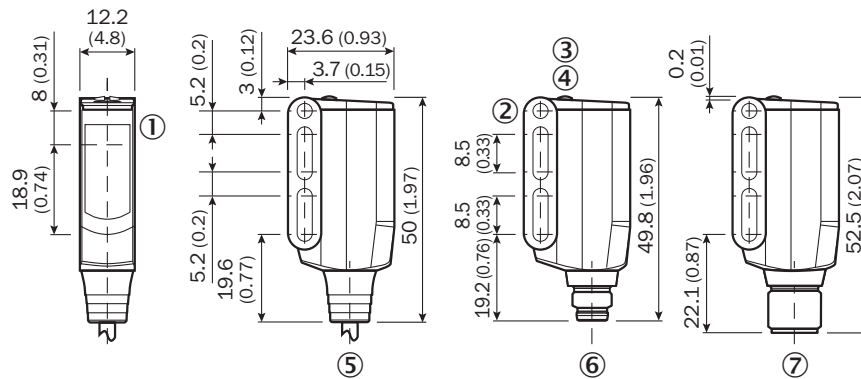
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### Dimensional drawing (Dimensions in mm (inch))

WL9-3, WSE9-3










- ① Center of optical axis, sender and receiver
- ② Mounting hole M3 (Ø 3.1 mm)
- ③ LED indicator yellow: Status of received light beam
- ④ LED indicator green: power on
- ⑤ Connecting cable or connector
- ⑥ Connector M8, 4-pin
- ⑦ Male connector M12, 4-pin

## Recommended accessories

 Other models and accessories → [www.sick.com/W9-3\\_Glass](http://www.sick.com/W9-3_Glass)

	Brief description	Type	Part no.
Universal bar clamp systems			
	Plate N08 for universal clamp bracket, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware	BEF-KHS-N08	2051607
Mounting brackets and plates			
	Mounting bracket, steel, zinc coated, mounting hardware included	BEF-WN-W9-2	2022855
	Adapter plate, Stainless steel	BEF-AP-W9	2022734
	Fastening plate with threaded sleeve M3, PMMA, Brass (Br)	BEF-GPM3-W9	4066039
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight Head B: - Cable: unshielded	DOS-1204-G	6007302
	Head A: female connector, M12, 4-pin, angled Head B: - Cable: unshielded	DOS-1204-W	6007303
	Head A: male connector, M12, 4-pin, straight Head B: - Cable: unshielded	STE-1204-G	6009932
	Head A: male connector, M12, 4-pin, angled Head B: - Cable: unshielded	STE-1204-W	6022084
Masks			
	Mask card, vertical/horizontal slots, slot width: 0.5 mm / 1.0 mm / 1.5 mm / 2.0 mm	BL-9-2	4033253
Reflectors			
	Rectangular, screw connection, 80 mm x 80 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL80A	1003865
	Fine triple reflector, screw connection, suitable for laser sensors, 47 mm x 47 mm, PMMA/ABS, Screw-on, 2 hole mounting	P250F	5308843
	Fine triple reflector, screw connection, suitable for laser sensors, 18 mm x 18 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL10F	5311210
	Fine triple reflector, screw connection, suitable for laser sensors, 38 mm x 16 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL20F	5308844
	Fine triple reflector, screw connection, suitable for laser sensors, 56 mm x 28 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL30F	5326523

	Brief description	Type	Part no.
	Fine triple reflector, screw connection, suitable for laser sensors, 76 mm x 45 mm, PM-MA/ABS, Screw-on, 2 hole mounting	PL81-1F	5325060
	Suitable for laser sensors, self-adhesive, cut, see alignment note, 56.3 mm x 56.3 mm, self-adhesive	REF-AC1000-56	4063030
	Fine triple reflector, chemically resistant, screw connection, 18 mm x 18 mm, Plastic, Screw-on, 2 hole mounting	PL10F CHEM	5321636
	Chemically resistant, screw connection, suitable for laser sensors, 16 mm x 38 mm, Plastic, Screw-on, 2 hole mounting	PL20F-CHEM	5326089
	Stainless steel reflector, hygienic design, chemically resistant, enclosure rating IP69K, D12 adapter shaft, 25 mm x 25 mm, Stainless steel V4A (1.4404, 316L), D12-adapter shaft	PLH25-D12	2063404
	Stainless steel reflector, hygienic design, chemically resistant, Enclosure rating IP 69K, M12-adapter thread, 25 mm x 25 mm, Stainless steel V4A (1.4404, 316L), M12-adapter thread	PLH25-M12	2063403
	Stainless steel reflector, washdown design, chemically resistant, IP 69K enclosure rating, screw connection, 14 mm x 14 mm, Stainless steel V4A (1.4404, 316L), Screw-on, 2 hole mounting	PLV14-A	2063405



## 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)