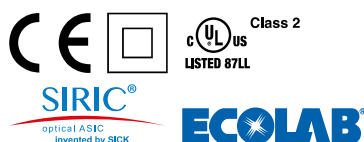


Reliable detection of clear material objects  
– from PET bottles to transparent film



### Additional information

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### Product description

WL11G-2 represents glass photoelectric sensor technology designed optimally for individual applications, thus enabling a wide range of applications in very different areas of automation technology. Whether in filling or packaging

technology, WL11G-2 offers optimum performance in a small robust housing, dependable object detection – everything from PET bottles to film – in the range up to 4 m, PinPoint LED, and high reliability in industrial environments.

### At a glance

- Retro-reflective for detection of clear material objects
- Rugged housing for industrial use
- PinPoint LED technology with a highly visible light spot
- Space-saving plastic housing in chemically, thermally or mechanically resistant designs
- Dovetail mounting – standard mounting holes and oblong holes
- Highly visible 360° status LEDs
- Simple sensitivity adjustment via potentiometer

### Your benefits

- Superior ASIC ensures reliable detection of transparent objects
- PinPoint LED technology provides a bright, small and precise light spot that enables quick and easy sensor alignment
- Precise switching characteristics ensure high performance even in changing application conditions
- Highly visible 360° status LEDs provide fast and easy commissioning
- Rugged housing design withstands harsh environments, reducing downtime and maintenance effort
- Uniform housing, mounting and connection systems reduce mounting and installation time
- High immunity to optical interferences reduces false readings and downtime

→ [www.mysick.com/en/W11G-2](http://www.mysick.com/en/W11G-2)

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



## Detailed technical data

## Features

Sensor principle	Photoelectric retro-reflective sensor
Detection principle	Autocollimation
Dimensions (W x H x D)	15.6 mm x 48.5 mm x 42 mm
Housing design (light emission)	Rectangular
Sensing range max. <sup>1)</sup>	0 m ... 4 m
Sensing range <sup>1)</sup>	0 m ... 4 m
Type of light	Visible red light
Light source <sup>2)</sup>	LED
Light spot size (distance)	Ø 25 mm (1.5 m)
Angle of dispersion	Approx. 1.5°
Wave length	640 nm
Adjustment	Potentiometer, 11 turns
Special feature	Detection of transparent objects

<sup>1)</sup> PL80A.<sup>2)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C.

## Mechanics/electronics

Supply voltage <sup>1)</sup>	10 V DC ... 30 V DC
Ripple <sup>2)</sup>	≤ 5 V <sub>pp</sub>
Power consumption <sup>3)</sup>	≤ 30 mA
Output type	PNP/NPN (depending on type)
Output function	Complementary
Switching mode	Light/dark-switching
Switching mode selector	Selectable via L/D control wire, 0 V or not connected, light-switching, Uv, dark-switching
Signal voltage PNP HIGH/LOW	Uv – 3 V / approx. 0 V
Signal voltage NPN HIGH/LOW	Approx. Uv / < 3 V
Output current I <sub>max.</sub>	100 mA
Response time <sup>4)</sup>	≤ 330 µs
Switching frequency <sup>5)</sup>	1,500 Hz
Attenuation along light beam	> 8 %
Connection type	Male connector, M12/Cable with connector, M12 (depending on type)
Circuit protection	A <sup>6)</sup> , C <sup>7)</sup> , D <sup>8)</sup>
Protection class	II
Weight	120 g
Polarisation filter	✓
Housing material	ABS
Optics material	PMMA
Enclosure rating	IP 66/IP 67/IP 69K
Ambient operating temperature	–30 °C ... +60 °C
Ambient storage temperature	–40 °C ... +75 °C

<sup>1)</sup> Limit values, operation in short-circuit protected network max. 8 A.<sup>2)</sup> May not exceed or fall short of V<sub>S</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.

Ordering information

Other models available at [www.mysick.com/en/W11G-2](http://www.mysick.com/en/W11G-2)

WL11G-2

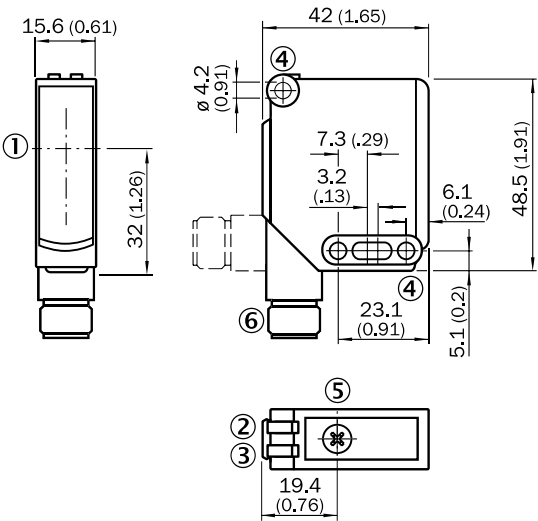
- **Adjustment:** potentiometer, 11 turns
- **Polarisation filter:** ✓

Sensing range max. <sup>1)</sup>	Output type	Switching mode	Connection	Connection diagram	Model name	Part no.
0 m ... 4 m	PNP, NPN	Light/dark-switching	Connector M12, 5-pin	Cd-144	WL11G-2B2531	1041390
	PNP	Light/dark-switching <sup>2)</sup>	Cable with connector M12, 4-pin	Cd-101	WL11G-2K3431	1048313

<sup>1)</sup> PL80A.  
<sup>2)</sup> Pin 2 / Pin 4 swapped over.

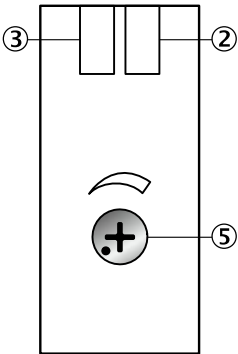
Dimensional drawings

Dimensions in mm (inch)



- ① Center of optical axis
- ② Status indicator LED green: power on
- ③ Status indicator LED, yellow: Status of received light beam
- ④ Mounting hole  $\varnothing$  4.2 mm
- ⑤ Sensitivity adjustment: poti

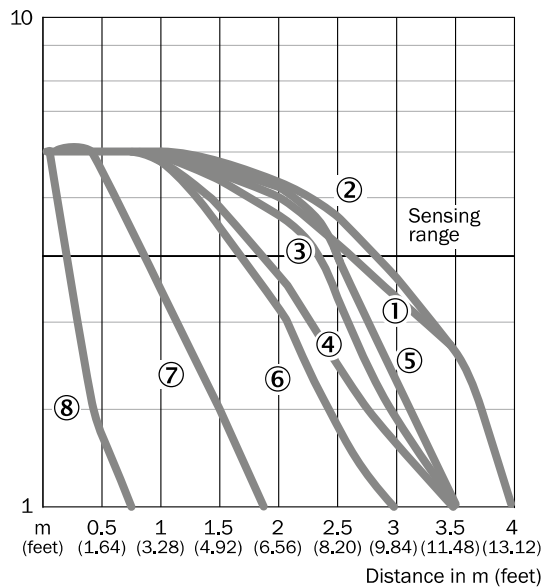
Adjustments



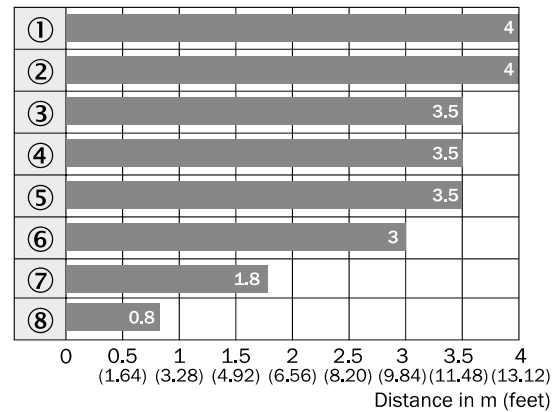
- ② Status indicator LED green: power on
- ③ Status indicator LED, yellow: Status of received light beam
- ⑤ Sensitivity adjustment

## Characteristic curves

Operating reserve



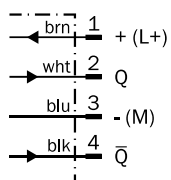
## Bar diagrams



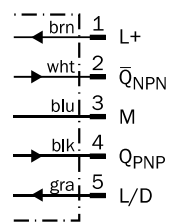
- Sensing range
- ① PL80A  
② C110A  
③ P250F  
④ PL50A  
⑤ PL40A  
⑥ PL30A  
⑦ PL20A  
⑧ Reflective tape Diamond Grade

## Connection diagram

### Cd-101




### Cd-144



## Recommended accessories

Mounting brackets/plates





### Mounting brackets

Figure	Material	Description	Model name	Part no.
	Stainless steel	Mounting bracket, large	BEF-WG-W12	2013942
		Mounting bracket, small	BEF-WK-W12	2012938

## Plug connectors and cables

**Connecting cable (female connector-open)**

- Cable material: PVC
- Connector material: TPU

Figure	Connection type head A	Connection type head B	Connecting cable	Enclosure rating	Model name	Part no.
	Female connector, M12, 4-pin, straight	Cable, open conductor heads	2 m, 4-wire	IP 67	DOL-1204-G02M	6009382
	Female connector, M12, 4-pin, angled	Cable, open conductor heads	2 m, 4-wire	IP 67	DOL-1204-W02M	6009383
	Female connector, M12, 5-pin, straight	Cable, open conductor heads	2 m, 5-wire	IP 67	DOL-1205-G02M	6008899
	Female connector, M12, 5-pin, angled	Cable, open conductor heads	2 m, 5-wire	IP 67	DOL-1205-W02M	6008900

## Universal bar clamp systems

Figure	Material	Description	Model name	Part no.
	Zinc plated steel (sheet), Diecast zinc (clamp)	Plate N02 for universal clamp bracket	BEF-KHS-N02	2051608
		Plate N03 for universal clamp bracket	BEF-KHS-N03	2051609
		Plate N04 for universal clamp bracket	BEF-KHS-N04	2051610



## Device protection (mechanical)

**Protective housing/tubes**

Figure	Material	Description	Model name	Part no.
	Zinc plated steel (protective housing), Diecast zinc (clamp)	Protective housing for universal clamp	BEF-SG-W12-3	2045175



## Terminal and alignment brackets

**Terminal brackets**







Figure	Material	Description	Model name	Part no.
	Steel, zinc coated	Double clamp bracket for dovetail mounting	BEF-DKH-W12	2013947
		Clamping block for dovetail mounting	BEF-KH-W12	2013285

## Reflectors

### Angular



Figure	Material	Description	Model name	Part no.
	Plastic	Chemically resistant, screw connection, 47 mm x 47 mm	P250 CHEM	5321097
	PMMA/ABS	Rectangular, screw connection, 80 mm x 80 mm	PL80A	1003865

### Fine triple reflectors




Figure	Material	Description	Model name	Part no.
	PMMA/ABS	Fine triple, screw connection, suitable for laser sensors, 47 mm x 47 mm	P250F	5308843
		Fine triple, screw connection, suitable for laser sensors, 18 mm x 18 mm	PL10F	5311210
	Plastic	Fine triple, chemically resistant, screw connection, 18 mm x 18 mm	PL10F CHEM	5321636
	Plastic	Fine triple, chemically resistant, screw connection, suitable for laser sensors, 16 mm x 38 mm	PL20F-CHEM	5326089
	PMMA/ABS	Fine triple, screw connection, suitable for laser sensors, 56 mm x 28 mm	PL30F	5326523
		Fine triple, screw connection, suitable for laser sensors, 76 mm x 45 mm	PL81-1F	5325060

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### Reflective tape

Figure	Description	Model name	Part no.
	Suitable for laser sensors, self-adhesive, cut, see alignment note, 56.3 mm x 56.3 mm	REF-AC1000-56	4063030
	Reflective tape "Diamond Grade", self-adhesive, customizable size by sheet, width max. 74.9 cm, length max. 91.4 cm	REF-DG-K	4019634

### Special reflectors

Figure	Material	Description	Model name	Part no.
	Stainless steel V4A (1.4404, 316L)	Stainless steel reflector, hygienic design, chemically resistant, Enclosure rating IP 69K, D12-adaptor shaft, 25 mm x 25 mm	PLH25-D12	2063404
		Stainless steel reflector, hygienic design, chemically resistant, Enclosure rating IP 69K, M12-adaptor thread, 25 mm x 25 mm	PLH25-M12	2063403
		Stainless steel reflector, wash-down design, chemically resistant, Enclosure rating IP 69K, screw connection, 14 mm x 14 mm	PLV14-A	2063405

→ For additional accessories, please see page L-861