



# GL2S-P0311S09

G2S

MINIATURE PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



## Ordering information

Type	Part no.
GL2S-P0311S09	1112777

Other models and accessories → [www.sick.com/G2S](http://www.sick.com/G2S)

## Detailed technical data

### Features

<b>Sensor/ detection principle</b>	Photoelectric retro-reflective sensor, Dual lens
<b>Dimensions (W x H x D)</b>	7.7 mm x 21.8 mm x 13.5 mm
<b>Housing design (light emission)</b>	Rectangular
<b>Sensing range max.</b>	0.02 m ... 3 m <sup>1)</sup>
<b>Sensing range</b>	0.03 m ... 2.5 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 11 mm (250 mm)
<b>Wave length</b>	640 nm
<b>Adjustment</b>	None

<sup>1)</sup> Reflector PL40A.

<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>Current consumption</b>	20 mA <sup>3)</sup>

<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> Do not bend below 0 °C.

<sup>7)</sup> A = V<sub>S</sub> connections reverse-polarity protected.

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

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

<b>Switching output</b>	PNP
<b>Switching mode</b>	Light switching
<b>Output current <math>I_{\max}</math></b>	$\leq 50 \text{ mA}$
<b>Response time</b>	$< 0.6 \text{ ms}^{4)}$
<b>Switching frequency</b>	$800 \text{ Hz}^{5)}$
<b>Connection type</b>	Cable with connector M8, 3-pin, 300 mm <sup>6)</sup>
<b>Cable material</b>	PVC
<b>Cable diameter</b>	$\varnothing 3 \text{ mm}$
<b>Circuit protection</b>	A <sup>7)</sup> C <sup>8)</sup> D <sup>9)</sup>
<b>Weight</b>	17.5 g
<b>Polarisation filter</b>	✓
<b>Housing material</b>	Plastic, ABS
<b>Optics material</b>	Plastic, PMMA
<b>Enclosure rating</b>	IP67
<b>Ambient operating temperature</b>	$-25 \text{ }^{\circ}\text{C} \dots +50 \text{ }^{\circ}\text{C}$
<b>Ambient temperature, storage</b>	$-40 \text{ }^{\circ}\text{C} \dots +75 \text{ }^{\circ}\text{C}$
<b>UL File No.</b>	NRKH.E181493

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) Do not bend below  $0 \text{ }^{\circ}\text{C}$ .

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

8) C = interference suppression.

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

## Safety-related parameters

<b>MTTF<sub>D</sub></b>	3,487 years
<b>DC<sub>avg</sub></b>	0 %

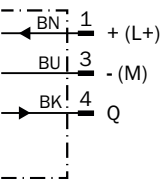
## Classifications

<b>ECI@ss 5.0</b>	27270902
<b>ECI@ss 5.1.4</b>	27270902
<b>ECI@ss 6.0</b>	27270902
<b>ECI@ss 6.2</b>	27270902
<b>ECI@ss 7.0</b>	27270902
<b>ECI@ss 8.0</b>	27270902
<b>ECI@ss 8.1</b>	27270902
<b>ECI@ss 9.0</b>	27270902
<b>ECI@ss 10.0</b>	27270902
<b>ECI@ss 11.0</b>	27270902
<b>ETIM 5.0</b>	EC002717

ETIM 6.0	EC002717
ETIM 7.0	EC002717
UNSPSC 16.0901	39121528

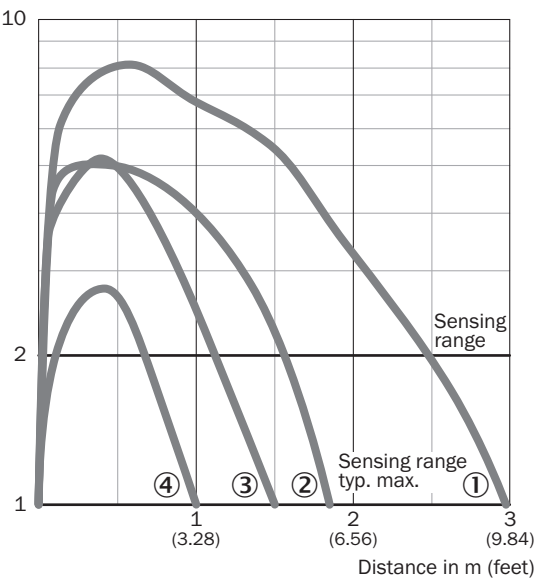
Connection diagram

Cd-045



Characteristic curve

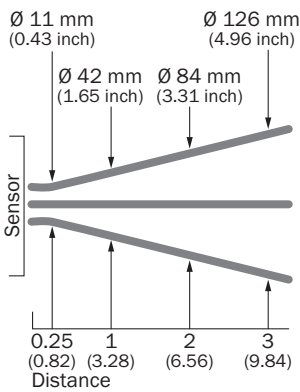
GL2S



- ① Reflector PL40A
- ② Reflector PL20A
- ③ PL10F reflector
- ④ Reflective tape IREF6000 (REF-IRF-56)

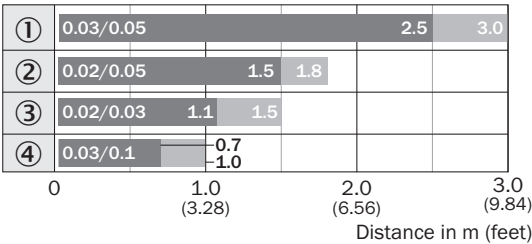
Light spot size

GL2S



Sensing range diagram

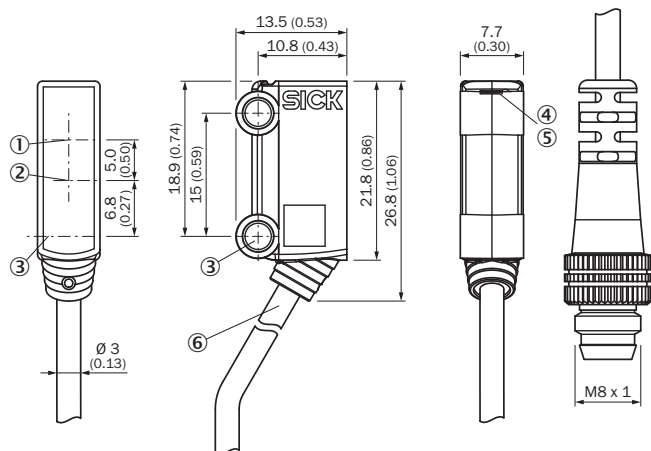
GL2S



- Sensing range      ■ Sensing range typ. max.
- ① Reflector PL40A
  - ② Reflector PL20A
  - ③ PL10F reflector
  - ④ Reflective tape IREF6000 (REF-IRF-56)

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




GL2S



- ① Optical axis, receiver
- ② Optical axis, sender
- ③ Mounting hole, Ø 3.2 mm
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam
- ⑥ Connection

### Recommended accessories

Other models and accessories → [www.sick.com/G2S](http://www.sick.com/G2S)

	Brief description	Type	Part no.
Reflectors			
	Fine triple reflector, screw connection, suitable for laser sensors, 20 mm x 32 mm, PM-MA/ABS, Screw-on, 2 hole mounting	PL10F	5311210
Plug connectors and cables			
	Head A: female connector, M8, 3-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF8U13-050VA1XLEAX	2095884
	Head A: male connector, M8, 3-pin, straight Head B: - Cable: unshielded	STE-0803-G	6037322

## 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)