



# GL2S-P1311

G2S

MINIATURE PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



## Ordering information

| Type       | Part no. |
|------------|----------|
| GL2S-P1311 | 1064357  |

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> | < 50 mA                                               |
| <b>Response time</b>                        | < 0.6 ms <sup>4)</sup>                                |
| <b>Switching frequency</b>                  | 800 Hz <sup>5)</sup>                                  |
| <b>Connection type</b>                      | Cable, 3-wire, 2 m <sup>6)</sup>                      |
| <b>Cable material</b>                       | PVC                                                   |
| <b>Cable diameter</b>                       | Ø 3 mm                                                |
| <b>Circuit protection</b>                   | A <sup>7)</sup><br>C <sup>8)</sup><br>D <sup>9)</sup> |
| <b>Weight</b>                               | 33.7 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 °C ... +50 °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  $U_V$  tolerances.

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

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## Safety-related parameters

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

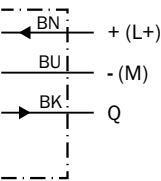
## Classifications

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

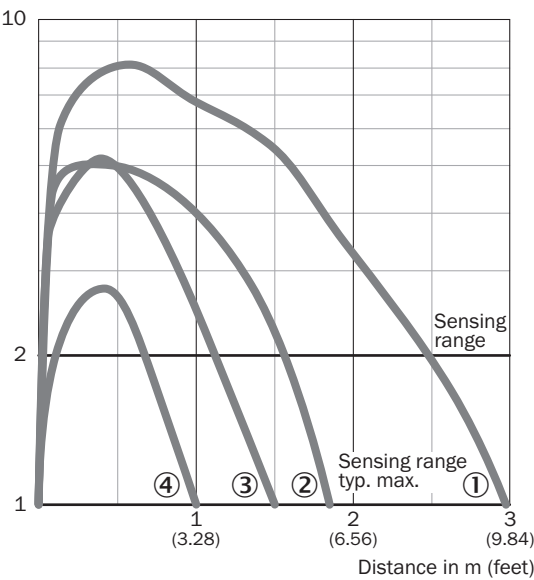
Connection diagram

Cd-043



Characteristic curve

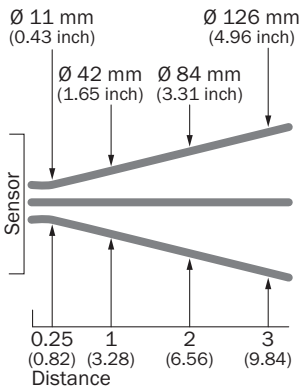
GL2S



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

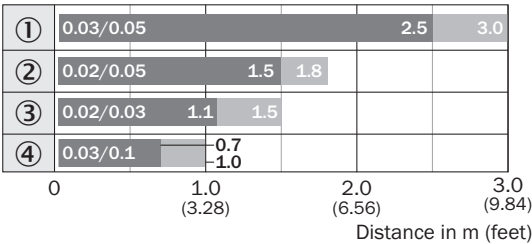
Light spot size

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Sensing range diagram

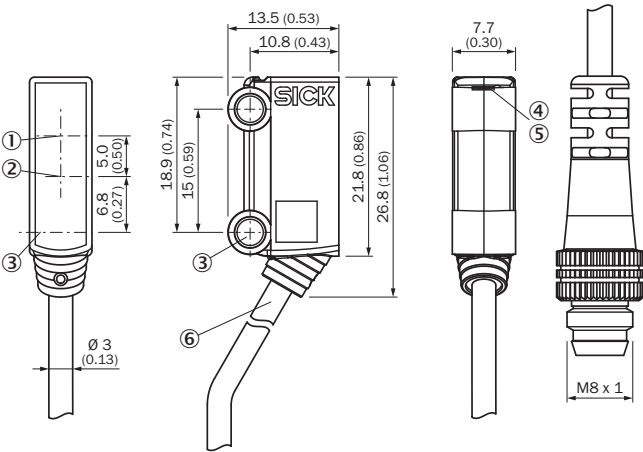
GL2S



- 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: male connector, M8, 3-pin, straight<br>Head B: -<br>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)