



GL6-P0511S02

G6

MINIATURE PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	Part no.
GL6-P0511S02	1052633

Other models and accessories → [www.sick.com/G6](http://www.sick.com/G6)

### Detailed technical data

#### Features

<b>Device type</b>	Photoelectric sensors
<b>Functional principle</b>	Photoelectric retro-reflective sensor
<b>Functional principle detail</b>	Dual lens
<b>Sensing range max.</b>	≤ 6 m <sup>1)</sup>
<b>Sensing range</b>	≤ 5 m <sup>1)</sup>
<b>Polarisation filters</b>	No
<b>Emitted beam</b>	
Light source	PinPoint LED <sup>2)</sup>
Type of light	Visible red light
Light spot size (distance)	Ø 8 mm (350 mm)
<b>Key LED figures</b>	
Wave length	680 nm
<b>Adjustment</b>	None

<sup>1)</sup> Object with 90% remission (based on standard white, DIN 5033).

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

## Electrical data

<b>Supply voltage <math>U_B</math></b>	12 V DC ... 24 V DC <sup>1)</sup>
<b>Ripple</b>	$\pm 10\%$ <sup>2)</sup>
<b>Current consumption</b>	30 mA <sup>3)</sup>
<b>Protection class</b>	III
<b>Digital output</b>	
Type	PNP
Output current $I_{max}$	$\leq 100\text{ mA}$ <sup>4)</sup>
Response time	$< 625\ \mu\text{s}$ <sup>5)</sup>
Switching frequency	1,000 Hz <sup>6)</sup>
<b>Switching mode</b>	Light switching
<b>Circuit protection</b>	A <sup>7)</sup> B <sup>8)</sup> D <sup>9)</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  $U_V$  tolerances.

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

<sup>4)</sup> At  $U_V > 24\text{ V}$ ,  $I_A\text{ max.} = 50\text{ mA}$ .

<sup>5)</sup> Signal transit time with resistive load.

<sup>6)</sup> With light/dark ratio 1:1.

<sup>7)</sup> A =  $V_S$  connections reverse-polarity protected.

<sup>8)</sup> B = inputs and output reverse-polarity protected.

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

## Mechanical data

<b>Housing</b>	Rectangular
<b>Dimensions (W x H x D)</b>	12 mm x 31.5 mm x 21 mm
<b>Connection</b>	Cable with connector M8, 3-pin <sup>1)</sup>
<b>Connection detail</b>	
Length of cable (L)	200 mm <sup>1)</sup>
<b>Material</b>	
Housing	Plastic, ABS/PC
Front screen	Plastic, PMMA
<b>Weight</b>	60 g

<sup>1)</sup> Do not bend below 0 °C.

## Ambient data

<b>Enclosure rating</b>	IP67
<b>Ambient operating temperature</b>	-25 °C ... +55 °C <sup>1)</sup>
<b>Ambient temperature, storage</b>	-40 °C ... +70 °C
<b>UL File No.</b>	NRKH.E348498 & NRKH7.E348498

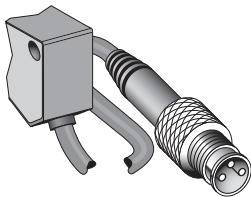
<sup>1)</sup> Temperature stability following adjustment +/-10 °C.

## Classifications

<b>eCl@ss 5.0</b>	27270902
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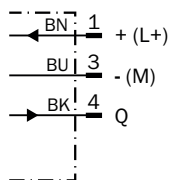
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<b>eCl@ss 11.0</b>	27270902
<b>eCl@ss 12.0</b>	27270902
<b>ETIM 5.0</b>	EC002717
<b>ETIM 6.0</b>	EC002717
<b>ETIM 7.0</b>	EC002717
<b>ETIM 8.0</b>	EC002717
<b>UNSPSC 16.0901</b>	39121528

### Connection type



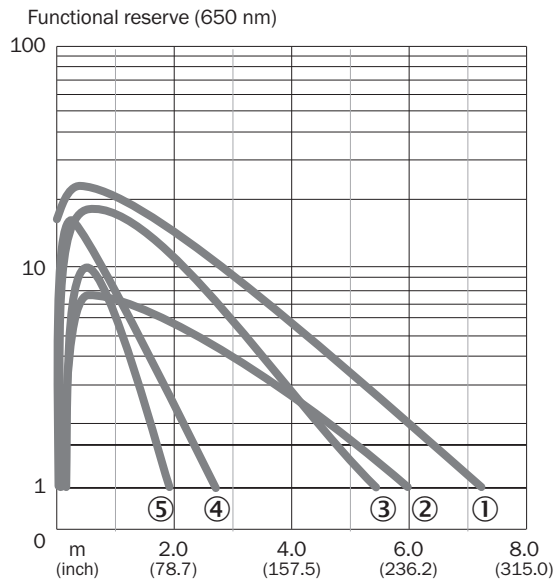
### Connection diagram

Cd-045



### Characteristic curve

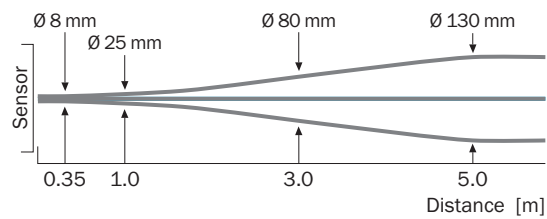
GL6G



- ① Reflector PL80A
- ② Reflector PL40A
- ③ Reflector P250
- ④ Reflector PL20A
- ⑤ Reflective tape Diamond Grade

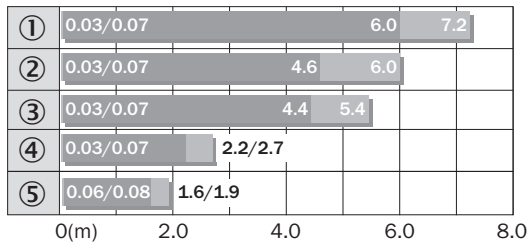
### Light spot size

GL6, GL6G



### Sensing range diagram

GL6

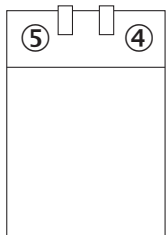


■ Sensing range max. ■ Sensing range

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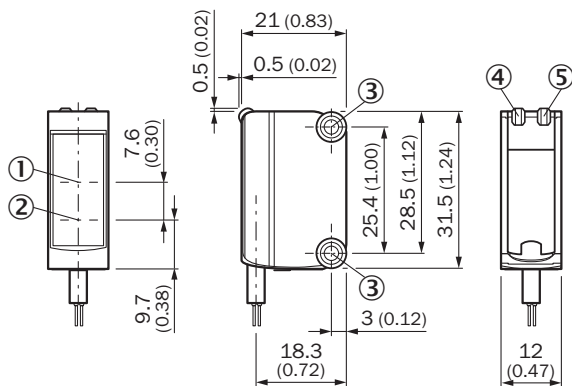
### Adjustments

No adjustment possibility



- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam







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



- ① Optical axis, receiver
- ② Optical axis, sender
- ③ Mounting holes M3
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam

## Recommended accessories

Other models and accessories → [www.sick.com/G6](http://www.sick.com/G6)

	Brief description	Type	Part no.
<b>Universal bar clamp systems</b>			
	Clamp bar to fix G6 sensors on rods of 12 mm, clamp-on design up to 4 mm wall thickness, aluminum (clamp bar), stainless steel (bracket), clamp bar mounting and clamp function, mounting bracket, mounting hardware	BEF-KHS-IS12G6	2086865
<b>Mounting brackets and plates</b>			
	Stainless steel (1.4301)	BEF-WN-G6	2062909
	Universal mounting bracket for reflectors, steel, zinc coated	BEF-WN-REFX	2064574
<b>Plug connectors and cables</b>			
	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 Cable: unshielded	STE-0803-G	6037322
<b>Reflectors</b>			
	Rectangular, screw connection, 51 mm x 61 mm, PMMA/ABS, Screw-on, 2 hole mounting	P250	5304812

## 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)