



# GSE2F-F0121S13

G2

MINIATURE PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



## Ordering information

Type	Part no.
GSE2F-F0121S13	1113669

Other models and accessories → [www.sick.com/G2](http://www.sick.com/G2)

## Detailed technical data

### Features

<b>Functional principle</b>	Through-beam photoelectric sensor
<b>Dimensions (W x H x D)</b>	10 mm x 27 mm x 3.5 mm
<b>Housing design (light emission)</b>	Rectangular
<b>Minimum detectable object (MDO)</b>	0.5 mm
<b>Sensing range max.</b>	0 mm ... 200 mm
<b>Sensing range</b>	0 mm ... 150 mm
<b>Type of light</b>	Visible red light
<b>Light source</b>	PinPoint LED <sup>1)</sup>
<b>Light spot size (distance)</b>	Ø 20 mm (150 mm)
<b>Wave length</b>	660 nm
<b>Adjustment</b>	None
<b>Special features</b>	Sender and receiver connected to one male connector M8, 3 pin, 500 mm

<sup>1)</sup> Average service life: 100,000 h at T<sub>J</sub> = +25 °C.

### Mechanics/electronics

<b>Supply voltage U<sub>B</sub></b>	10 V DC ... 30 V DC
<b>Ripple</b>	< 5 V <sub>pp</sub> <sup>1)</sup>

- <sup>1)</sup> May not fall below or exceed U<sub>V</sub> tolerances.
- <sup>2)</sup> Without load.
- <sup>3)</sup> Signal transit time with resistive load.
- <sup>4)</sup> With light/dark ratio 1:1.
- <sup>5)</sup> Do not bend below 0 °C.
- <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.

<b>Current consumption</b>	40 mA <sup>2)</sup>
<b>Switching output</b>	PNP
<b>Switching mode</b>	Dark switching
<b>Output current I<sub>max.</sub></b>	≤ 50 mA
<b>Response time</b>	< 0.625 ms <sup>3)</sup>
<b>Switching frequency</b>	800 Hz <sup>4)</sup>
<b>Connection type</b>	Cable with male connector M8, 3 pin (common male connector for sender and receiver), 500 mm <sup>5)</sup>
<b>Cable material</b>	Plastic, PVC
<b>Cable diameter</b>	Ø 2.3 mm
<b>Circuit protection</b>	A <sup>6)</sup> C <sup>7)</sup> D <sup>8)</sup>
<b>Weight</b>	39 g
<b>Housing material</b>	Plastic, VISTAL®
<b>Optics material</b>	Plastic, MABS
<b>Enclosure rating</b>	IP67
<b>Ambient operating temperature</b>	-20 °C ... +50 °C
<b>Ambient temperature, storage</b>	-40 °C ... +70 °C
<b>UL File No.</b>	NRKH.E348498 & NRKH7.E348498
<b>Repeatability (T<sub>a</sub> not constant)</b>	0.1 mm

<sup>1)</sup> May not fall below or exceed U<sub>y</sub> tolerances.

<sup>2)</sup> Without load.

<sup>3)</sup> Signal transit time with resistive load.

<sup>4)</sup> With light/dark ratio 1:1.

<sup>5)</sup> Do not bend below 0 °C.

<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.

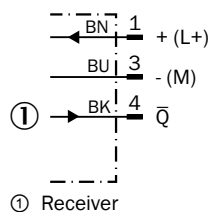
## Classifications

<b>ECLASS 5.0</b>	27270901
<b>ECLASS 5.1.4</b>	27270901
<b>ECLASS 6.0</b>	27270901
<b>ECLASS 6.2</b>	27270901
<b>ECLASS 7.0</b>	27270901
<b>ECLASS 8.0</b>	27270901
<b>ECLASS 8.1</b>	27270901
<b>ECLASS 9.0</b>	27270901
<b>ECLASS 10.0</b>	27270901
<b>ECLASS 11.0</b>	27270901
<b>ECLASS 12.0</b>	27270901
<b>ETIM 5.0</b>	EC002716
<b>ETIM 6.0</b>	EC002716

<b>ETIM 7.0</b>	EC002716
<b>ETIM 8.0</b>	EC002716
<b>UNSPSC 16.0901</b>	39121528

### Connection diagram

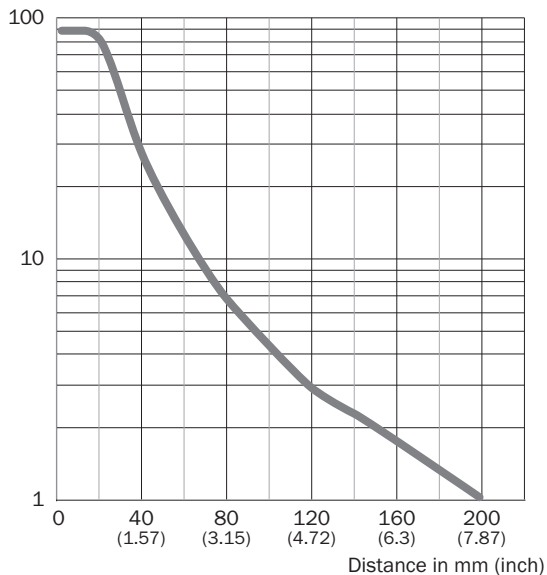
Cd-486



### Characteristic curve

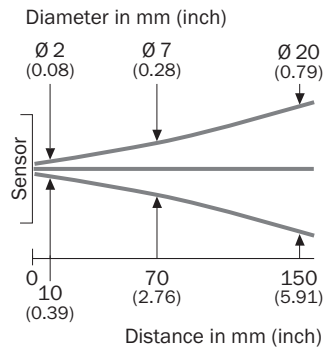
GSE2 Flat, GSE2 Flat Side, 150 mm

Operating reserve



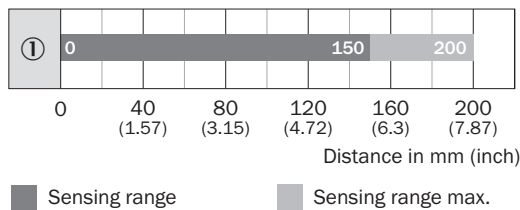
### Light spot size

GSE2 Flat, 150 mm



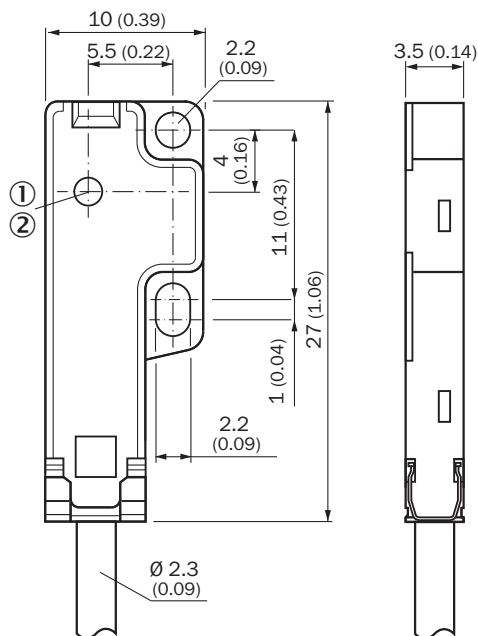
### Sensing range diagram

GSE2 Flat, GSE2 Flat Side, 150 mm



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



GSE2 Flat



- ① Optical axis, receiver
- ② Optical axis, sender

### Recommended accessories

Other models and accessories → [www.sick.com/G2](http://www.sick.com/G2)

	Brief description	Type	Part no.
Mounting brackets and plates			
	10 pieces, Mounting plate for direct mounting, from the rear, on wall or machine, not adjustable. 10 Piece,Black ,Plastic, VISTAL®. Suitable for GTB2F and GSE2F	BEF-G2F-FLAT-SPACER-M2	2107263
Others			
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M8, 3-pin, straight, A-coded</li> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection systems:</b> Screw-type terminals</li> <li>• <b>Permitted cross-section:</b> 0.14 mm<sup>2</sup> ... 0.5 mm<sup>2</sup></li> </ul>	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)