



GSE2F-F5151

G2F

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
GSE2F-F5151	1095454

Other models and accessories → www.sick.com/G2F

Detailed technical data

Features

Dimensions (W x H x D)	10 mm x 27 mm x 3.5 mm
Housing design (light emission)	Rectangular
Minimum detectable object (MDO)	1 mm
Sensing range max.	0 mm ... 700 mm
Sensing range	0 m ... 500 mm
Type of light	Visible red light
Light source	PinPoint LED ¹⁾
Light spot size (distance)	Ø 70 mm (500 mm)
Wave length	660 nm
Adjustment	None

¹⁾ Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Ripple	< 5 V _{pp} ¹⁾
Current consumption	20 mA ²⁾
Switching output	PNP
Switching mode	Dark switching

¹⁾ May not exceed or fall below U_v tolerances.

²⁾ Without load.

³⁾ Signal transit time with resistive load.

⁴⁾ With light/dark ratio 1:1.

⁵⁾ A = V_S connections reverse-polarity protected.

⁶⁾ C = interference suppression.

⁷⁾ D = outputs overcurrent and short-circuit protected.

Output current I_{\max}.	≤ 50 mA
Response time	< 0.625 ms ³⁾
Switching frequency	800 Hz ⁴⁾
Circuit protection	A ⁵⁾ C ⁶⁾ D ⁷⁾
Weight	23 g
Housing material	Plastic, VISTAL®
Optics material	Plastic, MABS
Enclosure rating	IP67
Ambient operating temperature	-20 °C ... +50 °C
Ambient temperature, storage	-40 °C ... +70 °C
Repeatability (T_a not constant)	0.1 mm

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³⁾ Signal transit time with resistive load.

⁴⁾ With light/dark ratio 1:1.

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Safety-related parameters

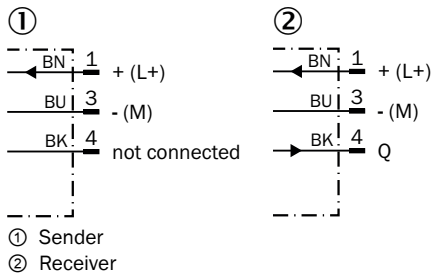
MTTF_D	977 years
DC_{avg}	0 %
T_M (mission time)	20 years

Classifications

ECl@ss 5.0	27270901
ECl@ss 5.1.4	27270901
ECl@ss 6.0	27270901
ECl@ss 6.2	27270901
ECl@ss 7.0	27270901
ECl@ss 8.0	27270901
ECl@ss 8.1	27270901
ECl@ss 9.0	27270901
ECl@ss 10.0	27270901
ECl@ss 11.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
ETIM 8.0	EC002716
UNSPSC 16.0901	39121528

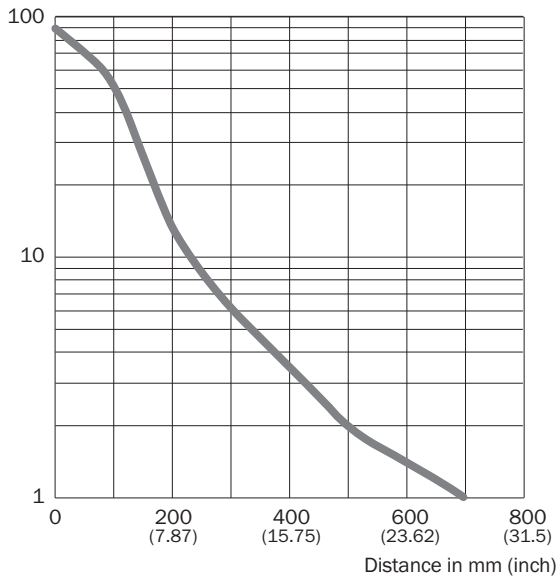
Connection diagram

Cd-051



Characteristic curve

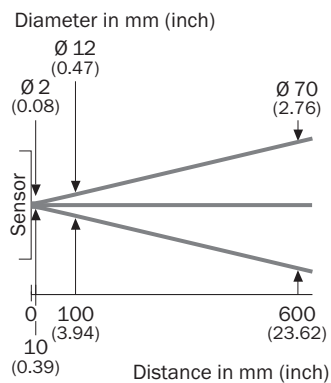
Operating reserve



① GSE2 Flat, GSE2 Flat Side, 500 mm

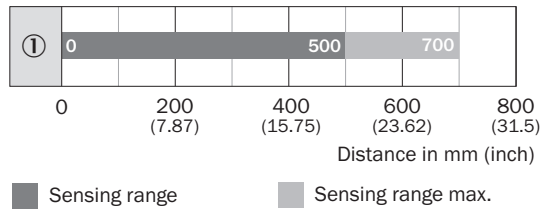
Light spot size

GSE2 Flat, 500 mm



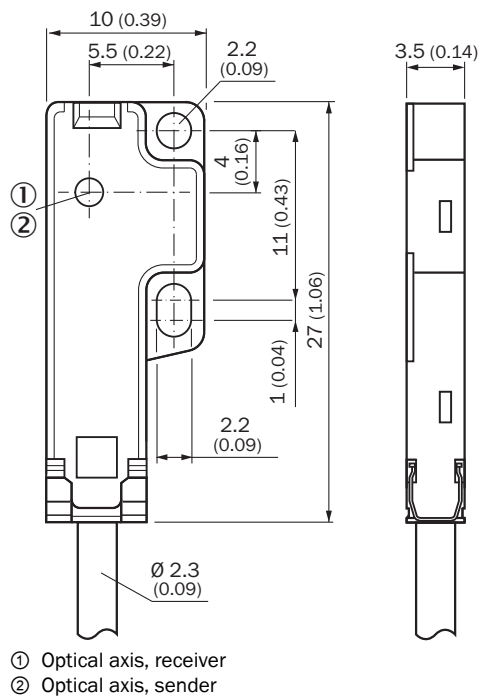
Sensing range diagram

GSE2 Flat, GSE2 Flat Side, 500 mm



Dimensional drawing (Dimensions in mm (inch))

GSE2 Flat



Recommended accessories

Mounting brackets and plates

Mounting plates

Plug connectors and cables

Connecting cables

Field-attachable connectors

Other models and accessories → www.sick.com/G2F

Brief description	Type	Part no.
<ul style="list-style-type: none"> • Description: Mounting plate for direct mounting, from the rear, on wall or machine, not adjustable. 10 Piece,Black ,Plastic, VISTAL®. Suitable for GTB2F and GSE2F • Packing unit: 10 pieces 	BEF-G2F-FLAT-SPACER-M2	2107263
Brief description	Type	Part no.
<ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, straight, A-coded • Connection type head B: Flying leads • Authorizations: UL • Signal type: Sensor/actuator cable • Cable: 5 m, 3-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals 	YF8U13-050VA1XLEAX	2095884
Brief description	Type	Part no.
<ul style="list-style-type: none"> • Connection type head A: Male connector, M8, 3-pin, straight • Description: Unshielded • Connection systems: Screw-type terminals • Permitted cross-section: 0.14 mm² ... 0.5 mm² 	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