OPR20G-RB111517

Glare

GLARE SENSORS

SICK
Sensor Intelligence.
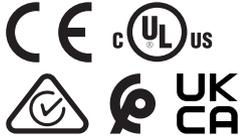
OPR20G-RB111517 | Glare

Illustration may differ

Ordering information

Type	part no.
OPR20G-RB111517	1065685

Other models and accessories ➜ www.sick.com/Glare

Detailed technical data

Features

Sensor principle	Delta-S-Technology®
Housing design	Middle
Dimensions (W x H x D)	42.5 mm x 44 mm x 43.4 mm
Light source	LED, visible red light [1]
Light spot size	10 mm x 12 mm
Wave length	640 nm
Sensing distance	≤ 50 mm
Sensing distance tolerance	± 5 mm
Tilt angle tolerance	± 5°
Minimum detectable object (MDO)	12 x 14 mm
Sensitivity	Fine, middle, coarse
Object speed max.	2 m/s [2]
Adjustment	Potentiometer, cable, Single teach-in button (Sensitivity (Q, Q/, teach-in), Teach-in, Teach-in) [3]
Teach-in mode	Static 1-point teach-in Static 2-point teach-in Dynamic 2-point teach-in Static 3-point teach-in

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

[2] Minimum object size.

[3] HIGH = > V_S - 2 V / LOW = open or < 2 V.

Electronics

Supply voltage	10 V DC ... 30 V DC [1]
Ripple	≤ 5 V_{pp} [2]
Current consumption	< 150 mA [3]
Switching frequency	500 Hz [4]
Response time	1 ms
Jitter	500 µs
Number of switching outputs	2 (Q_1, Q_2)
Switching output	Push-pull: PNP/NPN
Switching output (voltage)	Push-pull: PNP/NPN (High: V_S - 3 V, Low: < 3 V)
Output current I$_{max.}$	< 100 mA [5]
Initialization time	< 2.5 s
Protection class	III
Circuit protection	A [6] C [7] D [8]
Connection type	Plug, M12, 5-pin

[1] Limit values when operated in short-circuit protected network: max. 8 A.

[2] May not fall below or exceed U_V tolerances.

[3] Without load.

[4] With light/dark ratio 1:1.

[5] Consumption count Q1 / Q2.

[6] A = V_S connections reverse-polarity protected.

[7] C = interference suppression.

[8] D = outputs overcurrent and short-circuit protected.

Mechanics

Housing material	ABS
Weight	130 g

Ambient data

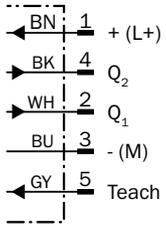|	
Ambient operating temperature	–10 °C ... +55 °C
Ambient temperature, storage	–25 °C ... +75 °C
Ambient light immunity	> 50 klx
Shock load	According to EN 60068-2-27, single shock (30 g/11 MS), continuous shock (25 g/11 MS)
Enclosure rating	IP67
UL File No.	NRKH.E181493

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓

China RoHS	✓
cULus certificate	✓
Photobiological safety (IEC EN 62471)	✓

Classifications

ECLASS 5.0	27270906
ECLASS 5.1.4	27270906
ECLASS 6.0	27270906
ECLASS 6.2	27270906
ECLASS 7.0	27270906
ECLASS 8.0	27270906
ECLASS 8.1	27270906
ECLASS 9.0	27270906
ECLASS 10.0	27270906
ECLASS 11.0	27270906
ECLASS 12.0	27270906
ETIM 5.0	EC001820
ETIM 6.0	EC001820
ETIM 7.0	EC001820
ETIM 8.0	EC001820
UNSPSC 16.0901	39121528

Dimensional drawing

Dimensions in mm (inch)
① Center of optical axis, sender
② Center of optical axis, receiver
③ fixing hole
④ LED indicator green: Supply voltage active
⑤ Status indicator LED, yellow: Detection of gloss level 1
⑥ Teach-in mode, inverting switching output
⑦ Sensitivity adjustment (A, B, C) / Operating mode (D)

⑧ Teach-in button

Connection diagram Cd-280

```
BN   1   + (L+)
BK   4   Q₂
WH   2   Q₁
BU   3   - (M)
GY   5   Teach
```

Recommended accessories

Other models and accessories ➜ www.sick.com/Glare

Brief description	Type	part no.
Mounting systems		
• **Description:** Plate N11N for universal clamp bracket • **Material:** Stainless steel • **Details:** Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp) • **Items supplied:** Universal clamp (5322627), mounting hardware • **Usable for:** DeltaPac, Glare, WTD20E	BEF-KHS-N11N	2071081

Brief description	Type	part no.
connectors and cables		
• **Description:** Sensor/actuator cable, unshielded • **Connection type head A:** Female connector, M12, 5-pin, angled, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 2 m, 5-wire, PVC • **Application:** Uncontaminated zones, Zones with chemicals	YG2A15-020VB5XLEAX	2096215
• **Description:** Sensor/actuator cable, unshielded • **Connection type head A:** Female connector, M12, 5-pin, angled, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 5-wire, PVC • **Application:** Uncontaminated zones, Zones with chemicals	YG2A15-050VB5XLEAX	2096216
• **Description:** Sensor/actuator cable, unshielded • **Connection type head A:** Female connector, M12, 5-pin, angled, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 10 m, 5-wire, PVC • **Application:** Uncontaminated zones, Zones with chemicals	YG2A15-100VB5XLEAX	2096217
• **Description:** Sensor/actuator cable, unshielded • **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 2 m, 5-wire, PVC • **Application:** Uncontaminated zones, Zones with chemicals	YF2A15-020VB5XLEAX	2096239
• **Description:** Sensor/actuator cable, unshielded • **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 5-wire, PVC • **Application:** Uncontaminated zones, Zones with chemicals	YF2A15-050VB5XLEAX	2096240
• **Description:** Sensor/actuator cable, unshielded • **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 10 m, 5-wire, PVC • **Application:** Uncontaminated zones, Zones with chemicals	YF2A15-100VB5XLEAX	2096241
• **Description:** Sensor/actuator cable, unshielded • **Connection type head A:** Female connector, M12, 5-pin, angled, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 0.6 m, 5-wire, PVC • **Application:** Uncontaminated zones, Zones with chemicals	YG2A15-C60VB5XLEAX	2145573
• **Description:** Sensor/actuator cable, unshielded • **Connection type head A:** Female connector, M12, 5-pin, angled, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 1 m, 5-wire, PVC • **Application:** Uncontaminated zones, Zones with chemicals	YG2A15-010VB5XLEAX	2145574
• **Description:** Sensor/actuator cable, unshielded • **Connection type head A:** Female connector, M12, 5-pin, angled, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 3 m, 5-wire, PVC • **Application:** Uncontaminated zones, Zones with chemicals	YG2A15-030VB5XLEAX	2145575
• **Description:** Sensor/actuator cable, unshielded • **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 0.6 m, 5-wire, PVC • **Application:** Uncontaminated zones, Zones with chemicals	YF2A15-C60VB5XLEAX	2145570
• **Description:** Sensor/actuator cable, unshielded • **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 3 m, 5-wire, PVC	YF2A15-030VB5XLEAX	2145572

Brief description	Type	part no.
• **Application:** Uncontaminated zones, Zones with chemicals • **Description:** Unshielded • **Connection type head A:** Male connector, M12, 5-pin, straight, A-coded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm² • **Note:** For field bus technology	STE-1205-G	6022083

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."

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