



LUT3-820

LUT3

LUMINESCENCE SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
LUT3-820	1012868

Other models and accessories → www.sick.com/LUT3

Detailed technical data

Features

Housing design	Large
Dimensions (W x H x D)	30.4 mm x 53 mm x 80 mm
Light source	LED, Ultraviolet light ¹⁾
Light spot size	3 mm x 9 mm
Receiving filters	≤ 420 nm ²⁾
Wave length	375 nm
Sensing distance	≤ 20 mm ³⁾
Receiving range	450 nm ... 750 nm
Adjustment	Potentiometer
Output function	Light switching

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

²⁾ Filter blocks shorter wavelengths to suppress background luminescence.

³⁾ From leading edge of lens.

Electronics

Supply voltage	12 V DC ... 30 V DC ¹⁾
Ripple	< 2 V _{pp} ²⁾
Current consumption	< 60 mA ³⁾
Switching frequency	1.5 kHz ⁴⁾

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⁾ Reference voltage DC 50 V.

Response time	350 µs
Switching output	PNP NPN
Switching output (voltage)	PNP: HIGH = $V_S - \leq 3 \text{ V}$ / LOW = approx. 0 V NPN: HIGH = approx. U_V / LOW $\leq 2 \text{ V}$
Switching mode	Light switching
Analog output	0.5 mA ... 10 mA
Output current I_{max}	100 mA
Protection class	II ⁵⁾
Circuit protection	U_V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
Connection type	Plug, M12, 5-pin

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³⁾ Without load.

⁴⁾ With light/dark ratio 1:1.

⁵⁾ Reference voltage DC 50 V.

Mechanics

Housing material	Zinc diecast
Weight	400 g

Ambient data

Ambient operating temperature	-10 °C ... +55 °C
Ambient temperature, storage	-25 °C ... +75 °C
Shock load	According to IEC 60068
Enclosure rating	IP67
UL File No.	NRKH.E181493 & NRKH7.E181493

Certificates

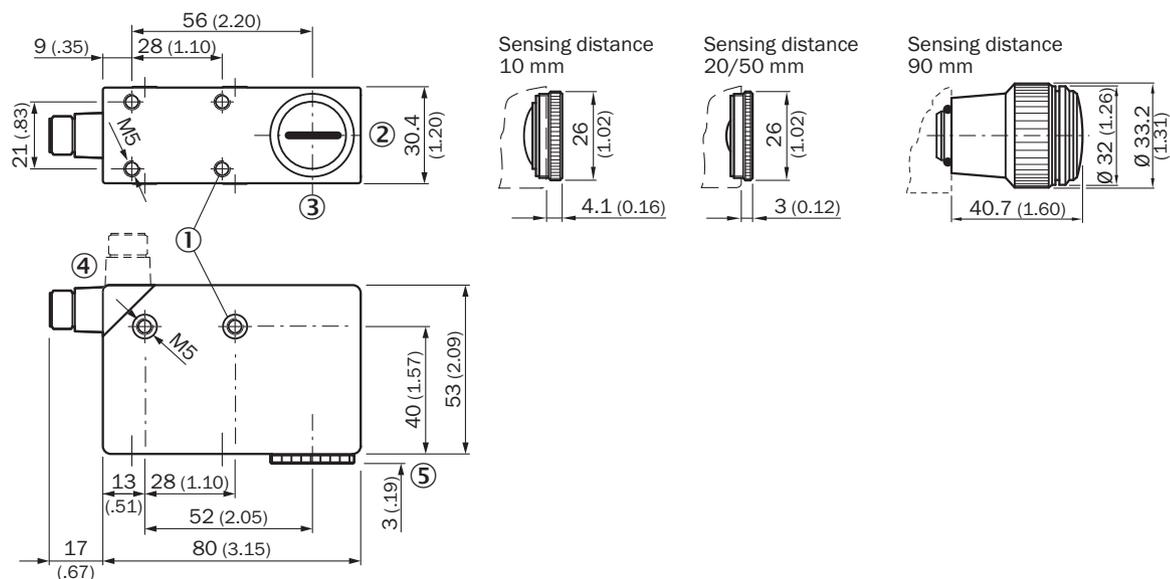
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cULus certificate	✓
Photobiological safety (IEC EN 62471)	✓

Classifications

ECLASS 5.0	27270908
ECLASS 5.1.4	27270908
ECLASS 6.0	27270908
ECLASS 6.2	27270908

ECLASS 7.0	27270908
ECLASS 8.0	27270908
ECLASS 8.1	27270908
ECLASS 9.0	27270908
ECLASS 10.0	27270908
ECLASS 11.0	27270908
ECLASS 12.0	27270908
ETIM 5.0	EC001822
ETIM 6.0	EC001822
ETIM 7.0	EC001822
ETIM 8.0	EC001822
UNSPSC 16.0901	39121528

Dimensional drawing



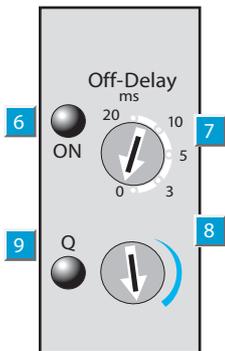
Dimensions in mm (inch)

- ① M5 threaded mounting hole, 5.5 mm deep
- ② Light spot direction
- ③ Center of optical axis
- ④ Connector M12 (rotatable up to 90°)
- ⑤ see dimensional drawings of lenses

Pinouts

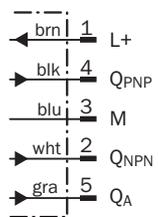


Adjustments

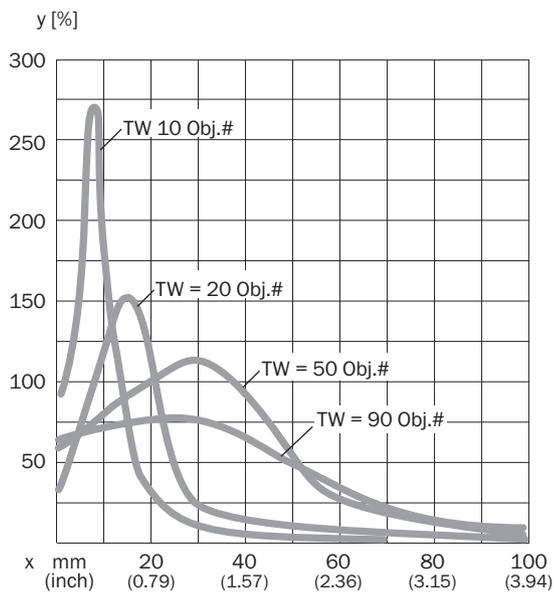


- ⑥ Operating indicator
- ⑦ time delay selector switch
- ⑧ sensitivity control
- ⑨ Output indicator

Connection diagram



Sensing distance



Recommended accessories

Other models and accessories → www.sick.com/LUT3

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"> Description: Plate G for universal clamp bracket Material: Steel Details: Steel, zinc coated Items supplied: Universal clamp (2022726), mounting hardware Usable for: W34, LUT3, KT5-2, KT10, CS8, W24-2, KT8, KT8 	BEF-KHS-G01	2022464
	<ul style="list-style-type: none"> Description: Plate K for universal clamp bracket Material: Steel Details: Steel, zinc coated Items supplied: Universal clamp (2022726), mounting hardware Usable for: W11-2, W12-3, W14-2, W18-3, W23-2, W24-2, W27-3, W30, W32, W34, W36, PL50A, PL80A, P250, UC12, LUT3, KT2, KT5-2, KT8, CS8, DT2, DS30, DS40, W12-2 Laser, W16, W26, KT5 	BEF-KHS-K01	2022718
Commissioning aids and test equipment			
	<ul style="list-style-type: none"> Description: Writing chalk, red fluorescence 	LUM-KLK	1002959
	<ul style="list-style-type: none"> Description: Thick chalk, red fluorescent, 12 units 	LUM-FT	1004460

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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:

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