

THE SOLUTION FOR STANDARD APPLICATIONS

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Product description

Whether ensuring that the package insert is in the packaging or the labels are on the vial – the LUT3-6 luminescence sensor permits reliable monitoring. For

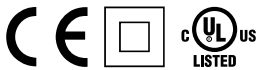
optimum adjustment to the fluorescent mark, the sensitivity of the LUT3-6 luminescence sensor is set with an infinite potentiometer.

At a glance

- Tough metal housing
- Operating range: 0 mm ... 15 mm / 10 mm ... 35 mm / 30 mm ... 60 mm
- Sensing distances selectable through interchangeable lenses
- Transmitter LED UV (375 nm)

Your benefits

- Sensitivity of the sensor can be infinitely adjusted using a potentiometer, saves time and reduces costs
- Filters ensure that background luminescence is reliably suppressed, ensuring greater process reliability
- Interchangeable lenses for different sensing distances provide flexibility



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→ www.sick.com/de/en/LUT3

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



Detailed technical data

Features

Dimensions (W x H x D)	30,4 mm x 53 mm x 80 mm
Sensing distance	10 mm ¹⁾ / 20 mm ¹⁾ / 50 mm ¹⁾ (depending on type)
Housing design (light emission)	Rectangular
Operating range	0 mm ... 15 mm / 10 mm ... 35 mm / 30 mm ... 60 mm (depending on type)
Light source ²⁾	LED
Type of light	UV
Wave length	375 nm
Light emission	Long side
Light spot direction	Vertical
Receiving filters	KV 418 (standard)
Receiving range	450 nm ... 750 nm
Adjustment	Manual (potentiometer)
Output function	Light switching

¹⁾ From front edge of lens.

²⁾ Average service life: 100,000 h at $T_U = +25\text{ °C}$.

Mechanics/electronics

Supply voltage ¹⁾	12 V DC ... 30 V DC
Ripple ²⁾	< 2 V _{pp}
Power consumption ³⁾	< 60 mA
Switching frequency ⁴⁾	1,5 kHz
Response time ⁵⁾	350 μs
Switching output	PNP: HIGH = $V_S - \leq 3\text{ V}$ / LOW = approx. 0 V NPN: HIGH = approx. V_S / LOW $\leq 2\text{ V}$
Output type	PNP / NPN
Output current I _{max.}	100 mA
Connection type	Connector M12, 4-pin
Protection class ⁶⁾	II
Circuit protection	V_S connections reverse-polarity protected, Output Q short-circuit protected, Interference suppression
Fieldbus interface	-
Enclosure rating	IP 67
Weight	400 g
Housing material	Metal, zinc diecast

¹⁾ Limit values; operation in short-circuit protected network max. 8 A.

²⁾ May not exceed or fall below U_v tolerances.

³⁾ Without load.

⁴⁾ With light/dark ratio 1:1.

⁵⁾ Signal transit time with resistive load.

⁶⁾ Reference voltage DC 50 V.

Ambient data

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

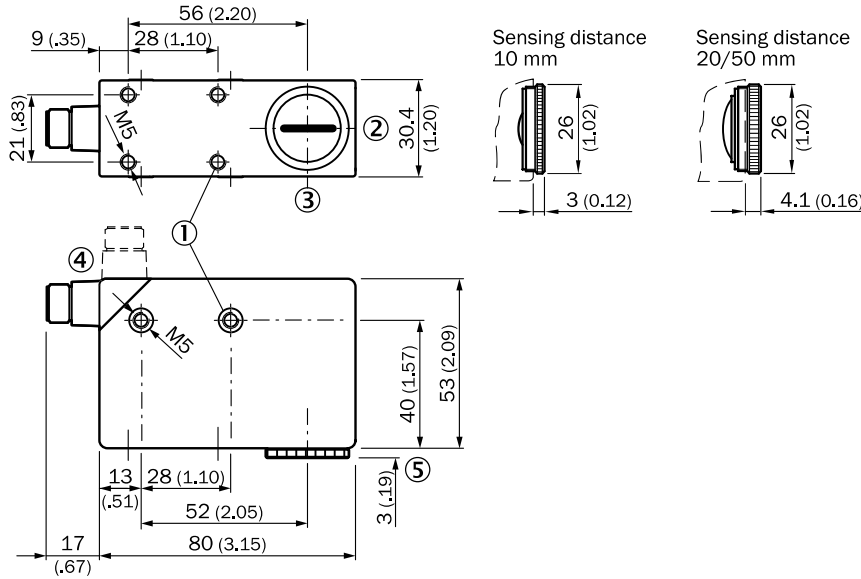
Ordering information

Other models → www.sick.com/de/en/LUT3

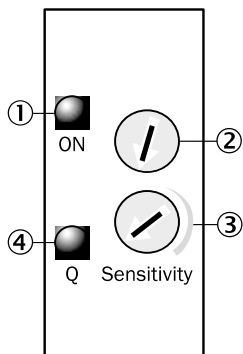
Sensing distance ¹⁾	Operating range	Light spot size	Type	Part no.
10 mm	0 mm ... 15 mm	2 mm x 6 mm	LUT3-610	1015396
20 mm	10 mm ... 35 mm	3 mm x 9 mm	LUT3-620	1015397
50 mm	30 mm ... 60 mm	5 mm x 15 mm	LUT3-650	1015398

¹⁾ From front edge of lens.

Dimensional drawing (Dimensions in mm (inch))

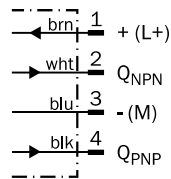


Adjustments

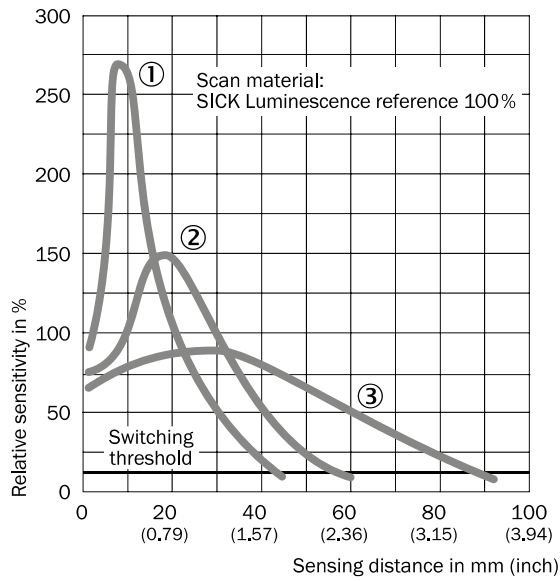


- ① Function signal indicator (green)
- ② Not connected
- ③ Sensitivity adjustment
- ④ Function signal indicator (yellow), switching output

Connection diagram



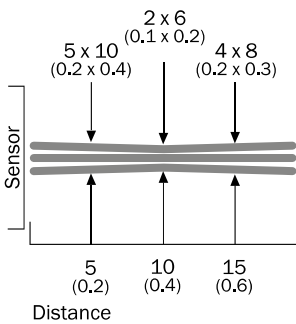
Sensing distance



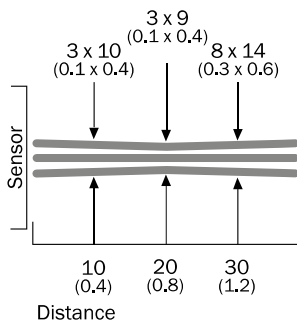
- ① Sensing distance 10 mm
- ② Sensing distance 20 mm
- ③ Sensing distance 50 mm

Light spot size

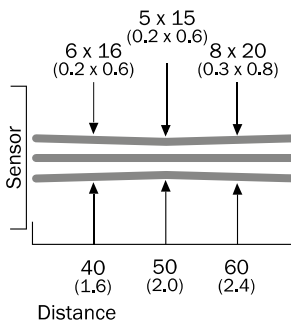
Sensing distance 10 mm



Sensing distance 20 mm



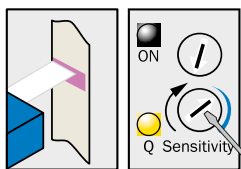
Sensing distance 50 mm



Setting the switching threshold

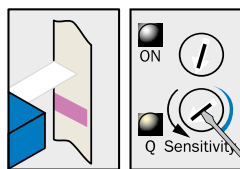
Potentiometer

1. Position mark



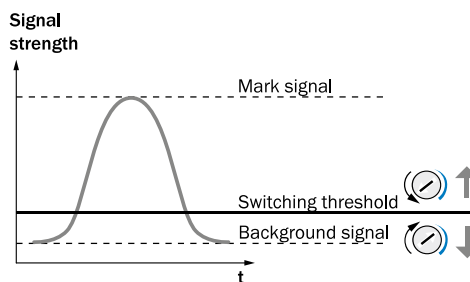
Turn "Sensitivity" rotary switch clockwise until yellow LED illuminates.

2. Position background



If yellow LED illuminates, turn "Sensitivity" rotary switch counter-clockwise until the yellow LED just goes out.

Sensitivity setting



Note

Adjustments are intended for luminescence background suppression.

Recommended accessories

Lens and accessories



Description	Diameter	Type	Part no.
Lens, 10 mm sensing distance	26 mm	OBJ-LUT3-10	2016348
Lens, 20 mm sensing distance	26 mm	OBJ-LUT3-20	2016349
Lens, 50 mm sensing distance	26 mm	OBJ-LUT3-50	2016350

Reference materials

Material	Description	Type	Part no.
Crayon	Crayon, red fluorescence	LUM-FT	1004460
Writing chalk	Writing chalk, red fluorescence	LUM-KLK	1002959

Universal bar clamp systems



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Figure	Material	Description	Type	Part no.
	Steel, zinc coated	Plate G for universal clamp bracket	BEF-KHS-G01	2022464
		Plate K for universal clamp bracket	BEF-KHS-K01	2022718
		Universal clamp bracket for rod mounting	BEF-KHS-KH1	2022726
		Mounting bar, straight, 200 mm, steel	BEF-MS12G-A	4056054
		Mounting bar, straight, 300 mm, steel	BEF-MS12G-B	4056055
		Mounting bar, L-shaped, 150 mm x 150 mm, steel	BEF-MS12L-A	4056052
		Mounting bar, L-shaped, 250 x 250 mm, steel	BEF-MS12L-B	4056053

Plug connectors and cables

Connecting cables with female connector

M12, 4-pin, PVC, chemical resistant

Figure	Connection type head A	Connection type head B	Connecting cable	Type	Part no.
	Female connector, M12, 4-pin, straight, unshielded	Cable, open conductor heads	2 m, 4-wire	DOL-1204-G02M	6009382
			5 m, 4-wire	DOL-1204-G05M	6009866
	Female connector, M12, 4-pin, angled, unshielded	Cable, open conductor heads	2 m, 4-wire	DOL-1204-W02M	6009383
			5 m, 4-wire	DOL-1204-W05M	6009867

→ For additional accessories, please see page K-240

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