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Product data sheet



LUT8U-11201

LUT8

LUMINESCENCE SENSORS

SICK
Sensor Intelligence.

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LUT8U-11201 | LUT8

LUMINESCENCE SENSORS



Illustration may differ

Ordering information

Type	Part no.
LUT8U-11201	1047042

Other models and accessories → www.sick.com/LUT8

Detailed technical data

Features

Dimensions (W x H x D)	30.4 mm x 53 mm x 80 mm
Sensing distance	≤ 20 mm [1]
Housing design	Large
Working range	10 mm ... 40 mm
Light source	LED, UV [2]
Wave length	375 nm
Light emission	Long side
Light spot size	3 mm x 9 mm
Light spot direction	Vertical
Receiving filters	KV 418 (standard)
Receiving range	450 nm ... 750 nm
Adjustment	Manual (rotary switch)
Output function	Light switching

[1] From leading edge of lens.
[2] Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage	12 V DC ... 30 V DC [1]
Ripple	< 5 V_{pp} [2]
Current consumption	< 100 mA [3]
Switching frequency	2.5 kHz [4]

[1] Limit values when operated 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.

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Response time	200 µs [5]
Switching output	PNP, NPN
Switching output (voltage)	PNP: HIGH = V_S– ≤ 3 V / LOW = approx. 0 V NPN: HIGH = approx. U_V / LOW ≤ 2 V
Switching mode	Light switching
Analog output	0 mA ... 13 mA
Output current $I_{max.}$	100 mA
Connection type	Male connector M12, 5-pin
Protection class	II [6]
Circuit protection	U_V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
Enclosure rating	IP67
Weight	400 g
Housing material	Metal, zinc diecast

[1] Limit values when operated 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.

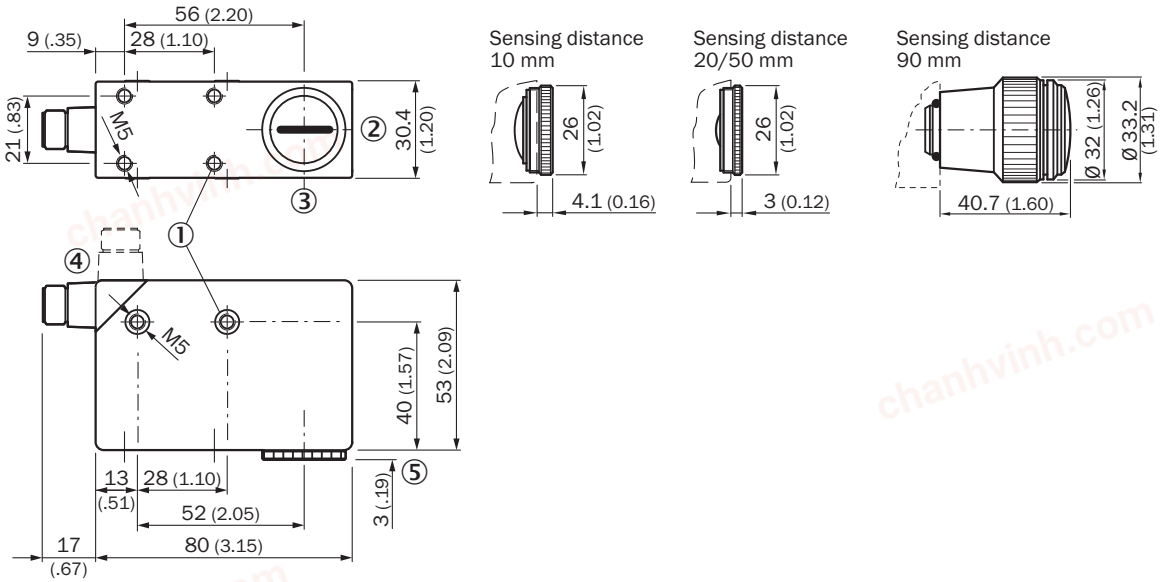
Ambient data

Ambient operating temperature	–10 °C ... +55 °C
Ambient temperature, storage	–25 °C ... +75 °C
Shock load	According to IEC 60068

Classifications

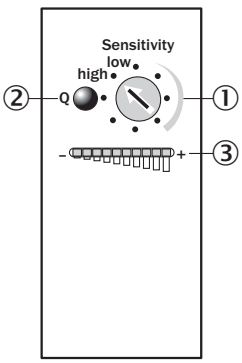
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eCl@ss 12.0	27270908
ETIM 5.0	EC001822
ETIM 6.0	EC001822
ETIM 7.0	EC001822
ETIM 8.0	EC001822
UNSPSC 16.0901	39121528

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

Adjustments

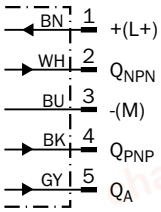


① Rotary selection switch
② Function signal indicator (yellow), switching output
③ Bar graph (green), power-on left-hand LED

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Connection diagram

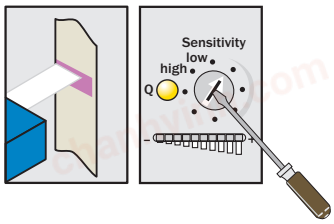
Cd-312



Concept of operation

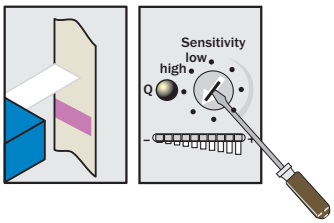
Rotary switch

1. Position mark



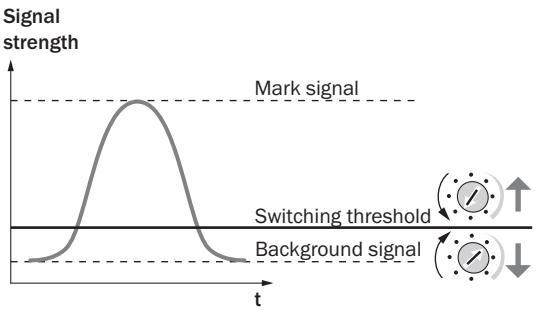
Turn “Sensitivity” rotary switch clockwise until yellow LED illuminates.

2. Position background



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

Sensitivity setting

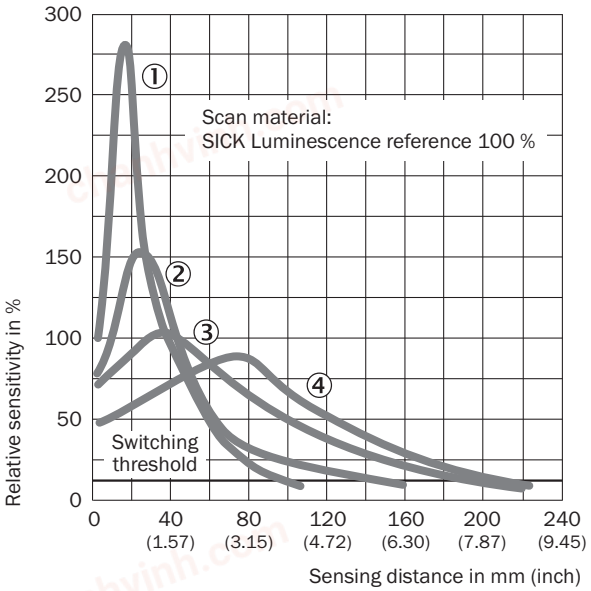


Note

The bar graph display shows the luminescence intensity (regardless of switching threshold setting).
Adjustments are intendend for luminescence background suppression.

Sensing distance

Sensing distance

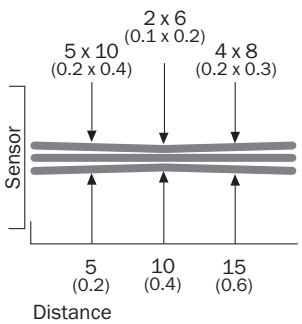


① Sensing distance 10 mm
② Sensing distance 20 mm
③ Sensing distance 50 mm
④ Sensing distance 90 mm

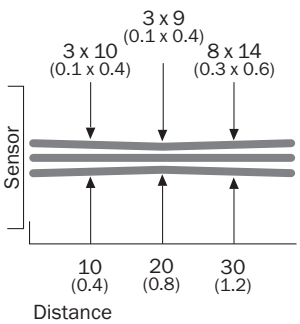
Light spot size

Light spot size

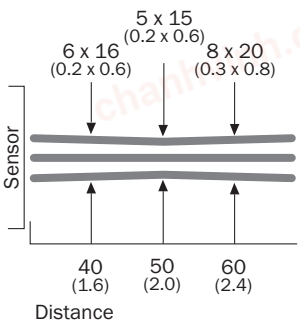
Sensing distance 10 mm



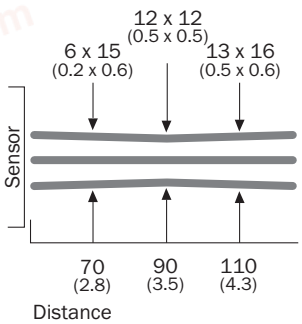
Sensing distance 20 mm



Sensing distance 50 mm



Sensing distance 90 mm



All dimensions in mm (inch)

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Recommended accessories

Other models and accessories ➜ www.sick.com/LUT8

	Brief description	Type	Part no.
Lenses and accessories			
	Adapter ring for lens with M20 x 0.75 (OBJ-026/90 mm lens), M25 x 0.75	AD-OBJ-01	2017097
	Lens, 90 mm scanning distance, M20 x 0.75	OBJ-026	1001326
	Lens, 10 mm sensing distance, M25 x 0.75	OBJ-LUT3-10	2016348
	Lens, 20 mm sensing distance, M25 x 0.75	OBJ-LUT3-20	2016349
	Lens, 50 mm sensing distance, M25 x 0.75	OBJ-LUT3-50	2016350
Universal bar clamp systems			
		BEF-KHS-G01	2022464
		BEF-KHS-K01	2022718
		BEF-KHS-KH1	2022726
		BEF-MS12G-A	4056054
		BEF-MS12G-B	4056055
		BEF-MS12L-A	4056052
		BEF-MS12L-B	4056053
Plug connectors and cables			
		YF2A15-020VB5XLEAX	2096239
		YF2A15-050VB5XLEAX	2096240
		YF2A15-100VB5XLEAX	2096241
		YG2A15-020VB5XLEAX	2096215
		YG2A15-050VB5XLEAX	2096216
		YG2A15-100VB5XLEAX	2096217
		DOS-1205-G	6009719
		DOS-1205-W	6009720

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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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