



DATA SHEET

# LUT3-852

LUT3  
Luminescence sensors

# SICK

Sensor Intelligence



Illustration may differ

LUMINESCENCE SENSORS

LUT3-852

ORDERING INFORMATION

| Type     | part no. |
|----------|----------|
| LUT3-852 | 1012871  |

Further device versions and accessories at [www.sick.com/LUT3](http://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 <sup>1)</sup> |
| Light spot size        | 5 mm x 15 mm                         |
| Receiving filters      | ≤ 610 nm <sup>2)</sup>               |
| Wave length            | 375 nm                               |
| Sensing distance       | ≤ 50 mm <sup>3)</sup>                |
| Receiving range        | 610 nm ... 750 nm                    |
| Adjustment             | Potentiometer                        |
| Output function        | Light switching                      |

<sup>1)</sup> Average service life: 100,000 h at T<sub>u</sub> = +25 °C.

<sup>2)</sup> Filter blocks shorter wavelengths to suppress background luminescence.

<sup>3)</sup> From leading edge of lens.

**ELECTRONICS**

|                                 |                                                                                                                     |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Supply voltage                  | 12 V DC ... 30 V DC <sup>1)</sup>                                                                                   |
| Ripple                          | < 2 V <sub>pp</sub> <sup>2)</sup>                                                                                   |
| Current consumption             | < 60 mA <sup>3)</sup>                                                                                               |
| Switching frequency             | 1.5 kHz <sup>4)</sup>                                                                                               |
| Response time                   | 350 µs                                                                                                              |
| Switching output                | PNP<br>NPN                                                                                                          |
| Switching output (voltage)      | PNP: HIGH = $V_s - \leq 3 \text{ V}$ / LOW = approx. 0 V<br>NPN: HIGH = approx. $U_v$ / LOW $\leq 2 \text{ V}$      |
| Switching mode                  | Light switching                                                                                                     |
| Analog output                   | 0.5 mA ... 10 mA                                                                                                    |
| Output current I <sub>max</sub> | 100 mA                                                                                                              |
| Protection class                | II <sup>5)</sup>                                                                                                    |
| Circuit protection              | $U_v$ connections, reverse polarity protected<br>Output Q short-circuit protected<br>Interference pulse suppression |
| Connection type                 | Plug, M12, 5-pin                                                                                                    |

<sup>1)</sup> Limit values when operated in short-circuit protected network: max. 8 A.

<sup>2)</sup> May not fall below or exceed  $U_v$  tolerances.

<sup>3)</sup> Without load.

<sup>4)</sup> With light/dark ratio 1:1.

<sup>5)</sup> Reference voltage DC 50 V.

**MECHANICS**

|                  |              |
|------------------|--------------|
| Housing material | Zinc diecast |
| Weight           | 400 g        |

**AMBIENT DATA**

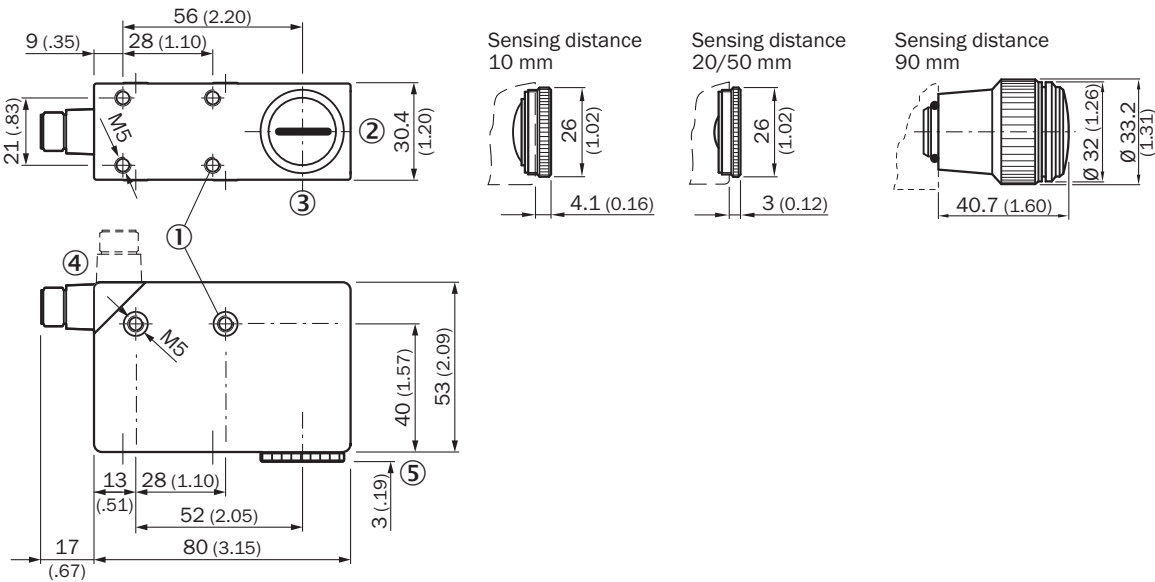
|                               |                              |
|-------------------------------|------------------------------|
| Ambient operating temperature | -10 °C ... +55 °C            |
| Ambient temperature, storage  | -25 °C ... +75 °C            |
| Shock load                    | According 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                                          | ✓ |
| China Compulsory Product Certification (CCC) exempt | ✓ |
| cULus certificate                                   | ✓ |

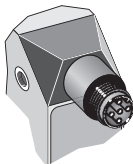
|                                       |   |
|---------------------------------------|---|
| Photobiological safety (IEC EN 62471) | ✓ |
|---------------------------------------|---|

DIMENSIONAL DRAWING

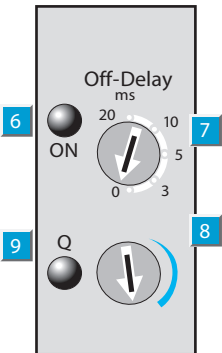


- Dimensions in mm (inch)
- ① M5 threaded mounting hole, 5.5 mm deep
  - ② Light spot direction
  - ③ Center of optical axis
  - ④ Connector M12 (rotatable up to 90°)
  - ⑤ see dimensional drawings of lenses

PINOUTS

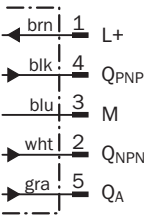


ADJUSTMENTS

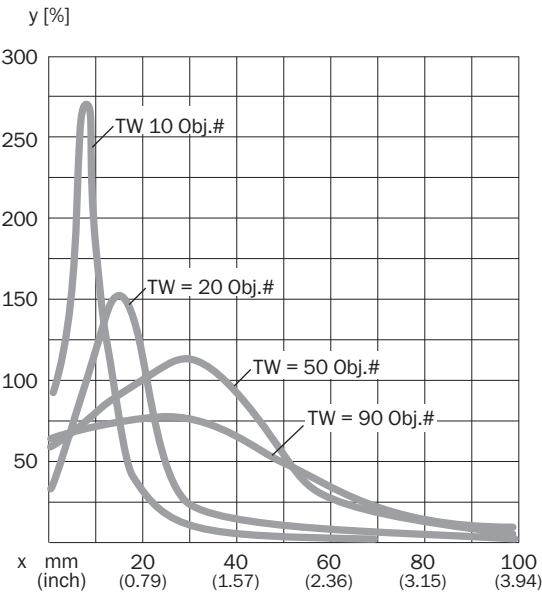


- ⑥ Operating indicator
- ⑦ time delay selector switch
- ⑧ sensitivity control
- ⑨ Output indicator

CONNECTION DIAGRAM



SENSING DISTANCE



Further information as well as suitable accessories, example applications and downloads such as CAD di-  
mensional models, operating instructions and software can be found at [www.sick.com/1012871](http://www.sick.com/1012871)



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# SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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