



# LD-OEM1501

LD-OEM

2D LIDAR SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	part no.
LD-OEM1501	1060829

Other models and accessories → [www.sick.com/LD-OEM](http://www.sick.com/LD-OEM)



### Detailed technical data

#### Features

<b>Application</b>	Indoor
<b>Light source</b>	Infrared (905 nm)
<b>Laser class</b>	1 (IEC 60825-1:2014, EN 60825-1:2014+A11:2021)
<b>Aperture angle</b>	
	Horizontal 360°
<b>Scanning frequency</b>	5 Hz ... 20 Hz
<b>Angular resolution</b>	
	Horizontal
	0.125°
	0.1875°
	0.375°
	0.5°
	1°
	0.25°
	0.75°
	0.0625°, interlaced
<b>Working range</b>	0.5 m ... 250 m
<b>Scanning range</b>	
	At 10% remission factor 55 m
	At 90% remission factor 180 m
<b>Fog correction</b>	No

#### Mechanics/electronics

<b>Connection type</b>	3 x M12 male connector/female connector
<b>Supply voltage</b>	24 V DC, ± 15 %
<b>Power consumption</b>	36 W
<b>Housing material</b>	Aluminum die cast
<b>Housing color</b>	Light blue (RAL 5012)

<b>Enclosure rating</b>	IP65
<b>Protection class</b>	III
<b>Weight</b>	+ 2.4 kg
<b>Dimensions (L x W x H)</b>	115 mm x 120 mm x 222 mm
<b>MTBF</b>	86 years

#### Safety-related parameters

<b>MTTF<sub>D</sub></b>	> 100 years
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#### Performance

<b>Detectable object shape</b>	Almost any
<b>Systematic error</b>	± 10 mm <sup>1)</sup>
<b>Statistical error</b>	15 mm <sup>1)</sup>

<sup>1)</sup> Actual value depends on environmental conditions.

#### Interfaces

<b>Ethernet</b>	Function	✓, TCP/IP
	Data transmission rate	≤ 100 Mbit/s
<b>Serial</b>	Function	✓, RS-232
	Data transmission rate	19,200 Baud ... 115,200 Baud
<b>Digital inputs/outputs</b>	Outputs	1 (digital)
<b>Optical indicators</b>		4 LEDs (Status display)

#### Ambient data

<b>Ambient operating temperature</b>	0 °C ... +50 °C
<b>Storage temperature</b>	-20 °C ... +80 °C
<b>Permissible relative humidity</b>	85 %, Non-condensing

#### General notes

<b>Note on use</b>	The sensor does not constitute a safety component as defined by relevant legislation on machine safety.
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#### Certificates

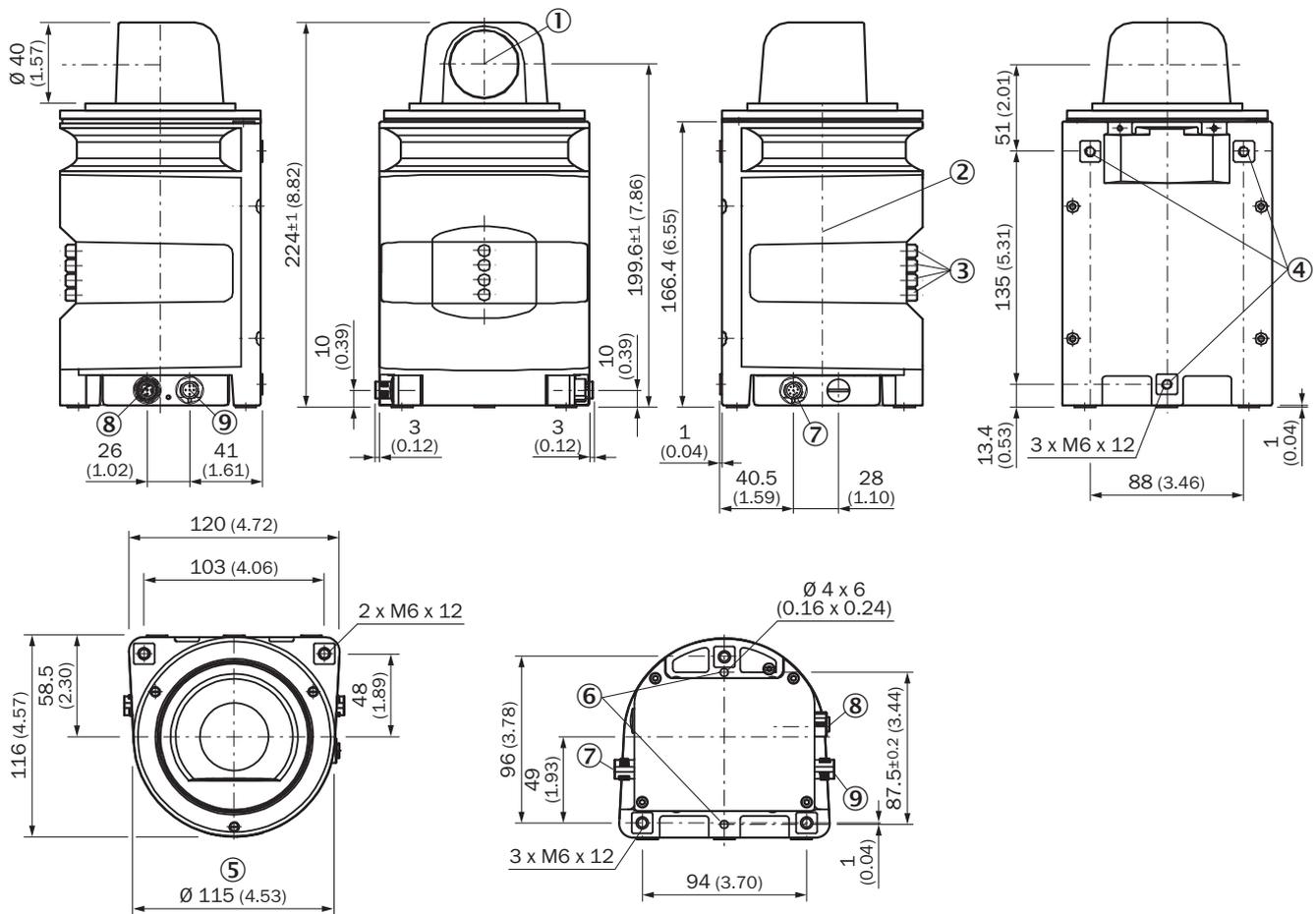
<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>China RoHS</b>	✓
<b>Information according to Art. 3 of Data Act (Regulation EU 2023/2854)</b>	✓

#### Classifications

<b>ECLASS 5.0</b>	27270990
<b>ECLASS 5.1.4</b>	27270990
<b>ECLASS 6.0</b>	27270913

<b>ECLASS 6.2</b>	27270913
<b>ECLASS 7.0</b>	27270913
<b>ECLASS 8.0</b>	27270913
<b>ECLASS 8.1</b>	27270913
<b>ECLASS 9.0</b>	27270913
<b>ECLASS 10.0</b>	27270913
<b>ECLASS 11.0</b>	27270913
<b>ECLASS 12.0</b>	27270913
<b>ETIM 5.0</b>	EC002550
<b>ETIM 6.0</b>	EC002550
<b>ETIM 7.0</b>	EC002550
<b>ETIM 8.0</b>	EC002550
<b>UNSPSC 16.0901</b>	41111615

### Dimensional drawing

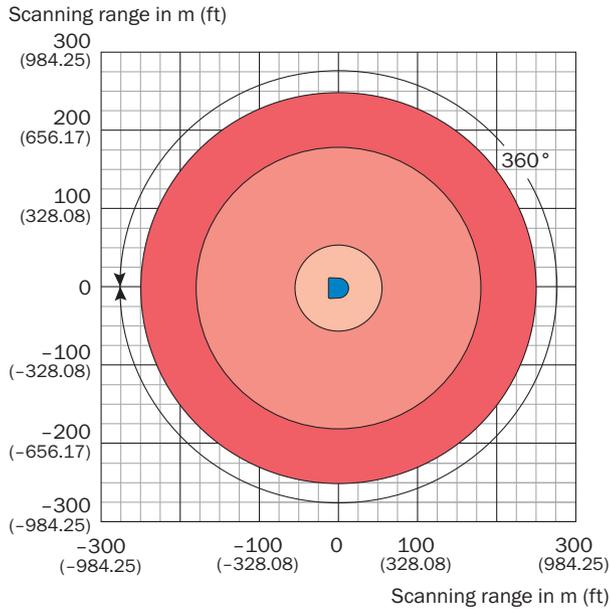


Dimensions in mm (inch)

- ① Optical axis
- ② Zero level
- ③ LED (from top: yellow, yellow, green, red)

- ④ Mounting hole M6 x 12
- ⑤ Rotating diameter
- ⑥ Aligning pin
- ⑦ RS-232 connection (M12 x 8, male connector)
- ⑧ Ethernet connection (M12 x 4, female connector)
- ⑨ power supply connection (M12 x 5, male connector)

### Working range diagram



- Scanning range max. 250 m (820.21 ft)
- Scanning range white targets  
90 % remission 180 m (590.55 ft)
- Scanning range for objects up to  
10 % remission 55 m (180.45 ft)

### Recommended accessories

Other models and accessories → [www.sick.com/LD-OEM](http://www.sick.com/LD-OEM)

	Brief description	Type	part no.
<b>Mounting systems</b>			
	<ul style="list-style-type: none"> <li>• <b>Description:</b> Assembly support</li> <li>• <b>Items supplied:</b> Mounting hardware included</li> </ul>	Assembly support	5311055

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 8-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 5 m, 8-wire, PUR, halogen-free</li> <li>• <b>Description:</b> Sensor/actuator cable, shielded</li> <li>• <b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YF2A28-050UA6XLEAX	2095835
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 8-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 0.6 m, 8-wire, PUR, halogen-free</li> <li>• <b>Description:</b> Sensor/actuator cable, shielded</li> <li>• <b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YF2A28-C60UA6XLEAX	2145470
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 8-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 1 m, 8-wire, PUR, halogen-free</li> <li>• <b>Description:</b> Sensor/actuator cable, shielded</li> <li>• <b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YF2A28-010UA6XLEAX	2145471
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 8-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 2 m, 8-wire, PUR, halogen-free</li> <li>• <b>Description:</b> Sensor/actuator cable, shielded</li> <li>• <b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YF2A28-020UA6XLEAX	2145472
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 8-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 3 m, 8-wire, PUR, halogen-free</li> <li>• <b>Description:</b> Sensor/actuator cable, shielded</li> <li>• <b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YF2A28-030UA6XLEAX	2145473
Power supply units and power supply cables			
	<ul style="list-style-type: none"> <li>• <b>Output voltage:</b> 24 V DC</li> <li>• <b>Output current:</b> 10 A</li> <li>• <b>Description:</b> Power supply DC 24 V / 10 A</li> </ul>	Power supply	6020875

## 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.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)