



# LL3-LM311500

LL3

FIBER-OPTIC SENSORS AND FIBERS

**SICK**  
Sensor Intelligence.



Illustration may differ

### Ordering information

Type	Part no.
LL3-LM311500	2073486

Other models and accessories → [www.sick.com/LL3](http://www.sick.com/LL3)

### Detailed technical data

#### Features

<b>Device type</b>	Fibers
<b>Detection principle</b>	Proximity system
<b>For fiber-optic sensor</b>	GLL170(T), WLL180T
<b>Fiber length</b>	1.5 m
<b>Fiber material</b>	Stone, ceramic, glass
<b>Jacket material</b>	Polyvinylchlorid (PVC)
<b>Fiber head material</b>	Chrome-plated metal coil
<b>Outer diameter, fiber-optic cable connection</b>	2.2 mm
<b>Smooth sleeve diameter (greatest diameter)</b>	≥ 5.8 mm
<b>Fiber-optic head design</b>	Smooth sleeve, Long end sleeve
<b>Array width</b>	4 mm
<b>Fiber arrangement</b>	Multi-fiber – fiber bundle
<b>Core structure</b>	Multi-fiber – fiber bundle
<b>Bend radius, fibre-optic cable</b>	20 mm
<b>Angle of dispersion &lt; 60°</b>	No
<b>Compatibility with infrared light (1,450 nm)</b>	Yes
<b>Ambient operating temperature</b>	-10 °C ... +60 °C
<b>Diameter/thread size from 2 mm taper</b>	≥ 4 mm
<b>Length of taper</b>	≥ 11.4 mm
<b>Diameter of taper</b>	≥ 4 mm
<b>Highly flexible/elastic fibers (bend radius 1–4 mm)</b>	No
<b>Adapter end sleeves required</b>	No
<b>Angle of dispersion</b>	60°
<b>Integrated lens</b>	No
<b>Minimal object diameter</b>	0.5 mm
<b>Compatibility tip adapters</b>	No

#### Classifications

<b>ECl@ss 5.0</b>	27270905
<b>ECl@ss 5.1.4</b>	27270905
<b>ECl@ss 6.0</b>	27270905

<b>ECI@ss 6.2</b>	27270905
<b>ECI@ss 7.0</b>	27270905
<b>ECI@ss 8.0</b>	27270905
<b>ECI@ss 8.1</b>	27270905
<b>ECI@ss 9.0</b>	27270905
<b>ETIM 5.0</b>	EC002651
<b>ETIM 6.0</b>	EC002651
<b>UNSPSC 16.0901</b>	39121528

Sensing ranges with WLL180T

<b>Operating mode 16 µs</b>	50 mm
<b>Operating mode 70 µs</b>	140 mm
<b>Operating mode 250 µs</b>	240 mm
<b>Operating mode 2 ms</b>	220 mm
<b>Operating mode 8 ms</b>	220 mm

Sensing ranges with GLL170

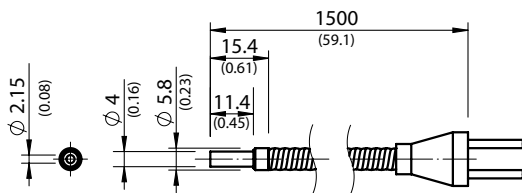
<b>Operating mode 250 µs</b>	125 mm
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Sensing ranges with GLL170T

<b>Operating mode 50 µs</b>	217 mm
<b>Operating mode 250 µs</b>	332 mm

**Dimensional drawing** (Dimensions in mm (inch))

LL3-LM311500



## 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)