



# LL3-LM31750

Fiber-optic cables

**FIBER-OPTIC SENSORS**

**SICK**  
Sensor Intelligence.



Illustration may differ

Ordering information

Type	part no.
LL3-LM31750	2073485

Other models and accessories → [www.sick.com/Fiber-optic\\_cables](http://www.sick.com/Fiber-optic_cables)

Detailed technical data

Features

Device type	Fiber-optic cables
Functional principle	Proximity system
Fiber-optic head design	Smooth sleeve, Long end sleeve
Application	Standard
Compatible fiber-optic amplifiers	GLL70, WLL80, WLL180, GLL170(T)
Sensing range max.	Depending on the fiber optic amplifier used
Minimal object diameter	0.5 mm
Optical fiber head	
Angle of dispersion	60°
Integrated lens	No
Compatibility tip adapters	No
Optical fiber	
Compatibility with infrared light	Yes <sup>1)</sup>
Adapter end sleeves required	No

<sup>1)</sup> Reduced sensing ranges possible when using a fiber-optic amplifier with infrared light.

Mechanics

Optical fiber head	
Light emission	Axial
Smooth sleeve diameter	5.8 mm
Fiber-optic head array width	10.85 mm
Optical fiber taper diameter	≥ 4 mm
Optical fiber taper length after 2 mm	≥ 11.4 mm
Optical fiber	
Fiber length	750 mm
Bending radius	20 mm
Dynamic flexibility (robotics)	No
Outside diameter, optical fiber cable connection	2.2 mm
Fiber arrangement	Multi-fiber
Core structure	Multi-fiber
Material	
Optical fiber head	Chrome-plated metal coil
Sheath	Polyvinylchlorid (PVC)

	Fibers	Glass
<b>Weight</b>		48 g

## Ambient data

<b>Ambient operating temperature</b>	-10 °C ... +60 °C
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## 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
<b>Note</b>	Sensing ranges related to fiber-optic sensors with type of light: visible red light

## Sensing ranges with GLL170

<b>Operating mode 250 µs</b>	82 mm
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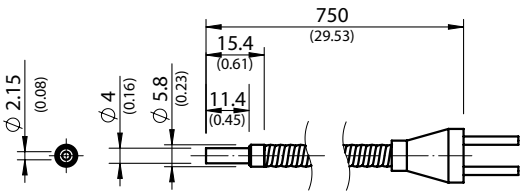
## Sensing ranges with GLL170T

<b>Operating mode 50 µs</b>	153 mm
<b>Operating mode 250 µs</b>	236 mm

## Classifications

<b>ECLASS 5.0</b>	27270905
<b>ECLASS 5.1.4</b>	27270905
<b>ECLASS 6.0</b>	27270905
<b>ECLASS 6.2</b>	27270905
<b>ECLASS 7.0</b>	27270905
<b>ECLASS 8.0</b>	27270905
<b>ECLASS 8.1</b>	27270905
<b>ECLASS 9.0</b>	27270905
<b>ECLASS 10.0</b>	27270905
<b>ECLASS 11.0</b>	27270905
<b>ECLASS 12.0</b>	27270905
<b>ETIM 5.0</b>	EC002651
<b>ETIM 6.0</b>	EC002651
<b>ETIM 7.0</b>	EC002651
<b>ETIM 8.0</b>	EC002651
<b>UNSPSC 16.0901</b>	39121528

Dimensional drawing LL3-LM31750



Dimensions in mm (inch)

## 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)