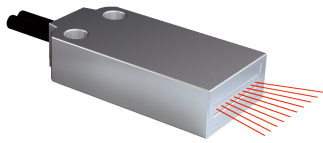


# LL3-DZ01

Fiber-optic cables

**FIBER-OPTIC SENSORS**

**SICK**  
Sensor Intelligence.



### Ordering information

Type	part no.
LL3-DZ01	5326013

**Included in delivery:** FC (1)

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

### Detailed technical data

#### Features

<b>Device type</b>	Fiber-optic cables
<b>Functional principle</b>	Proximity system
<b>Fiber-optic head design</b>	Flat type, Array
<b>Application</b>	Area detection
<b>Compatible fiber-optic amplifiers</b>	GLL70, WLL80, WLL180, GLL170(T), WLL24 Ex
<b>Sensing range max.</b>	660 mm (Sensing range of WLL80 at 8 ms)
<b>Minimal object diameter</b>	0.02 mm <sup>1)</sup>
<b>Optical fiber head</b>	
Angle of dispersion	23°
Integrated lens	Yes
Compatibility tip adapters	No
<b>Optical fiber</b>	
Compatibility with infrared light	No
Optical fiber cable can be shortened	✓
Adapter end sleeves required	No
<b>Included with delivery</b>	FC fiber cutter (5304141)

<sup>1)</sup> Minimum detectable object was determined at optimum measuring distance and optimum setting.

#### Mechanics

<b>Optical fiber head</b>	
Light emission	Axial
Fiber-optic head array width	4 mm
<b>Optical fiber</b>	
Fiber length	2,000 mm
Bending radius	25 mm
Dynamic flexibility (robotics)	No
Outside diameter, optical fiber cable connection	2.2 mm
Fiber arrangement	Multi-fiber
Core structure	S: Ø 1,0 mm R: 16 x Ø 0,265 mm Multi-fiber
<b>Material</b>	
Optical fiber head	Polycarbonate (PC)
Sheath	Polyethylen (PE)

	Fibers	Polymethylmethacrylat (PMMA)
<b>Weight</b>		50 g

## Ambient data

<b>Ambient operating temperature</b>	-40 °C ... +60 °C
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## Sensing ranges with GLL70

<b>Operating mode 50 µs</b>	200 mm
<b>Operating mode 250 µs</b>	500 mm
<b>Operating mode 1 ms</b>	660 mm
<b>Operating mode 4 ms</b>	660 mm

## Sensing ranges with WLL80

<b>Operating mode 16 µs</b>	120 mm
<b>Operating mode 70 µs</b>	300 mm
<b>Operating mode 250 µs</b>	500 mm
<b>Operating mode 500 µs</b>	590 mm
<b>Operating mode 1 ms</b>	660 mm
<b>Operating mode 2 ms</b>	660 mm
<b>Operating mode 8 ms</b>	660 mm
<b>Note</b>	Sensing ranges related to fiber-optic sensors with type of light: visible red light

## Sensing ranges with WLL180T

<b>Operating mode 16 µs</b>	65 mm
<b>Operating mode 70 µs</b>	240 mm
<b>Operating mode 250 µs</b>	320 mm
<b>Operating mode 2 ms</b>	650 mm
<b>Operating mode 8 ms</b>	690 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>	130 mm
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## Sensing ranges with GLL170T

<b>Operating mode 50 µs</b>	160 mm
<b>Operating mode 250 µs</b>	230 mm

## Sensing ranges with KTL180

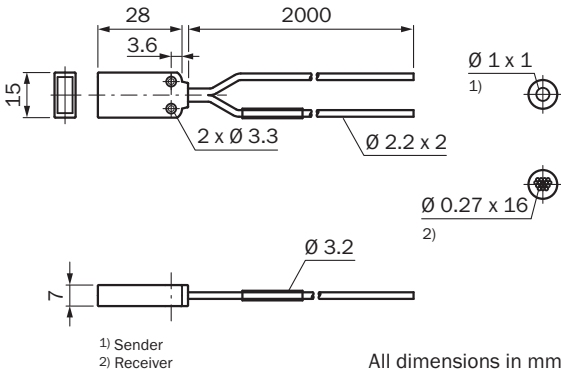
<b>Operating mode 16 µs</b>	10 mm
<b>Operating mode 200 µs</b>	10 mm

## 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

ECLASS 7.0	27270905
ECLASS 8.0	27270905
ECLASS 8.1	27270905
ECLASS 9.0	27270905
ECLASS 10.0	27270905
ECLASS 11.0	27270905
ECLASS 12.0	27270905
ETIM 5.0	EC002651
ETIM 6.0	EC002651
ETIM 7.0	EC002651
ETIM 8.0	EC002651
UNSPSC 16.0901	39121528

Dimensional drawing LL3-DZ01



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)