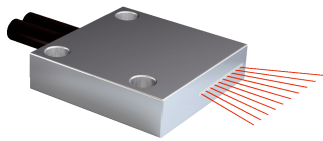


## LL3-DZ02

Fiber-optic cables

**FIBER-OPTIC SENSORS**

**SICK**  
Sensor Intelligence.



### Ordering information

Type	part no.
LL3-DZ02	5326014

**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>	1,050 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	60°
Integrated lens	No
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	11 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: 16 x Ø 0,265 mm R: 16 x Ø 0,265 mm Multi-fiber
<b>Material</b>	
Optical fiber head	Copper-zinc alloy (CuZn)
Sheath	Polyethylen (PE)

	Fibers	Polymethylmethacrylat (PMMA)
<b>Weight</b>		55 g

## Ambient data

<b>Ambient operating temperature</b>	-40 °C ... +70 °C
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## Sensing ranges with GLL70

<b>Operating mode 50 µs</b>	140 mm
<b>Operating mode 250 µs</b>	420 mm
<b>Operating mode 1 ms</b>	575 mm
<b>Operating mode 4 ms</b>	950 mm

## Sensing ranges with WLL80

<b>Operating mode 16 µs</b>	95 mm
<b>Operating mode 70 µs</b>	285 mm
<b>Operating mode 250 µs</b>	455 mm
<b>Operating mode 500 µs</b>	535 mm
<b>Operating mode 1 ms</b>	575 mm
<b>Operating mode 2 ms</b>	725 mm
<b>Operating mode 8 ms</b>	1,050 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>	57 mm
<b>Operating mode 70 µs</b>	190 mm
<b>Operating mode 250 µs</b>	310 mm
<b>Operating mode 2 ms</b>	630 mm
<b>Operating mode 8 ms</b>	670 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>	210 mm
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## Sensing ranges with GLL170T

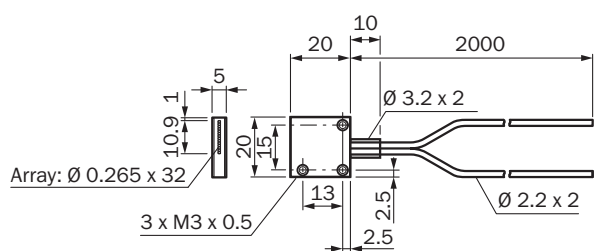
<b>Operating mode 50 µs</b>	120 mm
<b>Operating mode 250 µs</b>	220 mm

## 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-DZ02



All dimensions in mm

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)