

## Technical data sheet

### Plastic fiber optics for throughbeam operation

Part no.: 50117738

KF-LE-220

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For illustration purposes only

## Technical data

### Basic data

|                     |                                 |
|---------------------|---------------------------------|
| Series              | KF                              |
| Operating principle | Throughbeam principle           |
| Device type         | Transmit and receive fiber      |
| Area of application | Highly precise object detection |

### Optical data

|                                |                   |
|--------------------------------|-------------------|
| Light beam exit                | Front             |
| Fiber core                     | Single fiber core |
| Fiber core material            | Plastic           |
| Active fiber diameter          | 0.25 mm           |
| Operating range with LV461     | 0 ... 18 mm       |
| Operating range with LV462     | 0 ... 30 mm       |
| Operating range with LV463     | 0 ... 54 mm       |
| Operating range with LV463.XV  | 0 ... 80 mm       |
| Operating range with LV463.XR  | 0 ... 95 mm       |
| Operating range with LV463L.XR | 0 ... 145 mm      |

### Measurement data

|                         |         |
|-------------------------|---------|
| Minimum object diameter | 0.03 mm |
|-------------------------|---------|

### Mechanical data

|                                     |                           |
|-------------------------------------|---------------------------|
| Design                              | Cylindrical               |
| Outer diameter                      | 1 mm                      |
| Head material                       | Stainless steel           |
| Type                                | Plastic fiber optics (KF) |
| Fiber length                        | 2,000 mm                  |
| Fiber sheathing material            | PE                        |
| Fastening of the probe              | Ø 2 mm                    |
| Smallest bending radius (moving)    | R10                       |
| Sleeve length at optical outlet     | 15 mm                     |
| Metric thread on fiber optic sleeve | No                        |
| Laying                              | standard                  |
| Damping at $\lambda = 650\text{nm}$ | 210 dB/km                 |

### Environmental data

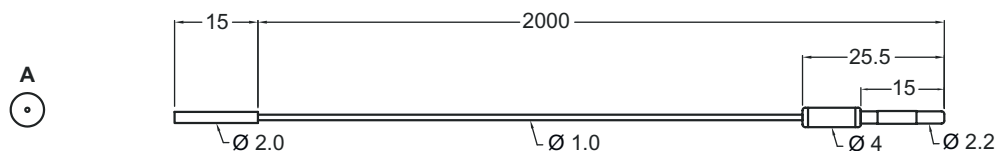
|                                |               |
|--------------------------------|---------------|
| Ambient temperature, operation | -55 ... 70 °C |
|--------------------------------|---------------|

### Classification

|                       |          |
|-----------------------|----------|
| Customs tariff number | 90011090 |
| ECLASS 5.1.4          | 27270905 |
| ECLASS 8.0            | 27270905 |
| ECLASS 9.0            | 27270905 |
| ECLASS 10.0           | 27270905 |
| ECLASS 11.0           | 27273606 |
| ECLASS 12.0           | 27273606 |
| ECLASS 13.0           | 27273606 |
| ECLASS 14.0           | 27273606 |
| ECLASS 15.0           | 27273606 |
| ETIM 5.0              | EC002651 |
| ETIM 6.0              | EC002651 |
| ETIM 7.0              | EC002651 |
| ETIM 8.0              | EC002651 |
| ETIM 9.0              | EC002651 |

## Dimensioned drawings

All dimensions in millimeters



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Notes

**Observe intended use!**



- ⚡ This product is not a safety sensor and is not intended as personnel protection.
- ⚡ The product may only be put into operation by competent persons.
- ⚡ Only use the product in accordance with its intended use.

Further information

- Suitable products for operating these fiber optics are the fiber optic amplifiers LV461, LV462B as well as LV463, LV463.XV and LV463.XR.
- The maximum range is limited by the length of the light conductor.
- Operating range measured on a white object (90% diffuse reflection) with the following setting on the fiber optic amplifier:
  - max. response time
  - max. amplification
  - min. switching threshold

Accessories

General

|                                                                                    | Part no.    | Designation  | Article            | Description                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------|-------------|--------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 50135984    | KF-PT-SS-619 | Protective housing | Type of article: Protection tube for mechanical protection of plastic fiber optic cables<br>Suitable for: Plastic fiber optics<br>Length: 1,900 mm<br>Outer diameter: 4.6 mm<br>Inner diameter: 3 mm<br>Material: Stainless steel |
|                                                                                    | 50117785 ** | KLC-4530     | Tool               | Type: Cutting tool                                                                                                                                                                                                                |

\*\* Included in delivery contents

**Note**



⚡ A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.