# Technical data sheet
# Glass fiber optics for throughbeam operation
Part no.: 50126462
GF-LB-SI-450-IQ



For Illustration purposes only

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# Technical data

## Basic data

| | |
|---|---|
| **Series** | GF |
| **Operating principle** | Throughbeam principle |
| **Device type** | Transmit and receive fiber |
| **Area of application** | Oil and chemical resistant |

## Special version

| | |
|---|---|
| **Special version** | Heat resistant |

## Optical data

| | |
|---|---|
| **Opening angle** | 65 ° |
| **Light beam exit** | On face |
| **Fiber core** | Mixed fiber configuration |
| | Multiple fiber core |
| **Fiber core material** | Glass |
| **Active fiber diameter** | 1.5 mm |
| **Operating range with LV463** | 0 ... 400 mm |
| **Operating range with LV463 + GF-L1** | 0 ... 1,200 mm |
| **Operating range with LV463 + GF-U1** | 0 ... 800 mm |
| **Operating range with LV463.XV** | 0 ... 680 mm |
| **Operating range with LV463.XV + GF-L1** | 0 ... 2,040 mm |
| **Operating range with LV463.XV + GF-U1** | 0 ... 1,360 mm |
| **Operating range with LV463.XR** | 0 ... 1,000 mm |
| **Operating range with LV463.XR + GF-L1** | 0 ... 3,000 mm |
| **Operating range with LV463.XR + GF-U1** | 0 ... 2,000 mm |
| **Operating range with LV463I.XR** | 0 ... 2,000 mm |
| **Operating range with LV463I.XR + GF-L1** | 0 ... 6,000 mm |
| **Operating range with LV463I.XR + GF-U1** | 0 ... 4,000 mm |

## Mechanical data

| | |
|---|---|
| **Design** | Cylindrical |
| **Outer diameter** | 4.5 mm |
| **Net weight** | 303 g |
| **Head material** | Stainless steel |
| **Type** | Glass fiber optics (GF) |
| **Fiber length** | 5,000 mm |
| **Fiber sheathing material** | Silicone |
| **Fastening of the probe** | Ø 4 mm |
| **Smallest bending radius (static)** | R40 |
| **Smallest bending radius (moving)** | R40 |
| **Sleeve length at optical outlet** | 10 mm |
| **Metric thread on fiber optic sleeve** | No |
| **Laying** | standard |

## Environmental data

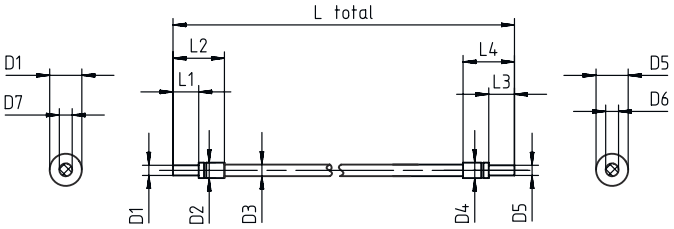
| | |
|---|---|
| **Ambient temperature, operation** | -30 ... 180 °C |

## 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 |
| **ECLASS 16.0** | 27273606 |
| **ETIM 5.0** | EC002651 |
| **ETIM 6.0** | EC002651 |
| **ETIM 7.0** | EC002651 |
| **ETIM 8.0** | EC002651 |
| **ETIM 9.0** | EC002651 |
| **ETIM 10.0** | EC002651 |
| **UNSPSC 26.08** | 41112103 |

# Dimensioned drawings

All dimensions in millimeters




| | |
|---|---|
| $L_{total}$ | 5000 |
| L1 | 10 |
| L2 | 20 |
| L3 | 14 |
| L4 | 24 |
| D1 | 4.0 |
| D2 | 6.0 |
| D3 | 5.5 |
| D4 | 6.0 |
| D5 | 2.2 |
| D6 | 1.5 |
| D7 | 1.5 |

# Notes

| | |
|---|---|
| | **Observe intended use!** |
| | This product is not a safety sensor and is not intended as personnel protection.<br>The product may only be put into operation by competent persons.<br>Only use the product in accordance with its intended use. |

# Further information

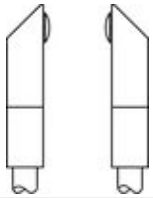
- Suitable products for operating these fiber optics are the fiber optic amplifiers LV461, LV462B as well as LV463, LV463.XV and LV463.XR.
- Operating range measured on a white object (90% diffuse reflection) with the following settings on the fiber optic amplifier:
  - max. response time
  - max. amplification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

# Accessories

## General

| | Part no. | Designation | Article | Description |
|---|---|---|---|---|
|  | 50014649 | GF-L1 | Lens attachment | Functions: Collimated<br>Type of fastening: Adhesive |

# Accessories

| | Part no. | Designation | Article | Description |
|---|---|---|---|---|
|  | 50009382 | GF-U1 | Deflector element | Functions: 90° - deflection<br>Type of fastening: Adhesive |

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