



LL3

A wide variety of solutions to your most challenging applications:
SICK's fiber-optic cables

FIBERS

SICK
Sensor Intelligence.



Product description

For any application-oriented sensor solution, a suitable fiber-optic cable must be chosen. At SICK, the broad range of fiber-optic cables made from plastic and glass fibers permits optimal automation solutions. This applies in particular to tasks for which the fiber-optic cable requires application-specific adaption, where flexible cable installation is crucial, where high temperatures prevail, or a particular material compatibility is important. While the fibers of plastic fiber-optic cables are characterized, among other things, by the smallest of bend radii and maximum flexibility, and can also be shortened to any length, the glass fiber-optic cables are more chemically resistant and suitable for a higher temperature range. The wide variety of end sleeve options or individual special sleeves enable virtually any installation possibility. Depending on the application, the fiber-optic cable's protective cladding can be made from plastic, metal, or Teflon for exposure to aggressive chemicals.

At a glance

- Very large selection of plastic and glass fiber-optic cables.
- Fiber-optic cables resistant to chemicals and high temperature
- Threaded and smooth sleeves, bands of light (array), 90° reflection versions available
- Focused optics
- Proximity and through-beam versions available
- Plastic, protective metal or Teflon sheathing available

Your benefits

- Very large selection of fiber-optic cables with plastic and glass fibers, giving users more application flexibility
- Resistant to damage caused by mechanical and chemical stress, as well as high temperatures
- Standard and customer-specific types
- Simple installation saves time
- For detection of objects, surfaces, leading edges, and fluid levels

Ordering information

Other models and accessories → www.sick.com/LL3

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Threaded sleeve
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.						
Stainless steel	✓	M3	No	No	No	2,000 mm	LL3-DS06	5308073						
							LL3-DB07	5325988						
							LL3-DT01	5308076						
											500 mm	LL3-DK21	5313023	
											1,000 mm	LL3-DR02	5308079	
											2,000 mm	LL3-DR08	5326037	
											5,000 mm	LL3-DT01-05	5309087	
											2,000 mm	LL3-DT01S02	5342826	
											5,000 mm	LL3-DT01S03	5342827	
			M4	No	No	No	2,000 mm	LL3-DM01	5308071					
												LL3-DK66	5313024	
												LL3-DR06	5308082	
							3,000 mm	LL3-DM02-3	5327029					
			M6	No	No	No	2,000 mm	LL3-DK06-S01	5327794					
		-	M3	No	No	No	1,000 mm	LL3-KD021000	5343661					
												2,000 mm	LL3-DH01	5308091
													LL3-DH02	5308092
												3,000 mm	LL3-DH01-03	5321260

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Threaded sleeve
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
Brass	✓	M6	-	Yes	-	2,000 mm	LL3-DH09	5326030
			No	No	No	2,000 mm	LL3-DR01	5308078

Fiber head material	Fiber-optic cable cuttable	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
Stainless steel	✓	M6	No	No	No	2,000 mm	LL3-DK06	5313019
						10,000 mm	LL3-DB01-10	5308075
						2,000 mm	LL3-DB03	5313021
							LL3-DK67	5313025
						3,000 mm	LL3-DB01-3	5322552
						30,000 mm	LL3-DB01-30	5324662
						1,000 mm	LL3-DK06-01	5326997
						3,000 mm	LL3-DK063000	5338135

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Threaded sleeve
- **Fiber material:** plastic
- **Jacket material:** stainless steel

Fiber head material	Fiber-optic cable cuttable	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
Brass	✓	M6	No	No	No	1,000 mm	LL3-DJ02	5325992
Stainless steel	✓	M3	No	No	No	1,000 mm	LL3-DJ01	5325989

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex, KTL180
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Threaded sleeve
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
Stainless steel	✓	M6	No	No	No	2,000 mm	LL3-DB01	5308074
							LL3-DB04	5325990

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, KTL180
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Threaded sleeve
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
Stainless steel	✓	M4	No	No	No	2,000 mm	LL3-DM02	5308077
						500 mm	LL3-DM02500	5342216
						5,000 mm	LL3-DM025000	5344076

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Flat type
- **Jacket material:** stainless steel

Integrated lens	Angle of dispersion < 60°	Type	Part no.
No	No	LL3-DL01	1068060
		LL3-DL08	1100925

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** special design
- **Fiber material:** glass
- **Jacket material:** stainless steel

Fiber head material	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Stainless steel	No	Yes	No	2,000 mm	LL3-DL07	1094996

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber-optic cable cuttable	Integrated lens	Compatibility with infrared light (1,450 nm)	Fiber length	Type	Part no.
✓	No	No	14,000 mm	LL3-KX0214000	5343663
			3,000 mm	LL3-KX023000	5343928
			9,000 mm	LL3-KX029000	5343662

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Flat type, 90° deflection, Array
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Type	Part no.
Aluminum	✓	No	No	No	LL3-TS15S01	1069692

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Threaded sleeve
- **Jacket material:** plastic

Fiber-optic cable cuttable	Thread diameter (housing)	Integrated lens	Angle of dispersion < 60°	Type	Part no.
✓	M12	Yes	Yes	LL3-TX0410	1072949

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Smooth sleeve
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
Stainless steel	✓	1.5 mm	No	No	No	1,000 mm	LL3-DR04	5308081
		2.5 mm	No	No	No	2,000 mm	LL3-DT03	5308072
		3 mm	No	No	No	2,000 mm	LL3-DB10	5325999
							LL3-DR11	5326000
							LL3-DK4Z	5313026
		5 mm	No	No	No	1,000 mm	LL3-DK051000	5342636

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, KTL180
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Smooth sleeve
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
Stainless steel	✓	3 mm	No	No	No	2,000 mm	LL3-DK04	5313020

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Smooth sleeve
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
Stainless steel	✓	2 mm	No	No	No	1,000 mm	LL3-DP01	5325998
		3 mm	No	No	No	500 mm	LL3-DR05	5308087

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Smooth sleeve, Long end sleeve, 90° deflection
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
Stainless steel	✓	3 mm	-	No	-	2,000 mm	LL3-DV02	5308089
			Yes	No	Yes	2,000 mm	LL3-DR12	5326001

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Smooth sleeve
- **Fiber material:** glass
- **Jacket material:** plastic

Fiber head material	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
-	7 mm	Yes	Yes	Yes	1,000 mm	LL3-LM401000	2082375
Aluminum	5.8 mm	No	Yes	No	150 mm	LL3-LM35150	2073488
					450 mm	LL3-LM35450	2073489
					750 mm	LL3-LM35750	2073490

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Smooth sleeve, Long end sleeve
- **Fiber material:** glass
- **Jacket material:** plastic

Fiber head material	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Aluminum	5.8 mm	No	Yes	No	2,200 mm	LL3-LT312200	2073487
					150 mm	LL3-LM31150	2073483
					1,500 mm	LL3-LM311500	2073486
					300 mm	LL3-LM31300	2079212
					450 mm	LL3-LM31450	2073484
					750 mm	LL3-LM31750	2073485

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Smooth sleeve, Long end sleeve
- **Fiber material:** glass

Fiber head material	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
-	5.8 mm	No	Yes	No	450 mm	LL3-LT31450	2077269
						LL3-LT31450S01	2088456
Aluminum	5.8 mm	No	Yes	No	750 mm	LL3-LT31750	2074450

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex, KTL180
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Threaded sleeve, 90° deflection
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber-optic cable cuttable	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
✓	M6	No	No	No	2,000 mm	LL3-DB09	5325991

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Threaded sleeve, 90° deflection
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
Plastic	✓	M6	Yes	No	Yes	2,000 mm	LL3-DV05	5322549
							LL3-DV06	5322550
							LL3-DV07	5322551

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Threaded sleeve, 90° deflection
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
Brass	✓	M3	No	No	No	1,000 mm	LL3-DV08	5336171

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Flat type, 90° deflection
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Plastic	✓	-	No	-	2,000 mm	LL3-DC07	5326019
					1,000 mm	LL3-DC08	5326029
		Yes	No	Yes	1,000 mm	LL3-DE01	5325285
					2,000 mm	LL3-DE03	5325986
						LL3-DC06	5326017
					3,000 mm	LL3-DC04	5326018
					2,000 mm	LL3-DC39	5322513
Stainless steel	✓	No	No	No	2,000 mm	LL3-DC47	5324268

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Flat type
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Plastic	✓	No	No	No	2,000 mm	LL3-DE04	5325987
					1,000 mm	LL3-DE02	5324497

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Flat type
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Plastic	✓	-	No	-	2,000 mm	LL3-DR09	5325528
		Yes	No	Yes	4,000 mm	LL3-DC03	5326020
					2,000 mm	LL3-RR01	5326008

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Flat type
- **Fiber material:** glass
- **Jacket material:** stainless steel

Fiber head material	Compatibility with infrared light (1,450 nm)	Fiber length	Type	Part no.
Plastic	Yes	3,000 mm	LL3-DH10	5326023

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Flat type
- **Fiber material:** plastic
- **Jacket material:** stainless steel

Fiber head material	Fiber-optic cable cuttable	Compatibility with infrared light (1,450 nm)	Fiber length	Type	Part no.
Plastic	✓	No	3,000 mm	LL3-DH11	5326024

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Flat type
- **Fiber material:** plastic
- **Jacket material:** chemical-resistant plastic

Fiber head material	Fiber-optic cable cuttable	Compatibility with infrared light (1,450 nm)	Fiber length	Type	Part no.
Stainless steel	✓	Yes	2,000 mm	LL3-DH08	5326025

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Flat type, 90° deflection
- **Fiber material:** glass
- **Jacket material:** stainless steel

Fiber head material	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Aluminum	No	Yes	No	10,000 mm	LL3-DH5010000	2106741
				500 mm	LL3-DH50500	2083802
Stainless steel	Yes	Yes	No	2,000 mm	LL3-DH06	5326026

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, KTL180
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Flat type
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Plastic	✓	Yes	No	Yes	2,000 mm	LL3-DC09	5326028

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Flat type, 90° deflection
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Plastic	✓	No	No	No	2,000 mm	LL3-TE04	5325911
		Yes	No	Yes	2,000 mm	LL3-TR12	5325907
						LL3-TE03	5325908
						LL3-TR13	5325909
						LL3-TR05	5325808
						LL3-TE05	5325914
Stainless steel	✓	No	No	No	2,000 mm	LL3-DC57	5324269

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Threaded sleeve, Long end sleeve
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Stainless steel	✓	M3	No	No	No	500 mm	LL3-DT02	5308085
							LL3-DT04	5308086
		M4	No	No	No	2,000 mm	LL3-DK63Z	5313027
							LL3-DT05	5313028
	-	M3	No	No	No	1,000 mm	LL3-DB05	5326002

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Threaded sleeve, Long end sleeve, Bendable sleeve
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Brass	✓	M4	No	No	No	2,000 mm	LL3-DB08	5326004
							LL3-DR10	5326005
Stainless steel	✓	M3	No	No	No	2,000 mm	LL3-DM04	5337948
							M4	No
		LL3-DM03-3	5326721					

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Threaded sleeve, Long end sleeve, Bendable sleeve
- **Fiber material:** glass
- **Jacket material:** stainless steel

Fiber head material	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Brass	M4	No	Yes	No	1,000 mm	LL3-DH05	5326021
						LL3-DH055000	5340697
	M6	No	Yes	No	2,000 mm	LL3-DH04	5326022

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Threaded sleeve, Long end sleeve, Bendable sleeve
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
Stainless steel	✓	M6	No	No	No	2,000 mm	LL3-DB06	5326006
							LL3-DB02	5308083
						10,000 mm	LL3-DB02-10	5328568

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Smooth sleeve, Long end sleeve
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
Stainless steel	✓	3 mm	No	No	No	1,000 mm	LL3-DR07	5326007

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Smooth sleeve, Long end sleeve
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
Stainless steel	✓	4 mm	No	No	No	2,000 mm	LL3-DK43	5313030

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Smooth sleeve, Long end sleeve, 90° deflection
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
Stainless steel	✓	5 mm	No	No	No	2,000 mm	LL3-DV01	5308088
							LL3-DK33	5313031
						9,000 mm	LL3-DV019000	5335399

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Threaded sleeve, Long end sleeve, 90° deflection
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
Stainless steel	✓	M6	No	No	No	2,000 mm	LL3-DV03	5308090

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex, KTL180
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Flat type, Array
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Plastic	✓	Yes	No	Yes	2,000 mm	LL3-DZ01	5326013

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Flat type, Array
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Brass	✓	No	No	No	2,000 mm	LL3-DZ02	5326014
					10,000 mm	LL3-DZ0210000	5334006

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Flat type, 90° deflection, Array
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Brass	✓	No	No	No	2,000 mm	LL3-DZ03	5326015

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Threaded sleeve
- **Fiber material:** glass
- **Jacket material:** stainless steel

Fiber head material	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Brass	M4	No	Yes	No	1,000 mm	LL3-DH07	5326031
					2,000 mm	LL3-DH072000	5342745
	M6	No	Yes	No	2,000 mm	LL3-DH03	5324787
					3,000 mm	LL3-DH03-03	5324788
					750 mm	LL3-DH03750	5340698
Stainless steel	M6	No	Yes	No	1,000 mm	LL3-DW01	5315234
					2,000 mm	LL3-DW01-2	5324789
					10,000 mm	LL3-DW0110000	5343668
					2,500 mm	LL3-DW012500	5344273
					3,000 mm	LL3-DW013000	5344274
					5,000 mm	LL3-DW01-5	5326221

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex, KTL180
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Smooth sleeve
- **Fiber material:** plastic
- **Jacket material:** chemical-resistant plastic

Fiber head material	Fiber-optic cable cuttable	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
Chemical-resistant plastic	✓	6 mm	No	No	No	2,000 mm	LL3-DY01	5308093

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Smooth sleeve
- **Fiber material:** plastic
- **Jacket material:** chemical-resistant plastic

Fiber head material	Fiber-optic cable cuttable	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
Chemical-resistant plastic	✓	6 mm	No	No	No	4,000 mm	LL3-DB114000	5338927

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Smooth sleeve, 90° deflection
- **Fiber material:** plastic
- **Jacket material:** chemical-resistant plastic

Fiber head material	Fiber-optic cable cuttable	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
Chemical-resistant plastic	✓	6 mm	No	No	No	4,000 mm	LL3-DV114000	5338928

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Flat type, 90° deflection
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Plastic	✓	Yes	No	Yes	3,000 mm	LL3-DC05	5326016

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, KTL180
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Flat type, 90° deflection
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Plastic	✓	Yes	No	Yes	2,000 mm	LL3-DC38	5322472

- **Type:** fibers
- **Detection principle:** Proximity system

Compatibility with infrared light (1,450 nm)	Fiber length	Type	Part no.
No	2,000 mm	LL3-RG01	5326012

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Array
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Plastic	✓	No	No	No	2,000 mm	LL3-DF07	5326033
					10,000 mm	LL3-DF0710000	5340780
					5,000 mm	LL3-DF075000	5338077

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** special design
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Chemical-resistant plastic	✓	-	No	-	5,000 mm	LL3-DW02	5325608
Plastic	✓	No	No	No	2,000 mm	LL3-DF05	5326034
						LL3-DF04	5326035

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Proximity system
- **Fiber-optic head design:** special design
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Chemical-resistant plastic	✓	–	No	No	No	235 mm	LL3-DF02-S02	5327922
		5 mm	No	No	No	2,000 mm	LL3-DF02-S01	5321924
							234 mm	LL3-DF02-S03

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** special design
- **Fiber material:** plastic
- **Jacket material:** chemical-resistant plastic

Fiber head material	Fiber-optic cable cuttable	Compatibility with infrared light (1,450 nm)	Fiber length	Type	Part no.
Chemical-resistant plastic	✓	No	2,000 mm	LL3-DF03	5336766

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Threaded sleeve
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Brass	✓	M4	–	Yes	–	2,000 mm	LL3-TH17	5325967
			No	No	No	2,000 mm	LL3-TK77	5313035
							LL3-TR01	5308052
							LL3-TR01-05	5322198
						2,000 mm	LL3-TH01	5308064
						5,000 mm	LL3-TH01-05	5329380

Fiber head material	Fiber-optic cable cuttable	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60 °	Fiber-length	Type	Part no.	
Stainless steel	✓	M12	Yes	No	Yes	20,000 mm	LL3-TX01	5324173	
							LL3-TX01S01	5343641	
							LL3-TX02	5325046	
						1,000 mm	LL3-TX02-01	5328256	
						10,000 mm	LL3-TX02-10	5326380	
						M4	No	No	No
		10,000 mm	LL3-TB01-10	5308051					
		30,000 mm	LL3-TB01-30	5315499					
		2,000 mm	LL3-TB02	5308048					
		1,000 mm	LL3-TJ01	5325915					
		2,000 mm	LL3-TH02	5308065					
		5,000 mm	LL3-TH02-05	5329394					

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Threaded sleeve
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60 °	Fiber-length	Type	Part no.
Stainless steel	✓	M3	No	No	No	2,000 mm	LL3-TR02	5308053
							LL3-TM01	5308068
							LL3-TM02	5308069

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Threaded sleeve
- **Fiber material:** plastic
- **Jacket material:** stainless steel

Fiber head material	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60 °	Fiber length	Type	Part no.
Stainless steel	M12	Yes	No	Yes	1,000 mm	LL3-TX03-01	5328257

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Smooth sleeve
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
Stainless steel	✓	–	Yes	No	Yes	2,000 mm	LL3-TG03	5325942
		1 mm	No	No	No	500 mm	LL3-TR04	5325918
		2.5 mm	No	No	No	2,000 mm	LL3-TB07	5325919
		3 mm	No	No	No	2,000 mm	LL3-TS07	5308049
			Yes	No	Yes		LL3-TK05	5313034
						4,000 mm	LL3-TK054000	5339333
		2,000 mm	LL3-TR10	5325920				

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Smooth sleeve
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
Brass	✓	3 mm	No	No	No	500 mm	LL3-TP01	5325925
Stainless steel	✓	1.5 mm	No	No	No	1,000 mm	LL3-TR03	5308054
						2,000 mm	LL3-TR03-2	5308055
							LL3-TM03	5308070
		3 mm	No	No	No	2,000 mm	LL3-TT01	5308057

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Smooth sleeve, Long end sleeve, 90° deflection
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
–	✓	2.5 mm	–	–	–	1,000 mm	LL3-TH06	5325926
Stainless steel	✓	2 mm	–	No	–	2,000 mm	LL3-TG05	5325921
		2.5 mm	No	No	No	2,000 mm	LL3-TV02	5308059

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Smooth sleeve, Long end sleeve, 90° deflection
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Stainless steel	✓	2 mm	Yes	No	Yes	2,000 mm	LL3-TV08	5325922
		3 mm	No	No	No	2,000 mm	LL3-TV01	5308058

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Smooth sleeve, Long end sleeve
- **Fiber material:** glass
- **Jacket material:** plastic

Fiber head material	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Aluminum	5.8 mm	No	Yes	No	450 mm	LL3-LM32450	2073499
					750 mm	LL3-LM32750	2073500

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Flat type, 90° deflection
- **Fiber material:** glass
- **Jacket material:** plastic

Fiber head material	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Aluminum	No	Yes	No	750 mm	LL3-LM38750	2073503
				150 mm	LL3-LM38150	2073501
				450 mm	LL3-LM38450	2073502
					LL3-LM39450	2073505
				750 mm	LL3-LM39750	2073506
	Yes	Yes	Yes	750 mm	LL3-LM38751	2073504

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Threaded sleeve, 90° deflection
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
-	✓	M4	No	No	No	2,000 mm	LL3-TR08	5325984
						10,000 mm	LL3-TR0810000	5334038
						2,000 mm	LL3-TV77	5326557
			Yes	No	Yes	2,000 mm	LL3-TR09	5325985
						5,000 mm	LL3-TR095000	5336564
						5,000 mm	LL3-TV055000	5336527
Plastic	✓	M4	Yes	No	Yes	2,000 mm	LL3-TV05	5322546
						2,000 mm	LL3-TV06	5322547
						2,000 mm	LL3-TV07	5322548
						3,000 mm	LL3-TV05-3	5326073
						2,000 mm	LL3-TB06	5325916

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Smooth sleeve, 90° deflection
- **Fiber material:** glass
- **Jacket material:** stainless steel

Fiber head material	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Brass	4 mm	Yes	No	No	2,000 mm	LL3-TH15	5325975
						LL3-TH16	5325976
Stainless steel	4 mm	No	Yes	No	2,000 mm	LL3-TH07	5325977

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Smooth sleeve, 90° deflection
- **Fiber material:** plastic
- **Jacket material:** chemical-resistant plastic

Fiber head material	Fiber-optic cable cuttable	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber-length	Type	Part no.
Chemical-resistant plastic	✓	5 mm	Yes	No	Yes	3,000 mm	LL3-TY03	5325982
						6,000 mm	LL3-TY036000	5336504

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Proximity system
- **Fiber-optic head design:** Flat type, 90° deflection
- **Fiber material:** glass
- **Jacket material:** plastic

Fiber head material	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Aluminum	No	Yes	No	1,000 mm	LL3-LM361000	2073494
				1,250 mm	LL3-LM361250	2073495
				150 mm	LL3-LM36150	2073491
				450 mm	LL3-LM36450	2073492
				750 mm	LL3-LM36750	2073493
				150 mm	LL3-LM37150	2073496
				450 mm	LL3-LM37450	2073497
				750 mm	LL3-LM37750	2073498

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Threaded sleeve, 90° deflection
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Fiber length	Type	Part no.
Plastic	✓	10,000 mm	LL3-TV0510000	5337026

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Flat type
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Plastic	✓	No	No	No	1,000 mm	LL3-TE02	5325910
		Yes	No	Yes	2,000 mm	LL3-TR11	5325906
					1,000 mm	LL3-TE01	5325807
					2,000 mm	LL3-TR06	5325912

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Threaded sleeve, Long end sleeve, Bendable sleeve
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60 °	Fiber-length	Type	Part no.
Stainless steel	✓	M4	No	No	No	2,000 mm	LL3-TB03	5308056
							LL3-TB03S01	5344077

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Threaded sleeve, Long end sleeve, 90° deflection
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60 °	Fiber-length	Type	Part no.
Stainless steel	✓	M3	No	No	No	2,000 mm	LL3-TV04	5308060

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Smooth sleeve, 90° deflection
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60 °	Fiber-length	Type	Part no.
Stainless steel	✓	3 mm	No	No	No	2,000 mm	LL3-TS08	5308061

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** 90° deflection
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60 °	Fiber length	Type	Part no.
Plastic	✓	Yes	No	Yes	2,000 mm	LL3-TG02	5325943
Stainless steel	✓	Yes	No	Yes	2,000 mm	LL3-TS12	5308062
						LL3-TK16	5313038

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Threaded sleeve, Long end sleeve, Bendable sleeve
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Stainless steel	✓	M3	No	No	No	2,000 mm	LL3-TB05	5325924

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Flat type, 90° deflection, Array
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Brass	✓	No	No	No	2,000 mm	LL3-TS10	5308063
						LL3-TZ06	5325938
						LL3-TS11	5338673
Plastic	✓	Yes	No	Yes	2,000 mm	LL3-TS40	5323971
					5,000 mm	LL3-TS40-5	5328527
Stainless steel	✓	-	No	-	2,000 mm	LL3-TS05	5334043

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Flat type, Array
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Brass	✓	No	No	No	2,000 mm	LL3-TS14	5313039
						LL3-TZ05	5325937

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Flat type, 90° deflection, Array
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Brass	✓	Yes	No	Yes	2,000 mm	LL3-TZ09	5326598
						LL3-TZ10	5326599

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Threaded sleeve
- **Fiber material:** glass
- **Jacket material:** stainless steel

Fiber head material	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.	
Brass	M4	No	No	No	2,000 mm	LL3-TH12	5325972	
						LL3-TH13	5325973	
						LL3-TH14	5325974	
			Yes	No	2,000 mm	LL3-TH08	5325978	
						LL3-TH09	5325979	
						5,000 mm	LL3-TH08-05	5329554
						3,000 mm	LL3-TH08-3	5328051
Stainless steel	M4	No	No	No	1,000 mm	LL3-TW01	5315233	
					2,000 mm	LL3-TW01-2	5321306	
			Yes	No	15,000 mm	LL3-TW0115000	2115488	
					2,000 mm	LL3-TW012000S03	5337904	
					3,000 mm	LL3-TW01-3	5326722	
						LL3-TW013000S04	5337905	
					4,000 mm	LL3-TW014000	5339218	
						LL3-TW014000S05	5337906	
					5,000 mm	LL3-TW015000	2081220	
LL3-TW015000S06	5337907							

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Threaded sleeve
- **Fiber material:** glass
- **Jacket material:** chemical-resistant plastic

Fiber head material	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Brass	M4	No	Yes	No	1,000 mm	LL3-TH10	5325970

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Threaded sleeve
- **Fiber material:** glass
- **Jacket material:** plastic

Fiber head material	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Brass	M4	No	Yes	No	1,000 mm	LL3-TH11	5325971

- **Type:** fibers
- **Detection principle:** Through-beam system

Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
M4	No	Yes	No	195 mm, 545 mm	LL3-TH08S01	5337056

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Threaded sleeve
- **Fiber material:** glass
- **Jacket material:** stainless steel

Fiber head material	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Stainless steel	M4	No	No	No	1,300 mm	LL3-TN011300	5338641

- **Type:** fibers
- **For fiber-optic sensor:** WLL24 Ex
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Threaded sleeve
- **Fiber material:** glass
- **Jacket material:** stainless steel

Fiber head material	Thread diameter (housing)	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Stainless steel	M4	No	Yes	No	2,000 mm	LL3-TW012000S01	2092707

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Smooth sleeve, Long end sleeve
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Plastic	✓	3.7 mm	Yes	No	Yes	2,000 mm	LL3-TG01	5325940

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** 90° deflection
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber-optic cable cuttable	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
✓	Yes	No	Yes	2,000 mm	LL3-TG04	5324499

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), GLL170(T), WLL180T
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** 90° deflection, Smooth sleeve, 90° deflection
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Stainless steel	✓	Yes	No	Yes	2,000 mm	LL3-TS22	5325944
						LL3-TS22M	5325968

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Smooth sleeve
- **Fiber material:** plastic
- **Jacket material:** chemical-resistant plastic

Fiber head material	Fiber-optic cable cuttable	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Chemical-resistant plastic	✓	6 mm	Yes	No	Yes	2,000 mm	LL3-TY01	5308066

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** 90° deflection
- **Fiber material:** plastic
- **Jacket material:** chemical-resistant plastic

Fiber head material	Fiber-optic cable cuttable	Smooth sleeve diameter	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Chemical-resistant plastic	✓	6 mm	Yes	No	Yes	2,000 mm	LL3-TY02	5308067

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T, WLL24 Ex
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** Flat type, 90° deflection
- **Fiber material:** plastic
- **Jacket material:** chemical-resistant plastic

Fiber head material	Fiber-optic cable cuttable	Integrated lens	Compatibility with infrared light (1,450 nm)	Angle of dispersion < 60°	Fiber length	Type	Part no.
Chemical-resistant plastic	✓	Yes	No	Yes	2,000 mm	LL3-TY05	5325980

- **Type:** fibers
- **For fiber-optic sensor:** GLL170(T), WLL180T
- **Detection principle:** Through-beam system
- **Fiber-optic head design:** special design
- **Fiber material:** plastic
- **Jacket material:** plastic

Fiber head material	Fiber-optic cable cuttable	Integrated lens	Compatibility with infrared light (1,450 nm)	Fiber length	Type	Part no.
Plastic	✓	Yes	No	2,000 mm	LL3-TF01	5324242

- **Type:** Adapter lens for proximity fibers
- **Detection principle:** Proximity system

Thread diameter (housing)	Type	Part no.
M3	LL3-DA01	5308127
	LL3-DA02	5308130
	LL3-DA03	5326465
	LL3-DA04	5326466
	LL3-DA08	5334039
M4	LL3-DA05	5326467
	LL3-DA06	5326468
	LL3-DA07	5326469
	LL3-DA09	5334040

- **Type:** Tip adapter for fiber through-beam system
- **Detection principle:** Through-beam system

Thread diameter (housing)	Type	Part no.
M2.6	LL3-TA01	5308128
	LL3-TA01IR	5328271
	LL3-TA01S	5326461
	LL3-TA02	5308129
	LL3-TA03	5326462
	LL3-TA05	5326464
	LL3-TA06	5338873
	LL3-TA07	5338642
M4	LL3-TA04	5326463

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