

OC10 SERIES

ARTICLE PROPERTIES

SENSOR TYPE	Fiber optic sensor with 1 display	CONNECTION TYPES (see table)
FUNCTION TYPE	High-performance single type	- Cable PVC, 0.18 mm², 2 m** - M8 connector
OPERATING DISTANCE	Depends on the fiber optic used	
DETECTION MODE	Depends on the fiber optic used	** Other cable lengths are available on request

TECHNICAL DATA

OPERATING VOLTAGE	10 ... 30 V DC	RESPONSE TIME	23 μs / 50 μs / 250 μs / 500 μs / 1 ms / 4 ms / 16 ms
RIPPLE VOLTAGE	≤ 10 %	HOUSING MATERIAL	PC
LIGHT SOURCE	Red 4-element LED (wavelength 660 nm)	VOLTAGE WITHSTANDING	650 V/AC, 50/60 Hz, 60 s
OUTPUT	PNP / NPN	REVERSE POLARITY PROTECTION	Yes
SWITCHING MODE	Light on / Dark on, switchable	OVERLOAD RESISTANCE	Yes (1 kV / 0.5 J)
OUTPUT CURRENT	≤ 100 mA (1-output), Total ≤ 100 mA (2-output)	SHORT CIRCUIT PROTECTION	Yes

ENVIRONMENTAL CONDITIONS

OPERATING ENVIRONMENT HUMIDITY	35 % to 85 % RH (no condensation)	INSULATION IMPEDENCE	≥ 50 MΩ (500 V DC)
PROTECTION CLASS	IP50	SHOCK RESISTANCE (EN 60068-2-27)	500 m/s ² (50 G) 3 times X, Y, Z respectively
STORAGE TEMPERATURE	-40 ... +70 °C	IMPACT RESISTANCE (EN 60068-2-6)	Complex amplitude 1.5 mm 10 ... 50 Hz (2hr X, Y, Z respectively)
AMBIENT TEMPERATURE	-20 ... +55 °C	ANTI-AMBIENT LIGHT	Incandescent light: ≤ 20000 Lux Sunlight: ≤ 30000 Lux

STANDARDS AND DIRECTIVES

EMC DIRECTIVE 2014/30/EU	EN IEC 60947-5-2	ROHS DIRECTIVE 2011/65/EU	EN IEC 63000
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APPROVALS



OC10 SERIES

PRODUCT TYPE

Article number	Control output	External input	Output	Switching mode	Connection	Wiring	Dimensions
OC10-CNLX	1 output	— —	NPN	Light on / Dark on	2 m cable	WD1	see Fig. 1
OC10-CPLX	1 output	— —	PNP	Light on / Dark on	2 m cable	WD1	see Fig. 1
OC10-IC2NLX	2 output	1 input	NPN	Light on / Dark on	2 m cable	WD3	see Fig. 1
OC10-IC2PLX	2 output	1 input	PNP	Light on / Dark on	2 m cable	WD3	see Fig. 1
OC10-ICNLQ8	1 output	1 input	NPN	Light on / Dark on	M8 connector	WD2	see Fig. 2
OC10-ICPLQ8	1 output	1 input	PNP	Light on / Dark on	M8 connector	WD2	see Fig. 2
OC10-C2NLQ8	2 output	— —	NPN	Light on / Dark on	M8 connector	WD4	see Fig. 2
OC10-C2PLQ8	2 output	— —	PNP	Light on / Dark on	M8 connector	WD4	see Fig. 2

DIMENSIONS

Fig. 1 OC10-CNLX/OC10-CPLX OC10-IC2NLX/OC10-IC2PLX

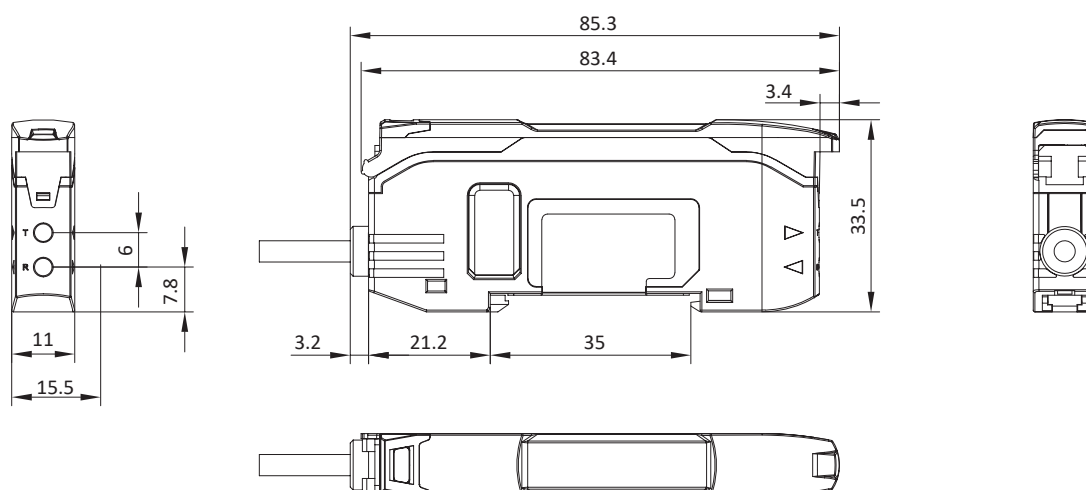
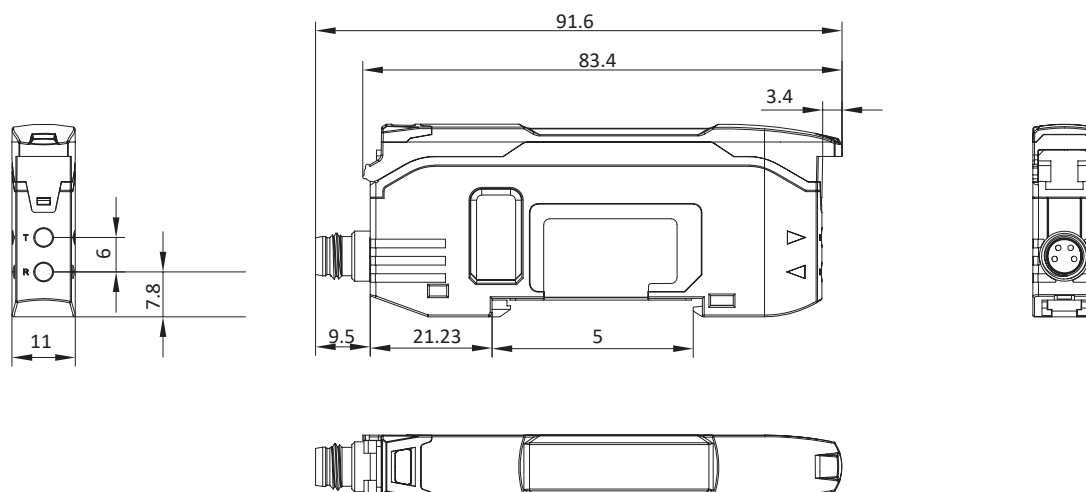
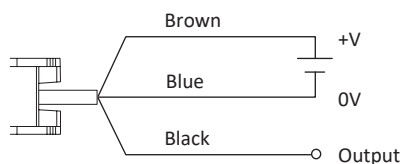
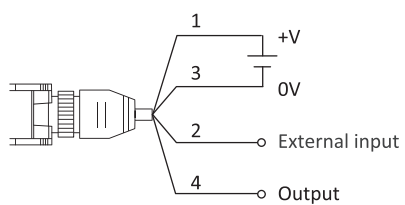


Fig. 2 OC10-ICNLQ8/OC10-ICPLQ8 OC10-C2NLQ8 / OC10-C2PLQ8



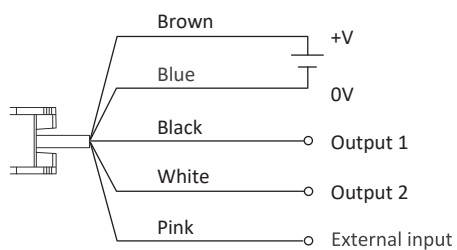
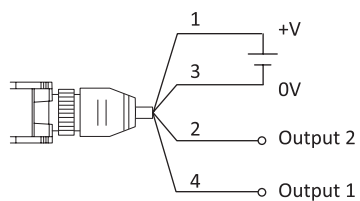
OC10 SERIES

WIRING DIAGRAMS

WD1 OC10-CNLX/OC10-CPLX**WD2** OC10-ICNLQ8/OC10-ICPLQ8

M8 Connector pin

Number	Cable color	Function
1	Brown	+V
2	White	External input
3	Blue	0 V
4	Black	Output

WD3 OC10-IC2NLX/OC10-IC2PLX**WD4** OC10-C2NLQ8 / OC10-C2PLQ8

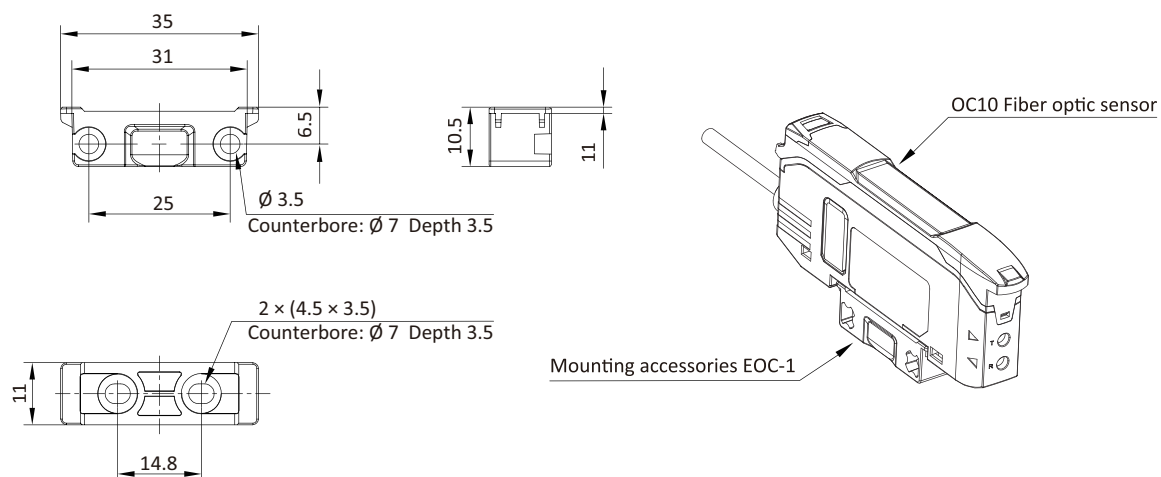
M8 Connector pin

Number	Cable color	Function
1	Brown	+V
2	White	Output 2
3	Blue	0 V
4	Black	Output 1

OC10 SERIES

ACCESSORIES

EOC10-1

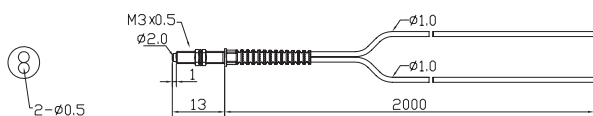


Product name	Mounting accessories
Function	It is connected to the fiber optic sensor and provides two mounting holes
Material	Plastic

OC10-CABLE

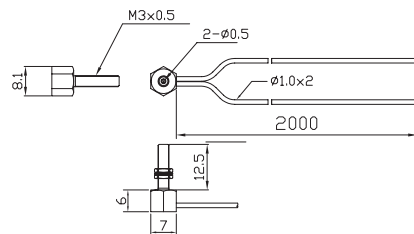
STANDARD FIBER OPTIC - DIFFUSED

OCK-C01-M3



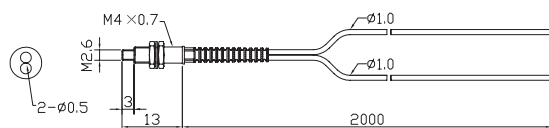
Fiber optic material	Plastic fiber optic
Fiber optic diameter	D: Ø 1.0 mm, Ø 1.0 mm d: Ø 0.5 mm, Ø 0.5 mm
Temperature resistance	-55 ... +70 °C
Minimum bending radius	R15

OCK-C01R-M3



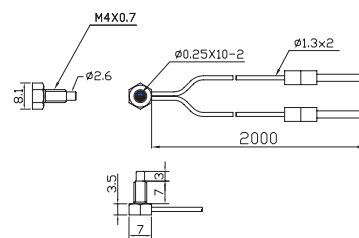
Fiber optic material	Plastic fiber optic
Fiber optic diameter	D: Ø 1.0 mm, Ø 1.0 mm d: Ø 0.5 mm, Ø 0.5 mm
Temperature resistance	-55 ... +70 °C
Minimum bending radius	R15

OCK-C01-M4



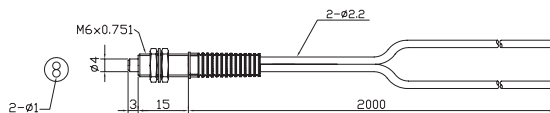
Fiber optic material	Plastic fiber optic
Fiber optic diameter	D: Ø 1.0 mm, Ø 1.0 mm d: Ø 0.5 mm, Ø 0.5 mm
Temperature resistance	-55 ... +70 °C
Minimum bending radius	R15

OCK-C01R-M4



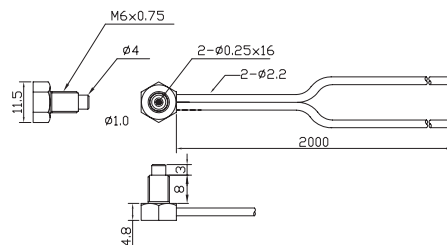
Fiber optic material	Plastic fiber optic
Fiber optic diameter	D: Ø 1.3 mm, Ø 1.3 mm d: Ø 0.25 mm x 10, Ø 0.25 mm x 10
Temperature resistance	-55 ... +70 °C
Minimum bending radius	R15

OCK-C01-M6



Fiber optic material	Plastic fiber optic
Fiber optic diameter	D: Ø 2.2 mm-2 d: Ø 1.0 mm-2
Temperature resistance	-55 ... +70 °C
Minimum bending radius	R25

OCK-C01R-M6

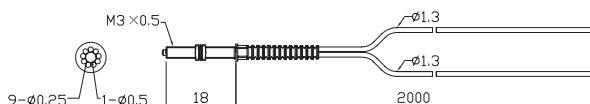


Fiber optic material	Plastic fiber optic
Fiber optic diameter	D: Ø 2.2 mm, Ø 2.2 mm d: Ø 0.25 mm x 16, Ø 0.25 mm x 16
Temperature resistance	-55 ... +70 °C
Minimum bending radius	R5

OC10-CABLE

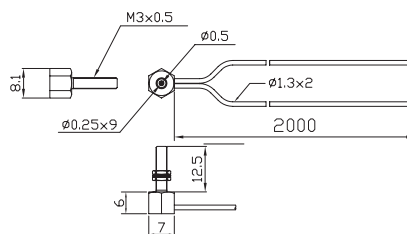
COAXIAL FIBER OPTIC - DIFFUSED

OCK-C02-M3



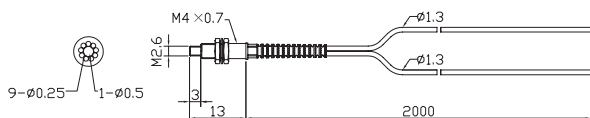
Fiber optic material	Plastic fiber optic
Fiber optic diameter	D: Ø 1.3 mm, Ø 1.3 mm d: Ø 0.5 mm, Ø 0.25 mm x 9
Temperature resistance	-50 ... +70 °C
Minimum bending radius	R4

OCK-C02R-M3



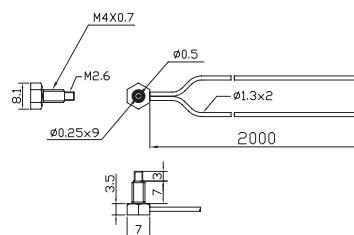
Fiber optic material	Plastic fiber optic
Fiber optic diameter	D: Ø 1.3 mm, Ø 1.3 mm d: Ø 0.5 mm, Ø 0.25 mm x 9
Temperature resistance	-55 ... +70 °C
Minimum bending radius	R4

OCK-C02-M4



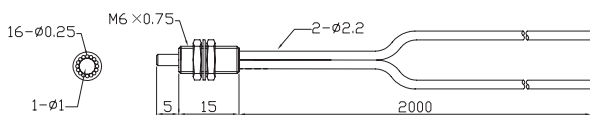
Fiber optic material	Plastic fiber optic
Fiber optic diameter	D: Ø 1.3 mm, Ø 1.3 mm d: Ø 0.5 mm, Ø 0.25 mm x 9
Temperature resistance	-50 ... +70 °C
Minimum bending radius	R4

OCK-C02R-M4



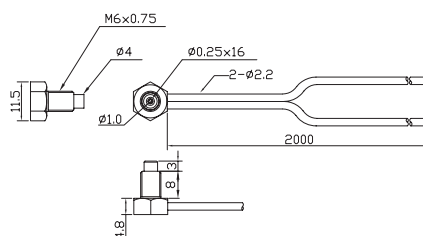
Fiber optic material	Plastic fiber optic
Fiber optic diameter	D: Ø 1.3 mm, Ø 1.3 mm d: Ø 0.5 mm, Ø 0.25 mm x 9
Temperature resistance	-55 ... +70 °C
Minimum bending radius	R4

OCK-C02-M6



Fiber optic material	Plastic fiber optic
Fiber optic diameter	D: Ø 2.2 mm, Ø 2.2 mm d: Ø 1.0 mm, Ø 0.25 mm x 16
Temperature resistance	-50 ... +70 °C
Minimum bending radius	R5

OCK-C02R-M6

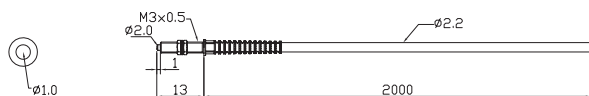


Fiber optic material	Plastic fiber optic
Fiber optic diameter	D: Ø 2.2 mm, Ø 2.2 mm d: Ø 1.0 mm, Ø 0.25 mm x 16
Temperature resistance	-55 ... +70 °C
Minimum bending radius	R5

OC10-CABLE

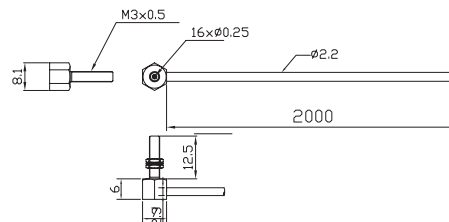
STANDARD FIBER OPTIC - OPPOSED

OCT-C01-M3



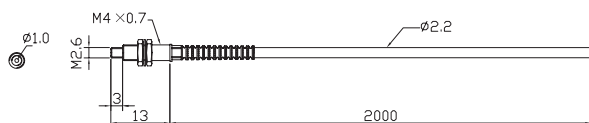
Fiber optic material	Plastic fiber optic
Fiber optic diameter	D: Ø 2.2 mm d: Ø 1.0 mm
Temperature resistance	-55 ... +70 °C
Minimum bending radius	R25

OCT-C01R-M3



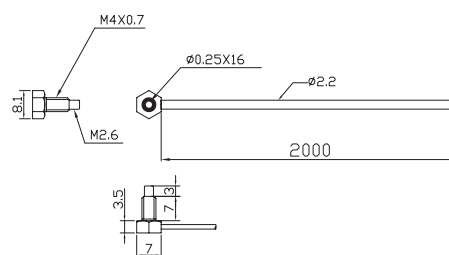
Fiber optic material	Plastic fiber optic
Fiber optic diameter	D: Ø 2.2 mm d: Ø 0.25 mm x 16
Temperature resistance	-55 ... +70 °C
Minimum bending radius	R5

OCT-C01-M4



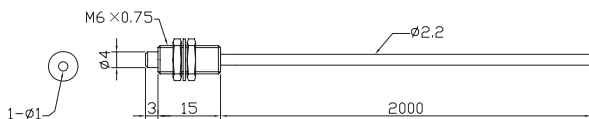
Fiber optic material	Plastic fiber optic
Fiber optic diameter	D: Ø 2.2 mm d: Ø 1.0 mm
Temperature resistance	-55 ... +70 °C
Minimum bending radius	R25

OCT-C01R-M4



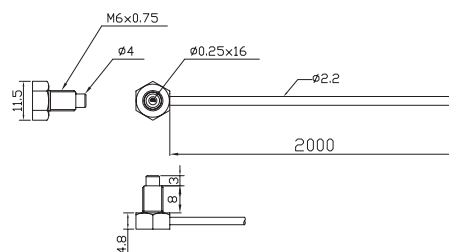
Fiber optic material	Plastic fiber optic
Fiber optic diameter	D: Ø 2.2 mm d: Ø 0.25 mm x 16
Temperature resistance	-55 ... +70 °C
Minimum bending radius	R5

OCT-C01-M6



Fiber optic material	Plastic fiber optic
Fiber optic diameter	D: Ø 2.2 mm d: Ø 1.0 mm
Temperature resistance	-55 ... +70 °C
Minimum bending radius	R25

OCT-C01R-M6

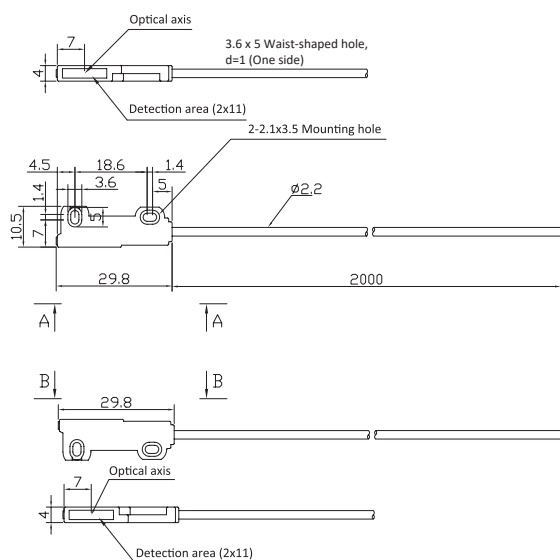


Fiber optic material	Plastic fiber optic
Fiber optic diameter	D: Ø 2.2 mm d: Ø 0.25 mm x 16
Temperature resistance	-55 ... +70 °C
Minimum bending radius	R5

OC10-CABLE

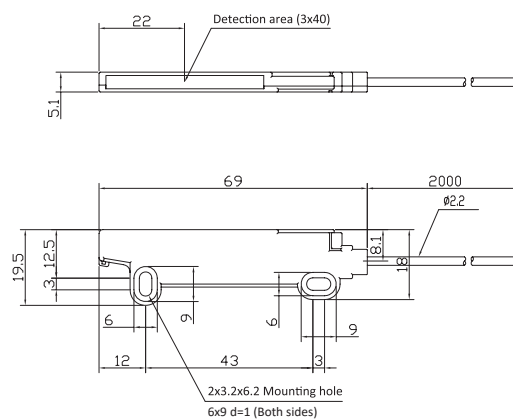
AREA FIBER OPTIC - OPPOSED

OCT-C01-A11



Fiber optic material	Plastic fiber optic
Fiber optic diameter	D: Ø 2.2 mm d: Ø 1.0
Temperature resistance	-55 ... +70 °C
Minimum bending radius	R25

OCT-C01-A40

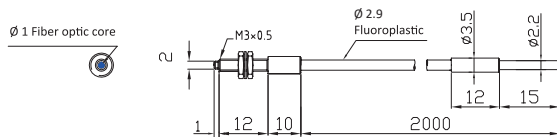


Fiber optic material	Plastic fiber optic
Fiber optic diameter	D: Ø 2.2 mm d: Ø 1.0
Temperature resistance	-55 ... +70 °C
Minimum bending radius	R25

OC10-CABLE

HIGH-TEMPERATURE RESISTANT FIBER OPTIC
(200 °C) - OPPOSED

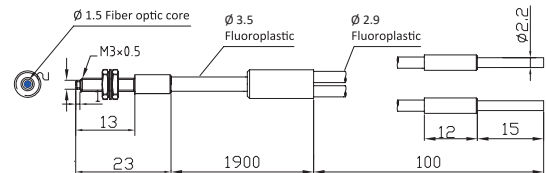
OCT-C01-M3/T200



Fiber optic material	Glass fiber optic
Fiber optic diameter	Ø 2.9; Ø 1.0
Temperature resistance	-55 ... +200 °C
Minimum bending radius	R25

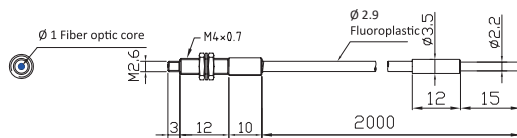
HIGH-TEMPERATURE RESISTANT FIBER OPTIC
(200 °C) - DIFFUSED

OCK-C01-M3/T200



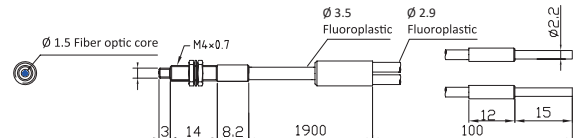
Fiber optic material	Glass fiber optic
Fiber optic diameter	Ø 3.5; Ø 1.5
Temperature resistance	-55 ... +200 °C
Minimum bending radius	R25

OCT-C01-M4/T200



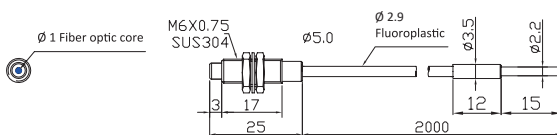
Fiber optic material	Glass fiber optic
Fiber optic diameter	Ø 2.9; Ø 1.0
Temperature resistance	-55 ... +200 °C
Minimum bending radius	R25

OCK-C01-M4/T200



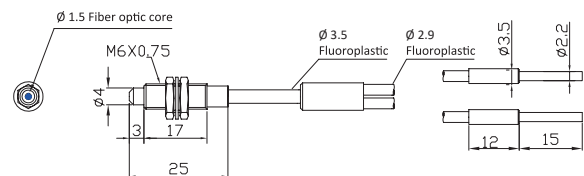
Fiber optic material	Glass fiber optic
Fiber optic diameter	Ø 3.5; Ø 1.5
Temperature resistance	-55 ... +200 °C
Minimum bending radius	R25

OCT-C01-M6/T200



Fiber optic material	Glass fiber optic
Fiber optic diameter	Ø 2.9; Ø 1.0
Temperature resistance	-55 ... +200 °C
Minimum bending radius	R25

OCK-C01-M6/T200



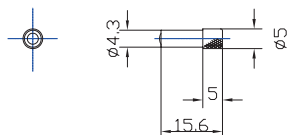
Fiber optic material	Glass fiber optic
Fiber optic diameter	Ø 3.5; Ø 1.5
Temperature resistance	-55 ... +200 °C
Minimum bending radius	R25

*High-temperature optical fibers can provide products resistant to temperatures up to 350 °C

OC10-CABLE

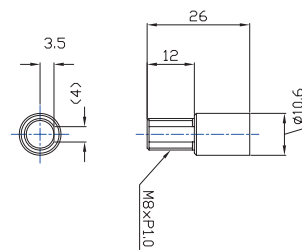
FIBER OPTIC ACCESSORIES - LENS

OCK-2HA/M3 Diffused



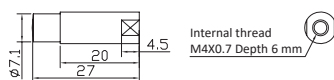
Name	Small light spot lens
Material	Aluminum + plastic
Spot diameter	About $\varnothing 0.1 \dots \varnothing 0.4$
Temperature	-60 ... +70 °C
Detection distance	7±2 mm

OCK-6HA/M3 Diffused



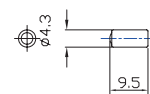
Name	Small light spot lens
Material	Aluminum + plastic
Spot diameter	About $\varnothing 1 \dots \varnothing 2$
Temperature	-60 ... +70 °C
Detection distance	35±2 mm

OCK-MR2/M4 Diffused



Name	Zoom lens
Material	Aluminum + glass
Spot diameter	About $\varnothing 0.71 \dots \varnothing 2$
Temperature	-60 ... +350 °C
Detection distance	43±2 mm

OCT-4/M4 Opposed



Name	Ultra-long distance lens
Material	Copper + glass
Temperature	-60 ... +70 °C
Detection distance	3.6 m

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