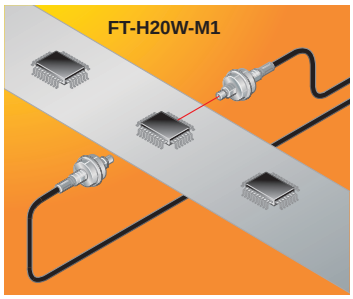
Heat-resistant

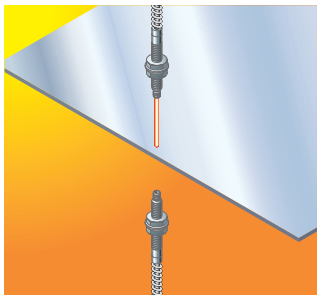
- It can be used under environments of -60 to +350 °C -76 to +662 °F.
- A joint type for wider workability is also available.

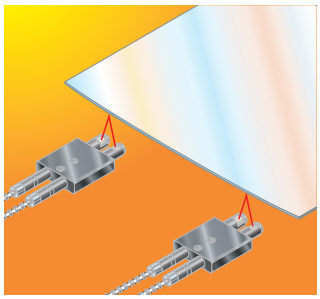
Applications

IC detection within a high temperature handler



Detecting glass substrates





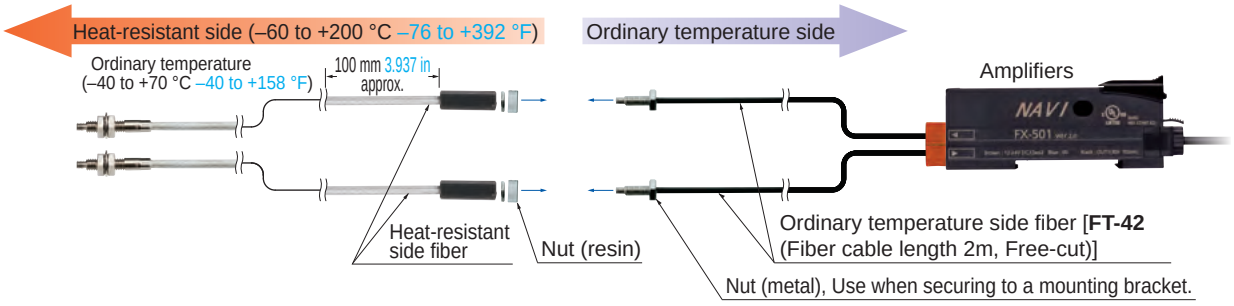
LIST OF FIBERS

Thru-beam type (one pair set)

Type	Heat-resistant temp.	Shape of fiber head (mm)	Model No.	Bending radius (mm)	Fiber cable length ✂: Free-cut	Sensing range (mm in) (Note 1) FX-500 series	Sensing range (mm in) (Note 1) U-LG LONG FAST H-SP	Sensing range (mm in) (Note 1) FX-101 (Upper value) FX-102 (Lower value)	Beam axis dia. (mm)	Ambient temp.	Dimensions
Heat-resistant	350 °C	Lens mountable (FX-LE1/LE2/SV1) M4 30	FT-H35-M2	R25	2 m	STD 430 16.929 HYPR 1,200 47.244	880 34.646 670 26.378 250 9.843 80 3.150	170 6.693 490 19.291	ø1.2	–60 to +350 °C	P.50
		Sleeve 60 mm M4 ø2.1 27	FT-H35-M2S6	Fiber R25 Sleeve R10							
	200 °C	Allows flexible wiring Lens mountable (FX-LE1/LE2/SV1) M4 23	FT-H20W-M1	R10	1 m	STD 470 18.504 HYPR (Note 2) 1,600 62.992	1,000 39.370 840 33.071 300 11.811 90 3.543	100 3.937 300 11.811	ø0.8	–60 to +200 °C	
		Lens mountable (FX-LE1/LE2/SV1) M4 23	FT-H20-M1	R25		STD 540 21.260 HYPR (Note 2) 1,600 62.992	1,300 51.181 960 37.795 330 12.992 110 4.331	210 8.268 540 21.260	ø1.2		
	130 °C	Lens mountable (FX-LE2 only) M4 16	FT-H13-FM2		✂ 2 m	STD 700 27.559 HYPR 3,300 129.921	1,900 74.803 1,300 51.181 410 16.142 140 5.512	250 9.843 700 27.559	ø1.5	–60 to +130 °C	P.49
Heat-resistant (joint)	200 °C	Lens mountable (FX-LE1/LE2/SV1) M4 23	FT-H20-J20-S (Note 5)	Heat-resistant side R18 (Note 4)	✂ 200 mm (Note 3)	STD 470 18.504 HYPR 1,600 62.992	1,000 39.370 790 31.102 300 11.811 90 3.543	135 5.315 420 16.535	ø1.2	–60 to +200 °C	P.50
			FT-H20-J30-S (Note 5)		✂ 300 mm (Note 3)						
			FT-H20-J50-S (Note 5)		✂ 500 mm (Note 3)						
		Side-view ø3.8 24 ø4	FT-H20-VJ50-S (Note 5)			STD 600 23.622 HYPR 2,100 82.677	1,300 51.181 980 38.583 390 15.354 120 4.724	150 5.906 500 19.685			
			FT-H20-VJ80-S (Note 5)		✂ 800 mm (Note 3)						

Notes: 1) Note that the sensing range of the free-cut type fiber may be reduced by 20 % max. depending upon how the fiber is cut.
2) The fiber cable length practically limits the sensing range.
3) Fiber length (fixed-length) for heat-resistant fiber side. Fiber length for ordinary temperature side is 2 m 6.562 ft (free-cut).
4) Bending durable fiber R4 mm R0.157 in or more for ordinary temperature side.
5) Heat-resistant joint fibers and ordinary-temperature fibers (**FT-42**) are sold as a set.

Heat-resistant joint fiber set contents



Model No. when ordering individually as spare parts

- Heat-resistant side fiber one pair set
  FT-H20-J20, **FT-H20-J30**, **FT-H20-J50**, **FT-H20-VJ50**, **FT-H20-VJ80**
- Ordinary temperature side fiber one pair set
  FT-42

LIST OF FIBERS

Reflective type

Type		Heat-resistant temp.	Shape of fiber head (mm)	Model No.	Bending radius (mm)	Fiber cable length ✂: Free-cut	Sensing range (mm in) (Note 1, 2) FX-500 series	Sensing range (mm in) (Note 1, 2) U-LG LONG FAST H-SP	Sensing range (mm in) (Note 1, 2) FX-101 (Upper value) FX-102 (Lower value)	Ambient temp.	Dimensions
Heat-resistant	Threaded	350 °C	Coaxial M6 25	**FD-H35-M2**	R25	2 m	STD 260 10.236 HYPR 720 28.346	540 21.260 460 18.110 150 5.906 45 1.772	75 2.953 280 11.024	–60 to +350 °C	P.61
			Sleeve 60 mm M6 ø2.8 22	**FD-H35-M2S6**	Fiber R25 Sleeve R10						
			Sleeve 90 mm M4 ø2.1 27	**FD-H35-20S**		1 m	STD 260 10.236 HYPR 840 33.071	550 21.654 440 17.323 140 5.512 45 1.772	85 3.346 200 7.874		
		200 °C	Coaxial M6 28	**FD-H20-M1**	R25		STD 330 12.992 HYPR 840 33.071	550 21.654 500 19.685 200 7.874 55 2.165	120 4.724 300 11.811	–60 to +200 °C	P.60
			Coaxial M4 27	**FD-H20-21**			STD 230 9.055 HYPR 770 30.315	500 19.685 380 14.961 130 5.118 45 1.772	90 3.543 280 11.024		
		130 °C	M6 21	**FD-H13-FM2**		✂ 2 m	STD 350 13.780 HYPR 880 34.646	640 25.197 600 23.622 200 7.874 65 2.559	100 3.937 280 11.024	–60 to +130 °C	
	Glass substrate detection convergent reflective	300 °C	W19 × H27 × D5	**FD-H30-L32**		2 m	STD 17 0.669 HYPR 40 1.575	30 1.181 25 0.984 12 0.472 1.5 to 6 0.059 to 0.236	2 to 9 0.079 to 0.354 0 to 17 0 to 0.669	–60 to +300 °C	P.61
		250 °C	W21 × H33.2 × D5	**FD-H25-L43**		3 m	STD 1.5 to 26 0.059 to 1.024 HYPR 1 to 31 0.039 to 1.220	1 to 30 0.039 to 1.181 1 to 28 0.039 to 1.102 1.5 to 24 0.059 to 0.945 2 to 18 0.079 to 0.709	4 to 16 0.157 to 0.630 4 to 23 0.157 to 0.906	–20 to +250 °C (Ordinary temp. side: –20 to +70 °C)	P.60
			W21 × H34.5 × D5	**FD-H25-L45**			STD 5 to 42 0.197 to 1.654 HYPR 4 to 43.5 0.157 to 1.713	4 to 43 0.157 to 1.693 4.5 to 43 0.177 to 1.693 5 to 40 0.197 to 1.575 6.5 to 34 0.256 to 1.339	7 to 35 0.276 to 1.378 7 to 38 0.276 to 1.496		
		180 °C	W19 × H27 × D5	**FD-H18-L31**		✂ 2 m	STD 16 0.630 HYPR 60 2.362	32 1.260 24 0.945 13 0.512 2 to 6.5 0.079 to 0.256	0 to 10 0 to 0.394 0 to 25 0 to 0.984	–60 to +180 °C	

Notes: 1) The sensing range of reflective type is the value for white non-glossy paper (50 × 50 mm 1.969 × 1.969 in glass substrate for **FD-H30-L32**, **FD-H18-L31**, transparent glass 100 × 100 × t0.7 mm 3.937 × 3.937 × t0.028 in for **FD-H25-L43** and **FD-H25-L45**).
2) Note that the sensing range of the free-cut type fiber may be reduced by 20 % max. depending upon how the fiber is cut.

FIBER OPTION

Lens (For thru-beam type fiber) ▸P.42