

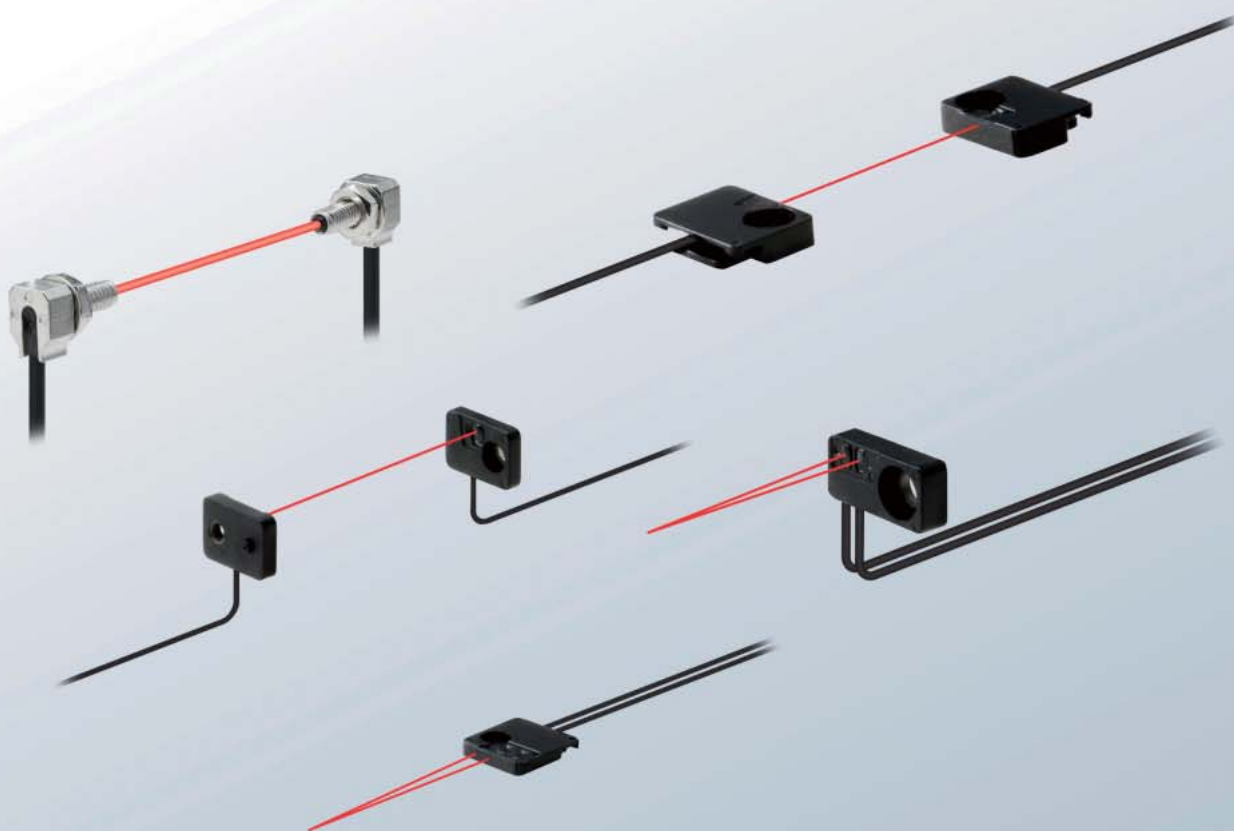


NEW SPACE-SAVING FIBER LINE-UP

FT-WR80(L) FT/FD-WZ□(HB)

Space Saving Fibers

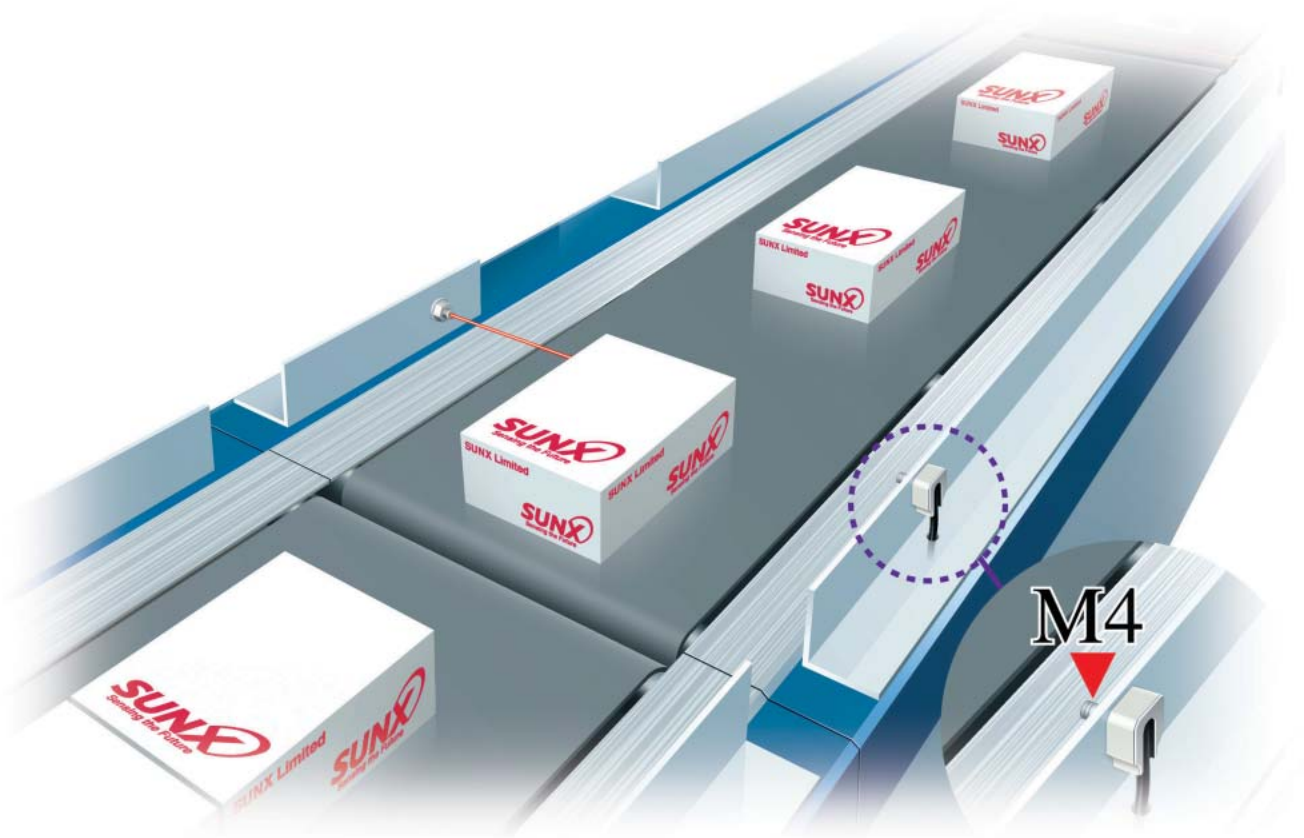
Offering New Advancements in Fiber Integration



Streamlined Fiber Heads!

Introducing our new easy to mount fibers.

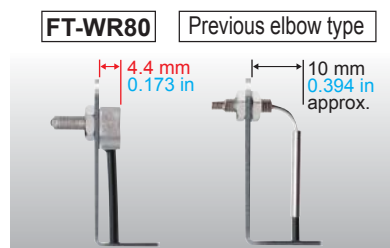
Our new square head fibers are streamlined so that they take up less installation space. A long sensing range of 1500 mm [59.055 in](#) makes them ideal for use on conveyor systems.



Streamlined fibers **FT-WR80, FT-WR80L**

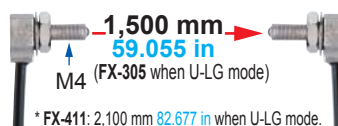
Compact Installation

The mounting space required is at a minimum, and the fiber position helps reduce the possibility of the cable snagging on tools and equipment. Also a sharp bending radius of R1 mm [R 0.039 in](#) allows easier wiring arrangement.



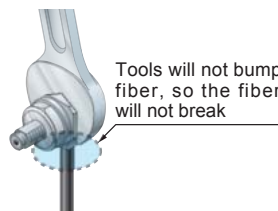
Long sensing range type available **FT-WR80L**

We also offer a long sensing range type with lenses. No additional lenses are required, and no extra space is consumed.



Head shape simplifies installation

Fiber head is square shaped to prevent damage during mounting.



In addition to fiber sensors, the line-up also includes amplifier built-in type photoelectric sensors which allow streamlined installation.

Hex Shaped photoelectric sensor **EX-30 series**

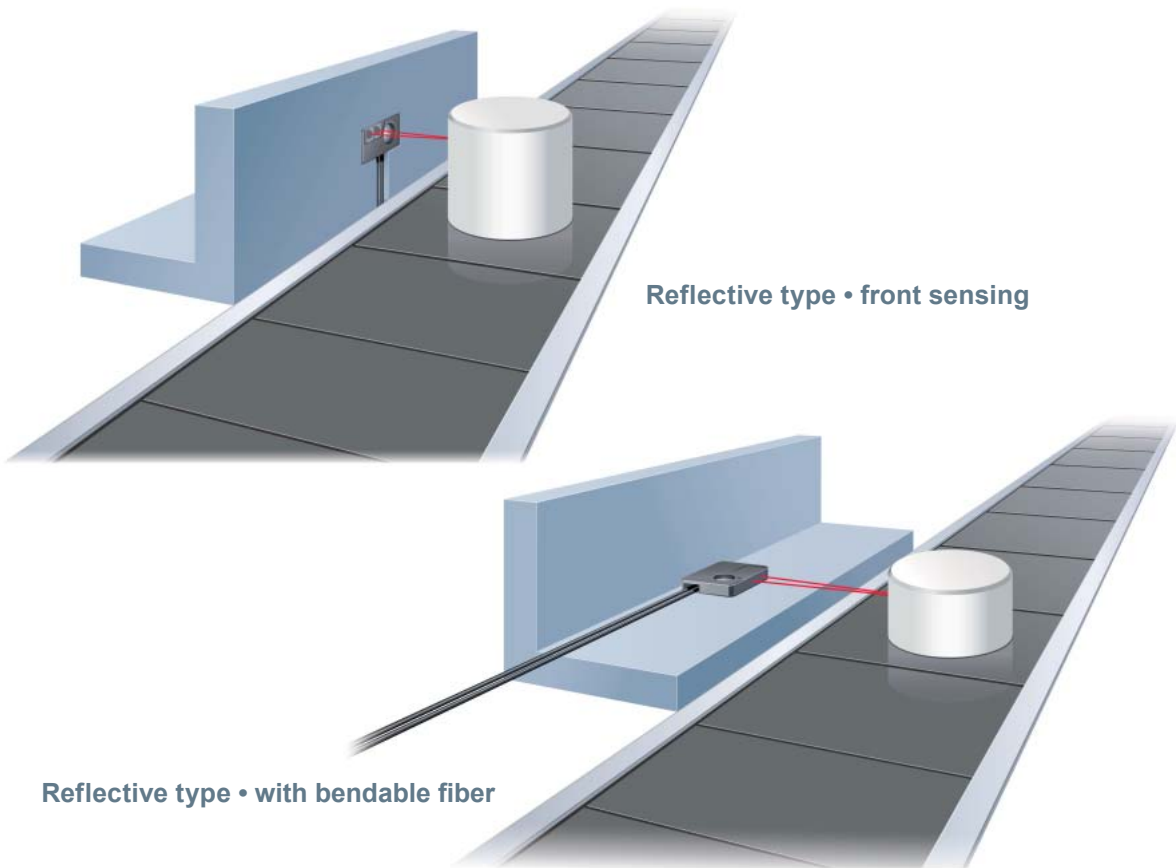


A new standard in space-saving fibers.

Flat fiber heads with a thickness of only 2 mm 0.079 in

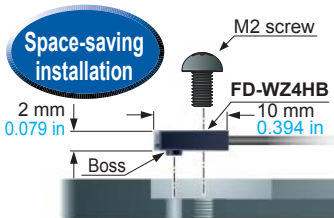
We have a comprehensive range of thin and flat-type fibers that offer a high level of integration.

This contributes to the miniaturization of equipment.



Flat type **FT-WZ4 (HB)**, **FD-WZ4 (HB)**, **FT-WZ7 (HB)**, **FD-WZ7 (HB)**

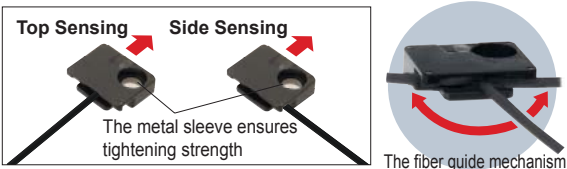
Mounting with M2 or M3 screw



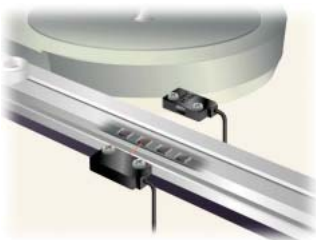
We offer;
FT-WZ4(HB), **FD-WZ4(HB)**,
 1 point mounting with M2
 screw and
FT-WZ7(HB), **FD-WZ7(HB)**,
 1 point mounting with M3
 screw.

The built-in fiber guide allows for multiple installation angles.

FT/FD-WZ□HB is equipped with a fiber guide feature.
 Front sensing and side sensing can be selected with one head.



Compact • long sensing range thru-beam type **FT-Z8**, **FT-WZ8** series



Compact size of only W3×H8×D12 mm W0.118×H0.315×D0.472 in, yet has a very long maximum sensing range of 3,500 mm 137.795 in. Flexible types (**FT-Z8**) and sharp-bending types (**FT-WZ8**) with a bending radius of 1 mm 0.039 in are available.

FT-WZ8 Rectangular head • front sensing W8.5×H12×D3 mm W0.335×H0.472×D0.118 in 950 mm 37.402 in (When U-LG mode)	FT-WZ8E Rectangular head • side sensing W3×H12×D8 mm W0.118×H0.472×D0.315 in 2,100 mm 82.677 in (When U-LG mode)	FT-WZ8H Rectangular head • top sensing W3×H8×D12 mm W0.118×H0.315×D0.472 in 3,500 mm 137.795 in (When U-LG mode)
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SPACE-SAVING FIBER SENSOR LINE-UP

Type	Shape of fiber head (mm in)	Sensing range (mm in)(Note 1)	U-LG LONG STDF STD FAST H-SP S-D	Min sensing object	Fiber cable length Free-cut	Bending radius	Model No.		
Thru-beam • Rectangular type	Easy mounting • Top sensing W3 X H8 X D12 W0.118 X H0.315 X D0.472	3,500 137.795 2,500 98.425 1,600 62.992 1,200 47.244	850 33.465 400 15.748 410 16.142	φ 0.08mm φ 0.0032 in opaque object	2 m 6.562 ft	R1 mm R0.039 in	FT-WZ8H		
		3,100 122.047 2,700 106.299 1,550 61.024 1,400 55.118	1,000 39.370 420 16.535 490 19.291	φ 0.03mm φ 0.0012 in opaque object		R4 mm R0.157 in Flexible	FT-Z8H		
		2,100 82.677 1,500 59.055 950 37.402 700 27.559	500 19.685 200 7.874 210 8.268	φ 0.05mm φ 0.0020 in opaque object		R1 mm R0.039 in	FT-WZ8E		
		1,850 72.835 1,600 62.992 950 37.402 800 31.496	600 23.622 250 9.843 280 11.024	φ 0.03mm φ 0.0012 in opaque object		R4 mm R0.157 in Flexible	FT-Z8E		
	Easy mounting • Side sensing W3 X H12 X D8 W0.118 X H0.472 X D0.315	2,100 82.677 1,500 59.055 950 37.402 700 27.559	500 19.685 200 7.874 210 8.268	φ 0.05mm φ 0.0020 in opaque object	2 m 6.562 ft	R1 mm R0.039 in	FT-WZ8E		
		1,850 72.835 1,600 62.992 950 37.402 800 31.496	600 23.622 250 9.843 280 11.024	φ 0.03mm φ 0.0012 in opaque object		R4 mm R0.157 in Flexible	FT-Z8E		
	Easy mounting • Front sensing W8.5 X H12 X D3 W0.335 X H0.472 X D0.118	950 37.402 700 27.559 420 16.535 330 12.992	240 9.449 100 3.937 120 4.724	φ 0.04mm φ 0.0016 in opaque object	2 m 6.562 ft	R1 mm R0.039 in	FT-WZ8		
		1,100 43.307 800 31.496 500 19.685 400 15.748	300 11.811 120 4.724 140 5.512	φ 0.03mm φ 0.0012 in opaque object		R4 mm R0.157 in Flexible	FT-Z8		
	Thru-beam • Threaded type	Front sensing W10 X H7 X D2 W0.394 X H0.276 X D0.079	300 11.811 200 7.874 140 5.512 100 3.937	70 2.756 40 1.575 40 1.575	φ 0.08mm φ 0.0032 in opaque object	1 m 3.281 ft	NEW	FT-WZ4	
		Fiber bending type W2 X H10 X D10 W0.079 X H0.394 X D0.394	220 8.661 150 5.906 105 4.134 75 2.953	50 1.969 30 1.181 30 1.181	φ 0.03mm φ 0.0012 in opaque object	2 m 6.562 ft	NEW	FT-WZ4HB	
Front sensing W14 X H7 X D3.5 W0.551 X H0.276 X D0.138		660 25.984 440 17.323 308 12.126 220 8.661	150 5.906 80 3.150 80 3.150	φ 0.08mm φ 0.0032 in opaque object	NEW		FT-WZ7		
Fiber bending type W3.5 X H14 X D11 W0.138 X H0.551 X D0.433		870 34.252 580 22.835 406 15.984 290 11.417	210 8.268 110 4.331 110 4.331	φ 0.03mm φ 0.0012 in opaque object	NEW		FT-WZ7HB		
Square head type		W7 X H9 X D13.9 W0.276 X H0.354 X D0.547	750 29.528 570 22.441 350 13.780 290 11.417	200 7.874 90 3.543 100 3.937	φ 0.06mm φ 0.0024 in opaque object		2 m 6.562 ft	NEW	FT-WR80
		With lens W7 X H9 X D14.6 W0.276 X H0.354 X D0.575	1,500 59.055 1,200 47.244 750 29.528 600 23.622	420 16.535 200 7.874 210 8.268	φ 0.04mm φ 0.0016 in opaque object	2 m 6.562 ft	NEW	FT-WR80L	
Convergent reflective type	W7.2 X H7.5 X D2 W0.283 X H0.295 X D0.079	0.5 to 8.5 0.020 to 0.335 0.5 to 7.5 0.020 to 0.295 1 to 6.5 0.039 to 0.256 1 to 5.5 0.039 to 0.217	1 to 5 0.039 to 0.197 Cannot use Cannot use	φ 0.3mm φ 0.012 in copper wire	1 m 3.281 ft	R1 mm R0.039 in	FD-WL48		
Reflective • Rectangular type	Compact	Front sensing W10 X H7 X D2 W0.394 X H0.276 X D0.079	1 to 50 0.039 to 1.969 1.5 to 34 0.059 to 1.339 2 to 24 0.079 to 0.945 3 to 17 0.118 to 0.669	3 to 10 0.118 to 0.394 Cannot use Cannot use	φ 0.16mm φ 0.006 in copper wire	1 m 3.281 ft	NEW	FD-WZ4	
		Fiber bending type W2 X H10 X D10 W0.079 X H0.394 X D0.394	1 to 70 0.039 to 2.756 1 to 46 0.039 to 1.811 1 to 32.2 0.039 to 1.268 2.5 to 23 0.098 to 0.906	2.5 to 15 0.098 to 0.591 3 to 7 0.118 to 0.276 3 to 7 0.118 to 0.276	φ 0.16mm φ 0.006 in copper wire	2 m 6.562 ft	R1 mm R0.039 in	NEW	FD-WZ4HB
		Front sensing W14 X H7 X D3.5 W0.551 X H0.276 X D0.138	200 7.874 120 4.724 1 to 84 0.039 to 3.307 1 to 60 0.039 to 2.362	1.5 to 35 0.059 to 1.378 2.5 to 18 0.098 to 0.709 2.5 to 18 0.098 to 0.709	φ 0.03mm φ 0.0012 in gold wire		NEW	FD-WZ7	
		Fiber bending type W3.5 X H14 X D11 W0.138 X H0.551 X D0.433	0.5 to 270 0.020 to 10.630 0.5 to 180 0.020 to 7.087 1 to 126 0.039 to 4.961 1 to 90 0.039 to 3.543	1 to 70 0.039 to 2.756 1 to 35 0.039 to 1.378 1 to 35 0.039 to 1.378	φ 0.03mm φ 0.0012 in gold wire		NEW	FD-WZ7HB	

Notes: 1) Please take care 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 sensing range is the value for the **FX-301/305/311** (infrared type). Contact our office for details on the sensing ranges for other types of amplifier.
The **FX-301** is not equipped with STDF / U-LG modes. The **FX-305** is not equipped with an S-D mode. The **FX-311** is not equipped with U-LG / STDF / FAST / H-SP modes.

SPECIFICATIONS

Type		Thru-beam • rectangular type			Thru-beam • threaded type	Reflective • rectangular type	
		Compact type			Square head type	Convergent reflective type	Compact type
Item	Model No.	FT-WZ□(HB)	FT-Z8□	FT-WZ8□	FT-WR80(L)	FD-WL48	FD-WZ□(HB)
Applicable amplifiers		FX-100/300/410 series					
Ambient temperature		− 40 to + 60 °C − 40 to + 140 °F (FD-WL48: − 20 to + 60 °C − 4 to + 140 °F)					
Ambient humidity		35 to 85 % RH (No dew condensation or icing allowed)					
Material	Fiber core	Acrylic					
	Sheath	Polyethylene (FT-Z8□: Vinyl chloride)					
	Fiber head	Enclosure: Polycarbonate Sleeve of FT-WZ□ (HB): stainless steel (SUS304) Lens of FT-WZ8H/WZ8E, Reflector of FT-WZ8E and Prism of FT-WZ4/WZ7: Acrylic Lens of FT-Z8H/Z8E and front film of FT-Z8: Polyester			Enclosure: Die-cast zinc (nickel plated) Lens of FT-WR80L: Acrylic		Enclosure: Polycarbonate Sleeve of FD-WZ□ (HB): stainless steel (SUS304) Prism of FD-WZ4/WZ7: Acrylic Prism of FD-WL48: polycarbonate
Accessories		1 fiber attachment set, FX-CT2 (fiber cutter) 1 pc., 1 set of mounting screw (except for FT-WZ7□)			1 fiber attachment set, FX-CT2 (fiber cutter) 1 pc., nuts 2 pcs., toothed lock washer 2 pcs.		1 fiber attachment set, FX-CT2 (fiber cutter) 1 pc., 1 set of mounting screw (FT-WZ4□ only)

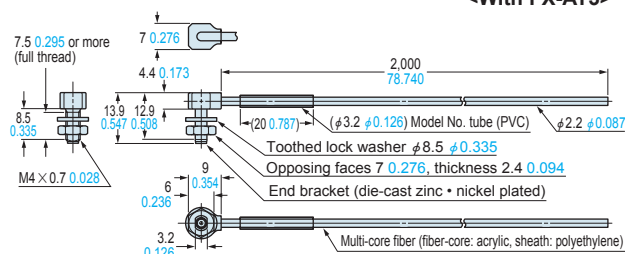
Note: Where measurement conditions have not been specified precisely, the conditions used were ambient temperature + 23 °C + 73.4 °F

■ DIMENSIONS (Unit: mm in)

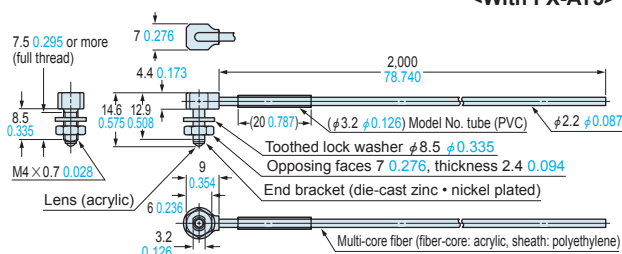
Refer to our website for dimensions which are not shown below.
The CAD data in the dimensions can be downloaded from the website: <http://www.sunx.jp/>

FT-WR80 Free-cut

<With FX-AT3>

**FT-WR80L** Free-cut

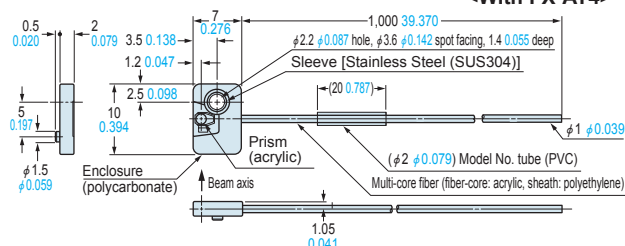
<With FX-AT3>



FT-WZ4

 Free-cut

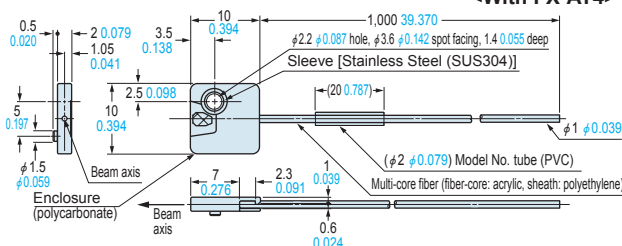
<With FX-AT4>



FT-WZ4HB

 Free-cut

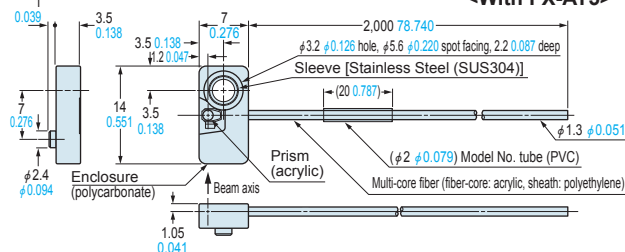
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FT-WZ7

 Free-cut

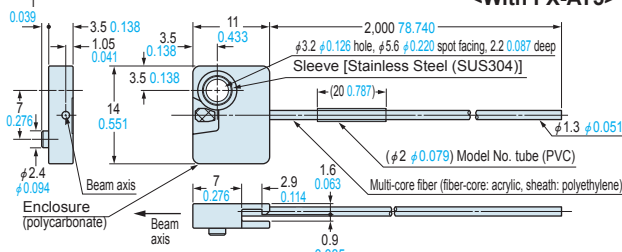
<With FX-AT5>



FT-WZ7HB

 Free-cut

<With FX-AT5>

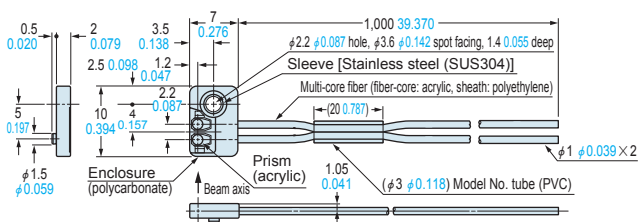


■ DIMENSIONS (Unit: mm in)

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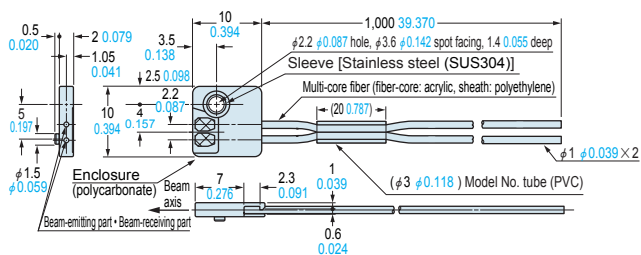
FD-WZ4

 Free-cut



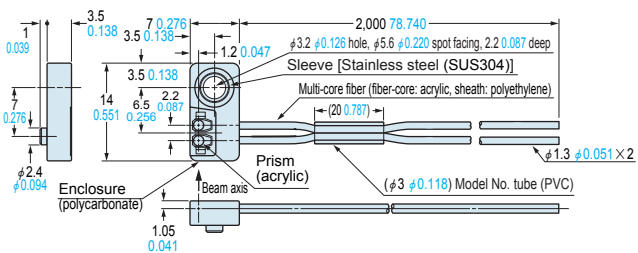
FD-WZ4HB

 Free-cut
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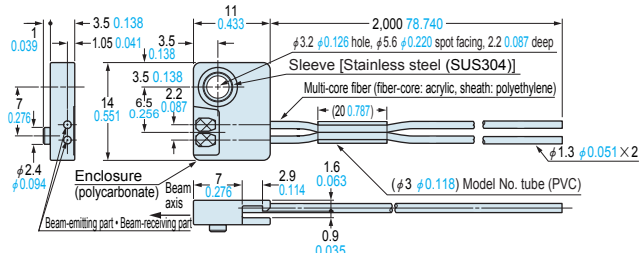
FD-WZ7

 Free-cut
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FD-WZ7HB

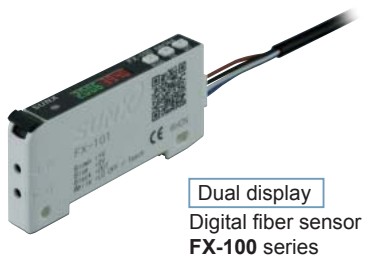
 Free-cut
<With FX-AT5>



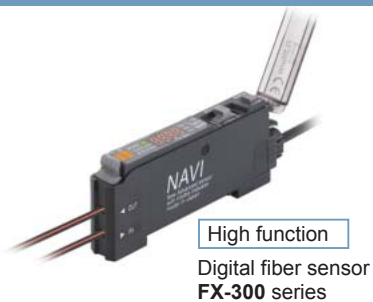
SUNX Fiber Optic Amplifiers

SUNX offers fiber sensor amplifiers which are easy to use that have high sensing performance are available. Refer to the SUNX product catalogs for details on the models below.

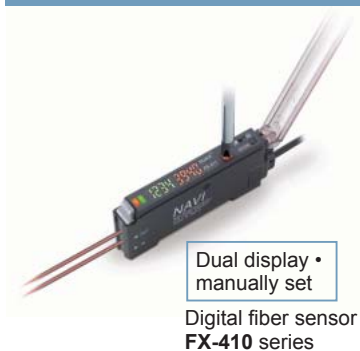
Dual display • teaching type



High Performance Sensing



Easy to operate - manual type



All information is subject to change without prior notice.

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