SUNX

NEW METAL-FREE FIBER

Thru-beam type FT-41
Coaxial reflective type FD-G60
Coaxial reflective type FD-G40

METAL-FREE

Metallic particulate production ratio: ZERO

The resin unit does not produce metallic particulate even when rubbed with metal. It is perfect for applications in which you wish to avoid metal mixing such as secondary cell production processes.
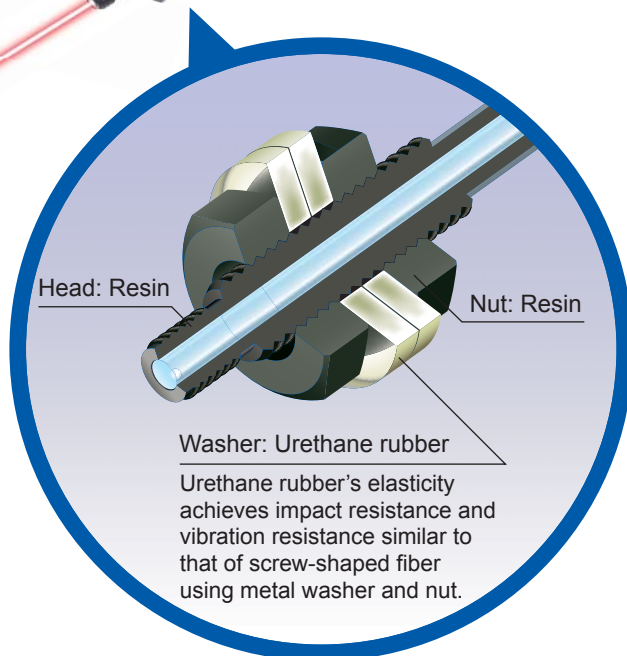
Effect on magnetic fields: ZERO

As a resin product it does not affect sensors that use magnetic fields. Also, it does not magnetize even when in a magnetic field.

FT-41
Thru-beam·
M4 type

FD-G40
Coaxial reflective·
M4 type

FD-G60
Coaxial reflective·
M6 type

Head: Resin

Nut: Resin

Washer: Urethane rubber
Urethane rubber's elasticity achieves impact resistance and vibration resistance similar to that of screw-shaped fiber using metal washer and nut.

Attention given to metal-free fiber

Filtered and neutralized fiber

To reduce risk of metallic particulate affixing, when coating we use our Ionizer Cleaning Box **EC-B01-EX** to implement static electricity removal and air blowing.

Attention given to the packaging

We do not use twist ties that contain wires but wrap the fiber unit by itself in a plastic bag. Metal products including fiber cutters are shipped in separate packaging.

■ SPECIFICATIONS

Type Item Model No.	Thru-beam	Coaxial reflective	
	FT-41	**FD-G60**	**FD-G40**
Applicable amplifiers	**FX-500/100/300/400** series		
Sensing range (Note) — HYPR	3,300 mm 129.921 in	1,000 mm 39.370 in	550 mm 21.654 in
U-LG	2,000 mm 78.740 in	680 mm 26.772 in	330 mm 12.992 in
LONG	1,550 mm 61.024 in	600 mm 23.622 in	270 mm 10.630 in
STD	1,100 mm 43.307 in	420 mm 16.535 in	140 mm 5.512 in
FAST	445 mm 17.520 in	200 mm 7.874 in	80 mm 3.150 in
H-SP	150 mm 5.906 in	60 mm 2.362 in	27 mm 1.063 in
Allowable bending radius	R25 mm R0.984 in or more		
Tightening torque	0.15 N·m or less	0.5 N·m or less	0.15 N·m or less
Ambient temperature	-40 to +70 °C -40 to +158 °F (No dew condensation or icing allowed) Storage: -40 to +70 °C -40 to +158 °F		
Ambient humidity	35 to 85 % RH / Storage: 35 to 85 % RH		
Vibration resistance	10 to 500 Hz frequency, 3 mm 0.118 in amplitude in X, Y and Z directions for two hours each		
Shock resistance	490 m/s² acceleration in X, Y and Z directions for three times each		
Material — Fiber core	Acrylic		
Sheath	Polyethylene		
Fiber head	PPS		
Nut	Polyamide resin		
Flat washer	Urethane rubber		
Accessories	**FX-AT3** (Fiber attachment) 1pc.	**FX-AT6** (Fiber attachment) 1pc.	
	FX-CT2 (Fiber cutter) 1pc.		
	Nuts and flat washers 4 pcs. each	Nuts and flat washers 2 pcs. each	

Note: The sensing range are the values for **FX-500** series.

■ OPTIONS

Designation	Model No.	Description
Resin nut set	**FX-M6N**	Resin M6 nuts and flat washers: for 10 heads
	FX-M4N	Resin M4 nuts and flat washers: for 10 heads

OTHER RESIN FIBER PRODUCTS For details refer to the SUNX website or general catalog.

Wide beam fiber
FT-WA□/A□

* This product contains an internal metallic sleeve.

Convergent reflective fiber
FD-L4□
FD-WL48

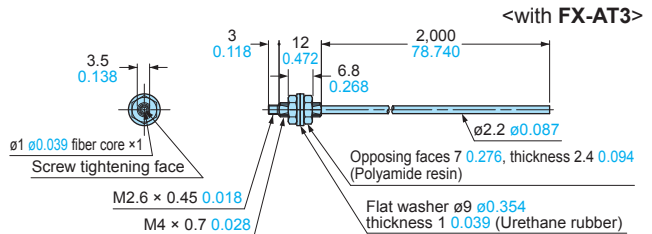* Except some models.

■ PRECAUTIONS FOR PROPER USE

⚠ • Never use this product as a sensing device for personnel protection.
• In case of using sensing devices for personnel protection, use products which meet laws and standards, such as OSHA, ANSI or IEC etc., for personnel protection applicable in each region or country.

• Our products are developed and manufactured for use in industrial environments.
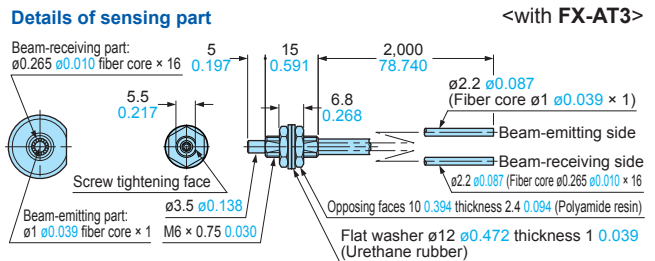
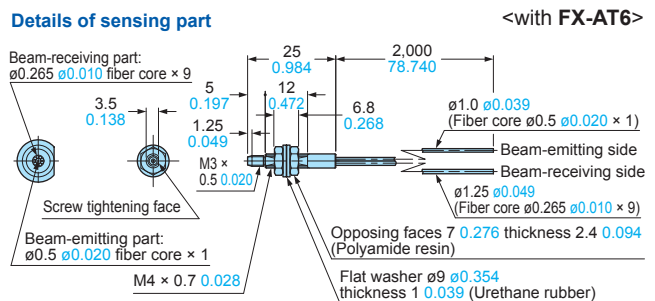## ■ DIMENSIONS (Unit: mm in)

FT-41   ✂ Free-cut
<with **FX-AT3**>

3.5 0.138
ø1 ø0.039 fiber core ×1
Screw tightening face
M2.6 × 0.45 0.018
M4 × 0.7 0.028
3 0.118   12 0.472   6.8 0.268   2,000 78.740
ø2.2 ø0.087
Opposing faces 7 0.276, thickness 2.4 0.094 (Polyamide resin)
Flat washer ø9 0.354 thickness 1 0.039 (Urethane rubber)

FD-G60   ✂ Free-cut
Details of sensing part   <with **FX-AT3**>

Beam-receiving part: ø0.265 ø0.010 fiber core × 16
5.5 0.217
Screw tightening face
Beam-emitting part: ø1 ø0.039 fiber core × 1
ø3.5 ø0.138   M6 × 0.75 0.030
5 0.197   15 0.591   6.8 0.268   2,000 78.740
ø2.2 ø0.087 (Fiber core ø1 ø0.039 × 1)
Beam-emitting side
Beam-receiving side
ø2.2 ø0.087 (Fiber core ø0.265 ø0.010 × 16)
Opposing faces 10 0.394 thickness 2.4 0.094 (Polyamide resin)
Flat washer ø12 ø0.472 thickness 1 0.039 (Urethane rubber)

FD-G40   ✂ Free-cut
Details of sensing part   <with **FX-AT6**>

Beam-receiving part: ø0.265 ø0.010 fiber core × 9
3.5 0.138
1.25 0.049
Screw tightening face
Beam-emitting part: ø0.5 ø0.020 fiber core × 1
M3 × 0.5 0.020   M4 × 0.7 0.028
25 0.984   5 0.197   12 0.472   6.8 0.268   2,000 78.740
ø1.0 ø0.039 (Fiber core ø0.5 ø0.020 × 1)
Beam-emitting side
Beam-receiving side
ø1.25 0.049 (Fiber core ø0.265 ø0.010 × 9)
Opposing faces 7 0.276 thickness 2.4 0.094 (Polyamide resin)
Flat washer ø9 ø0.354 thickness 1 0.039 (Urethane rubber)

All information is subject to change without prior notice.