



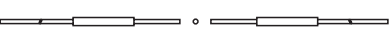










# Fiber Optic Cable

## ■ Specifications(Transmitted beam)

Dimension	Model	(Note1) Cable length(L)	(Note2) Sensing distance (mm)	(Note3) Min. sensing target	Allowable bend radius	Temperature
Free cut 	FT-320-05	2m	150	φ 0.5	15R	-40~+70℃ (Humidity:35~85%RH)
Free cut 	FT-420-10	2m	500	φ 1	30R	
Free cut Cylinder type 	FTC-220-05	2m	150	φ 0.5	15R	
Free cut Cylinder type 	FTC-320-10	2m	500	φ 1	30R	
Free cut SUS Cylinder type 	FTCS-220-05	2m	150	φ 0.5	15R	
Free cut Plastic type 	FTP-320-10	2m	500	φ 1	30R	
Free cut High-flex type 	FT-420-13	2m	400	φ 1	4R	
Free cut SUS type 	FTS-320-05 FTS2-320-05	2m	150	φ 0.5	15R (SUS part 10R)	
Free cut SUS type 	FTS-420-10 FTS2-420-10	2m	500	φ 1.0	30R (SUS part 10R)	
Free cut SUS type 	FTS1-320-05	2m	150	φ 0.5	15R	
Free cut Heat-resistant type 	FT-420-10H	2m	300	φ 1.0	30R	-40~+105℃
Free cut Heat-resistant type 	FT-420-15H1	2m	500	φ 1.0	50R	-40~+150℃
Glass type Heat-resistant type 	GT-420-13H2	2m	400	φ 1.0	25R	-40~+250℃

※ (Note1) The length of fiber optic cable is optional.

※ (Note2) The sensing distance is a standard for Red LED of BF4 Series and 10% of Red LED is applied when it is Green LED.

※ (Note3) The smallest sensing target is detected in maximum sensitivity, so this value is not standard.

※ Free cut The sensing distance can be shortened about 20% than the normal according to condition of the cable.  
[(FC-2) should be used for cutting fiber cable.]

# Fiber Optic Cable

## ■ Specifications(Diffuse reflective)

Dimension	Model	(Note1) Cable length(L)	(Note2) Sensing distance (mm)	(Note3) Min. sensing target	Allowable bend radius	Temperature
Free cut 	FD-320-05	2m	40	φ 0.03	15R	-40~+70℃ (Humidity:35~85%RH)
Free cut 	FD-420-05	2m	40	φ 0.03	15R	
Free cut 	FD-620-10	2m	120	φ 0.03	30R	
Free cut Cylinder type 	FDC-320-05	2m	40	φ 0.03	15R	
Free cut SUS Cylinder type 	FDCS-320-05	2m	40	φ 0.03	15R	
Free cut Plastic type 	FDP-320-10	2m	120	φ 0.03	30R	
Free cut SUS type 	FDS-320-05	2m	40	φ 0.03	15R	
	FDS2-320-05				(SUS part 10R)	
Free cut SUS type 	FDS-420-05	2m	40	φ 0.03	15R	
	FDS2-420-05				(SUS part 10R)	
Free cut SUS type 	FDS-620-10	2m	120	φ 0.03	30R	
	FDS2-620-10				(SUS part 10R)	
Free cut Coaxial type 	FD-320-F	2m	40	φ 0.03	15R	
Free cut Coaxial type 	FD-320-F1	2m	60	φ 0.03	15R	
Free cut Coaxial type 	FD-620-F2	2m	120	φ 0.03	30R	
Free cut Heat-resistant type 	FD-620-10H	2m	120	φ 0.03	30R	-40~+105℃
Free cut Heat-resistant type 	FD-620-15H1	2m	160	φ 0.03	50R	-40~+150℃
Glass type Heat-resistant type 	FD-420-20H2	2m	100	φ 0.03	50R	-40~+250℃
Glass type Heat-resistant type 	FD-620-20H2	2m	100	φ 0.03	50R	-40~+250℃

※ (Note1) The length of fiber optic cable is optional.

※ (Note2) The sensing distance is a standard for Red LED of BF4 Series and the sensing target is □ 50mm of non-glossy white paper and 10% of Red LED is applied when it is Green LED.  
(FD-620 Type is the value measured at the max. sensitivity using □ 100mm of non-glossy white paper.)

※ (Note3) The smallest sensing target is detected in maximum sensitivity, so this value is not standard.

※ Free cut The sensing distance can be shortened about 20% than the normal according to condition of the cable.  
[(FC-2) should be used for cutting fiber cable.]

(A) Counter

(B) Timer

(C) Temp. controller

(D) Power controller

(E) Panel meter

(F) Tacho/Speed/Pulse meter

(G) Display unit

(H) Sensor controller

(I) Switching power supply

(J) Proximity sensor

(K) Photo electric sensor

(L) Pressure sensor

(M) Rotary encoder

(N) Stepping motor & Driver & Controller

(O) Graphic panel

(P) Production stoppage models & replacement

# Fiber Optic Cable

## Dimensions

Model	Diffuse reflective	Model	Transmitted beam
<b>FD-320-05</b> M3-D0.5  Free cut Adapter 2- $\phi$ 0.5 M3X0.5 2- $\phi$ 1		<b>FT-320-05</b> M3-D0.5  Free cut Adapter $\phi$ 0.5 M3X0.5 $\phi$ 1	
<b>FD-420-05</b> M4-D0.5  Free cut Adapter 2- $\phi$ 0.5 $\phi$ 2.6 M4X0.7 2- $\phi$ 1		<b>FT-420-10</b> M4-D1.0  Free cut $\phi$ 1 M4X0.7 M2.6X0.45 $\phi$ 2.2	
<b>FD-620-10</b> M6-D1.0  Free cut 2- $\phi$ 1 $\phi$ 4 M6X0.75 2- $\phi$ 2.2		<b>FTC-220-05</b> $\phi$ 2-D0.5  Free cut Adapter $\phi$ 0.5 15mm 1mm $\phi$ 2 $\phi$ 1.0	
<b>FDC-320-05</b> M3-D0.5  Free cut Adapter 2- $\phi$ 0.5 15mm 1mm $\phi$ 3 2- $\phi$ 1		<b>FTC-320-10</b> $\phi$ 3-D1.0  Free cut $\phi$ 1 20mm 11mm $\phi$ 3 $\phi$ 2.2	
<b>FDCS-320-05</b> $\phi$ 3-D0.5 SUS $\phi$ 1.5x15mm  Free cut Adapter 2- $\phi$ 0.5 15mm 15mm $\phi$ 1.5 $\phi$ 3 2- $\phi$ 1		<b>FTCS-220-05</b> $\phi$ 1.0-D0.5 SUS $\phi$ 1x15mm  Free cut Adapter $\phi$ 0.5 15mm 15mm $\phi$ 1 $\phi$ 2 $\phi$ 1	
<b>FDP-320-10</b> D1.0x2 Plastic  Free cut 2- $\phi$ 1 7.5mm 19mm 13mm 10mm 14mm 4- $\phi$ 3.1 2- $\phi$ 2.2		<b>FTP-320-10</b> D1.0 Plastic  Free cut $\phi$ 1 7.5mm 19mm 13mm 10mm 14mm 4- $\phi$ 3.1 $\phi$ 2.2	
<b>FDS-320-05</b> M3-D0.5 SUS $\phi$ 1.5x90mm  Free cut Adapter 2- $\phi$ 0.5 90mm 12mm $\phi$ 1.5 M3X0.5 2- $\phi$ 1		<b>FT-420-13</b> M4-D0.265x16  Free cut $\phi$ 1.3 7mm 20mm 3mm 12mm M4X0.7 M2.6X0.45 $\phi$ 2.2	
<b>FDS2-320-05</b> M3-D0.5 SUS $\phi$ 1.5x45mm  Free cut Adapter 2- $\phi$ 0.5 45mm 12mm $\phi$ 1.5 M3X0.5 2- $\phi$ 1		<b>FTS-320-05</b> M3-D0.5 SUS $\phi$ 1.0x90mm  Free cut Adapter $\phi$ 0.5 5.5mm 90mm 12mm $\phi$ 1.0 M3X0.5 $\phi$ 1	
<b>FDS-420-05</b> M4-D0.5 SUS $\phi$ 1.5x90mm  Free cut Adapter 2- $\phi$ 0.5 90mm 3mm 12mm $\phi$ 1.5 M4X0.7 2- $\phi$ 1		<b>FTS1-320-05</b> M3-D0.5 SUS $\phi$ 1.0x35mm  Free cut Adapter $\phi$ 0.5 5.5mm 35mm 12mm $\phi$ 1 M3X0.5 $\phi$ 1	
<b>FDS2-420-05</b> M4-D0.5 SUS $\phi$ 1.5x45mm  Free cut Adapter 2- $\phi$ 0.5 45mm 3mm 12mm $\phi$ 1.5 M4X0.7 2- $\phi$ 1		<b>FTS2-320-05</b> M3-D0.5 SUS $\phi$ 1.0x45mm  Free cut Adapter $\phi$ 0.5 5.5mm 45mm 12mm $\phi$ 1.0 M3X0.5 $\phi$ 1	
<b>FDS-620-10</b> M6-D1.0 SUS $\phi$ 2.5x90mm  Free cut 2- $\phi$ 1 10mm 90mm 3mm 15mm $\phi$ 2.5 M6X0.75 2- $\phi$ 2.2		<b>FTS-420-10</b> M4-D1.0 SUS $\phi$ 1.5x90mm  Free cut $\phi$ 1 7mm 90mm 3mm 12mm $\phi$ 1.5 M4X0.7 $\phi$ 2.2	
<b>FDS2-620-10</b> M6-D1.0 SUS $\phi$ 2.5x45mm  Free cut 2- $\phi$ 1 10mm 45mm 3mm 15mm $\phi$ 2.5 M6X0.75 2- $\phi$ 2.2		<b>FTS2-420-10</b> M4-D1.0 SUS $\phi$ 1.5x45mm  Free cut $\phi$ 1 7mm 45mm 3mm 12mm $\phi$ 1.5 M4X0.7 $\phi$ 2.2	
<b>FD-320-F</b> Co-axial M3 $\phi$ 0.5, $\phi$ 0.25x4  Free cut Adapter Emitter $\phi$ 0.5 5.5mm Receiver 4- $\phi$ 0.25 18mm M3X0.5 2- $\phi$ 1		<b>FT-420-15H</b> M4-D1.0 Heat Resistant 105°C  Free cut $\phi$ 1 7mm 15mm 3mm 12mm M2.6X0.45 M4X0.7 $\phi$ 2.2	

# Fiber Optic Cable

## Dimensions

Model	Diffuse reflective	Model	Diffuse reflective
<b>FT-420-15H1</b> M4-D1.0 Heat Resistant 150°C Free cut		<b>GT-420-13H2</b> M4-D1.4 Heat Resistant Max.250°C Glass Free cut	
Model	Transmitted beam	Model	Transmitted beam
<b>FD-320-F1</b> Co-axial M3 φ0.5, φ0.25×9 Free cut Adapter		<b>FD-620-15H1</b> M6-D1.5 Heat Resistant 150°C Free cut	
<b>FD-620-F2</b> Co-axial M6 φ1.0 φ0.25×16 Free cut		<b>GD-420-20H2</b> M4-D0.05×1000 Heat Resistant 250°C	
<b>FD-620-10H</b> M6-D1.0 Heat Resistant 105°C Free cut		<b>GD-620-20H2</b> M6-D0.05×1000 Heat Resistant 250°C	

## Protecting tube for fiber optic cable (Option)

●Usage : Protect cable from impact or cutting

Model	Dimension
<b>FTH-310</b>	
<b>FTH-410</b>	
<b>FDH-610</b>	

## Lens unit (Option)

●Model : FTL-M26



<Lens unit>

<Mounting at cable>

●Applicable fiber optic cable and max. mounting distance

**FT-420-10 : 2500mm**

**FT-420-13 : 2000mm**

**FT-420-10H : 1500mm**

●Mounting of lens

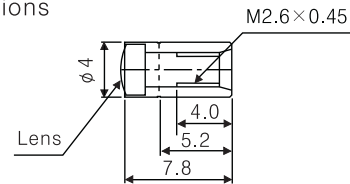
Mount the lens unit on the 3 mm projecting point of the front hood

●Ambient temperature range of lens unit

Able to use within -40°C~100°C.

(Disable to use over 100°C.)

●Dimensions



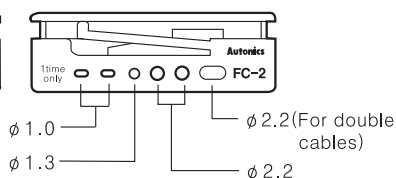
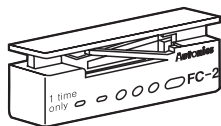
(Unit:mm)

## Accessory

### ○Fiber cutter

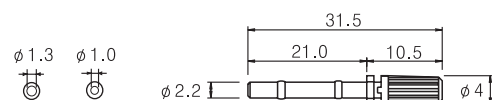
Usage : Free cut type, fiber optic cable cutting

●FC-2



### ○Adapter

Adapter : should be used.



※Note1)

The inside diameter φ1.0(Standard and black)

The inside diameter φ1.3(Only applied to the receiver of FD-320-F1 and dark gray.)

(Unit:mm)

(A)  
Counter

(B)  
Timer

(C)  
Temp.  
controller

(D)  
Power  
controller

(E)  
Panel  
meter

(F)  
Tacho/  
Speed/  
Pulse  
meter

(G)  
Display  
unit

(H)  
Sensor  
controller

(I)  
Switching  
power  
supply

(J)  
Proximity  
sensor

(K)  
Photo  
electric  
sensor

(L)  
Pressure  
sensor

(M)  
Rotary  
encoder

(N)  
Stepping  
motor &  
Driver &  
Controller

(O)  
Graphic  
panel

(P)  
Production  
stoppage  
models &  
replacement