



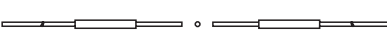
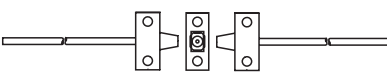








# Fiber Optic Cable

## ■ 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	2m	150	φ 0.5	15R (SUS part 10R)	
	FTS1-320-05					
	FTS2-320-05					
Free cut SUS type 	FTS-420-10	2m	500	φ 1.0	30R (SUS part 10R)	
	FTS2-420-10					
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 For BF4R 	GT-420-13H2	2m	400	φ 1.0	25R	-40~ +250℃

※ (Note1)Fiber optic cable out of the rated length can be customizable.

※ (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.  
It is applied to 40% of sensing distance for BF3RX.


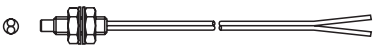
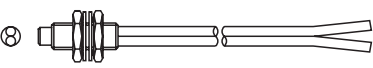





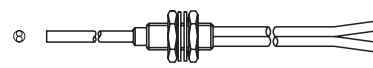

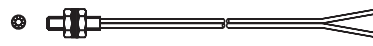
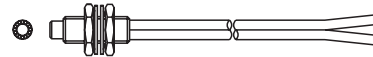

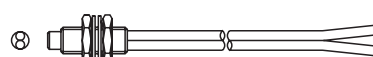
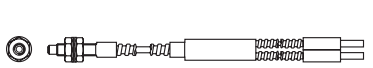

※ (Note3)Min. sensing target is a value measured opaque material in accurate output status and the sensing distance is different with the rated sensing distance(Note2).

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

※ Glass type is for BF4R Series.

# Fiber Optic Cable

## ■ Specifications(Diffuse reflective)

Dimension	Model	(Note1) Cable length (L)	(Note2) Sensing distance (mm)	(Note3) Min. sensing target	Allowable bend radius	Temperature
<b>Free cut</b> 	<b>FD-320-05</b>	2m	40	φ 0.03	15R	-40~+70℃ (Humidity:35~85%RH)
<b>Free cut</b> 	<b>FD-420-05</b>	2m	40	φ 0.03	15R	
<b>Free cut</b> 	<b>FD-620-10</b>	2m	120	φ 0.03	30R	
<b>Free cut</b> <b>Cylinder type</b> 	<b>FDC-320-05</b>	2m	40	φ 0.03	15R	
<b>Free cut</b> <b>SUS Cylinder type</b> 	<b>FDCS-320-05</b>	2m	40	φ 0.03	15R	
<b>Free cut</b> <b>Plastic type</b> 	<b>FDP-320-10</b>	2m	120	φ 0.03	30R	
<b>Free cut</b> <b>SUS type</b> 	<b>FDS-320-05</b>	2m	40	φ 0.03	15R (SUS part 10R)	
	<b>FDS2-320-05</b>					
<b>Free cut</b> <b>SUS type</b> 	<b>FDS-420-05</b>	2m	40	φ 0.03	15R (SUS part 10R)	
	<b>FDS2-420-05</b>					
<b>Free cut</b> <b>SUS type</b> 	<b>FDS-620-10</b>	2m	120	φ 0.03	30R (SUS part 10R)	
	<b>FDS2-620-10</b>					
<b>Free cut</b> <b>Coaxial type</b> 	<b>FD-320-F</b>	2m	40	φ 0.03	15R	
<b>Free cut</b> <b>Coaxial type</b> 	<b>FD-320-F1</b>	2m	60	φ 0.03	15R	
<b>Free cut</b> <b>Coaxial type</b> 	<b>FD-620-F2</b>	2m	120	φ 0.03	30R	
<b>Free cut</b> <b>Heat-resistant type</b> 	<b>FD-620-10H</b>	2m	120	φ 0.03	30R	-40~+105℃
<b>Free cut</b> <b>Heat-resistant type</b> 	<b>FD-620-15H1</b>	2m	160	φ 0.03	50R	-40~+150℃
<b>Glass type</b> <b>Heat-resistant type</b> <b>For BF4R</b> 	<b>GD-420-20H2</b>	2m	100	φ 0.03	50R	-40~+250℃
<b>Glass type</b> <b>Heat-resistant type</b> <b>For BF4R</b> 	<b>GD-620-20H2</b>	2m	100	φ 0.03	50R	-40~+250℃

※ (Note1) Fiber optic cable out of the rated length can be customizable.

※ (Note2) The sensing distance above is set based on BF4 series, Red LED and non-glossy white paper(50×50mm). As for Green LED, 10% of Red LED is applied.

The sensing distance for FD-620 Type is set based on non-glossy white paper(100×100mm), at max. sensitivity. It is applied to 40% of sensing distance for BF3RX.

※ (Note3) Min. sensing target is a value measured opaque material in accurate output status and the sensing distance is different with the rated sensing distance(Note2).

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

※ **Glass type** is for BF4R Series.

(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)  
Field  
network  
device

(Q)  
Production  
stoppage  
models &  
replacement

# Fiber Optic Cable

## ■ Dimensions

(Unit:mm)

Model	Diffuse reflective	Model	Transmitted beam
<b>FD-320-05</b> M3-D0.5 		<b>FT-320-05</b> M3-D0.5 	
<b>FD-420-05</b> M4-D0.5 		<b>FT-420-10</b> M4-D1.0 	
<b>FD-620-10</b> M6-D1.0 		<b>FTC-220-05</b> φ2-D0.5 	
<b>FDC-320-05</b> M3-D0.5 		<b>FTC-320-10</b> φ3-D1.0 	
<b>FDCS-320-05</b> φ3-D0.5 SUS φ1.5×15mm 		<b>FTCS-220-05</b> φ1.0-D0.5 SUS φ1×15mm 	
<b>FDP-320-10</b> D1.0×2 Plastic 		<b>FTP-320-10</b> D1.0 Plastic 	
<b>FDS-320-05</b> M3-D0.5 SUS φ1.5×90mm 		<b>FT-420-13</b> M4-D0.265×16 	
<b>FDS2-320-05</b> M3-D0.5 SUS φ1.5×45mm 		<b>FTS-320-05</b> M3-D0.5 SUS φ1.0×90mm 	
<b>FDS-420-05</b> M4-D0.5 SUS φ1.5×90mm 		<b>FTS1-320-05</b> M3-D0.5 SUS φ1.0×35mm 	
<b>FDS2-420-05</b> M4-D0.5 SUS φ1.5×45mm 		<b>FTS2-320-05</b> M3-D0.5 SUS φ1.0×45mm 	
<b>FDS-620-10</b> M6-D1.0 SUS φ2.5×90mm 		<b>FTS-420-10</b> M4-D1.0 SUS φ1.5×90mm 	
<b>FDS2-620-10</b> M6-D1.0 SUS φ2.5×45mm 		<b>FTS2-420-10</b> M4-D1.0 SUS φ1.5×45mm 	
<b>FD-320-F</b> Co-axial M3 φ0.5, φ0.25×4 		<b>FT-420-15H</b> M4-D1.0 Heat Resistant 105°C 	

# Fiber Optic Cable

## ■ Dimensions

(Unit:mm)

Model	Transmitted beam	Model	Transmitted beam
<b>FT-420-15H1</b> M4-D1.0 Heat Resistant 150°C Free cut		<b>GT-420-13H2</b> M4-D1.3 Heat Resistant Max.250°C Glass Glass fiber with 2.9 sus protective armor.	
Model	Diffuse reflective	Model	Diffuse reflective
<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 φ0.265×16 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	

## ■ Lens unit for long distance detection (Sold separately)

◎Model : **FTL-M26**



◀Lens unit▶

◀Mounting at cable▶

◎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.)

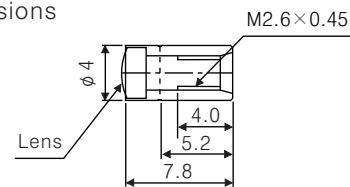
◎Applicable fiber optic cable and max. mounting distance

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

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

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

◎Dimensions



(Unit:mm)

## ■ Micro spot fiber optic cable and lens unit (Sold separately)

◎Model

Fiber optic cable : **FDC-320-F**

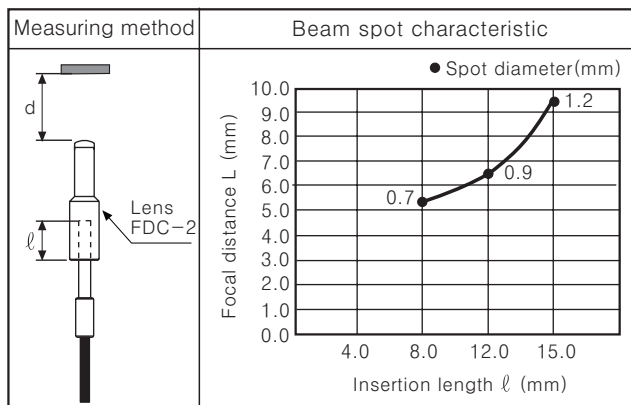
Micro spot lens : **FDC-2**

◎Ambient temperature range of lens unit

It is used within -40°C~+100°C.

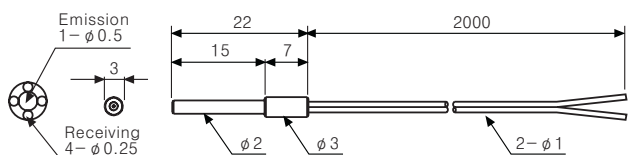
(It cannot be used over 100°C.)

◎Feature data

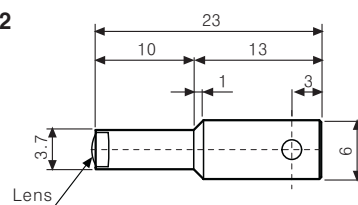


◎Dimensions

●**FDC-320-F**



●**FDC-2**



(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)  
Field  
network  
device

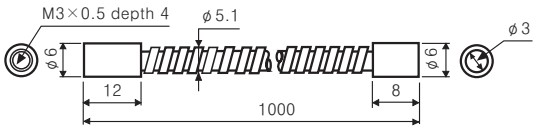
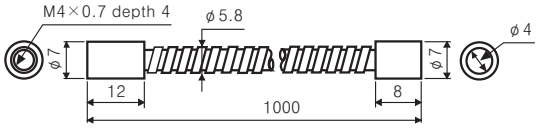
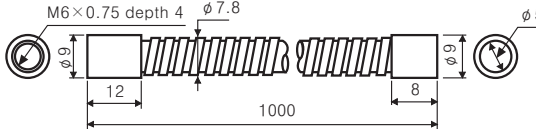
(Q)  
Production  
stoppage  
models &  
replacement

# Fiber Optic Cable

## ■Protection tube for fiber optic cable (Sold separately)

◎Usage : Protect cable from impact or cutting

(Unit:mm)

Model	Dimension
FTH-310	
FTH-410	
FDH-610	

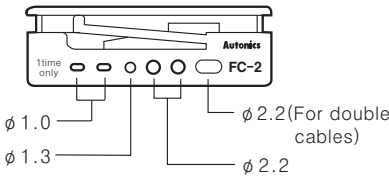
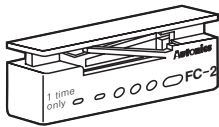
※Note1)  
500mm tube can be customized.  
※Note2)  
Additional 8mm is for tube coupling.

## ■Accessory

### ◎Fiber cutter

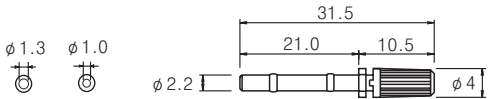
Usage : Free cut type, fiber optic cable cutting

●FC-2



### ◎Adapter

Adapter :  should be used.



※Note1)  
The inside diameter 1.0(Standard and black)  
The inside diameter 1.3(Only applied to the receiver of FD-320-F1 and dark gray.)

(Unit:mm)