



*New*

Reflective type flexible fiber

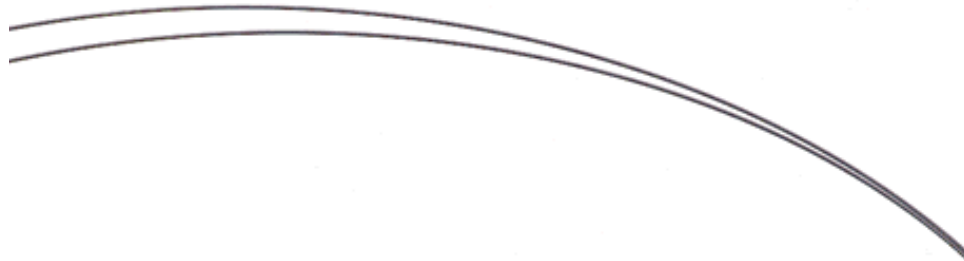
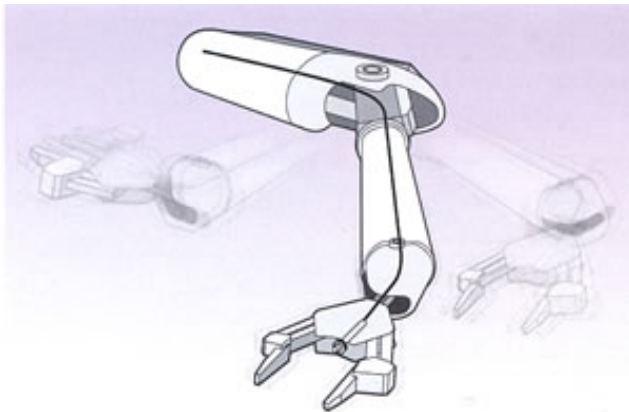
# FD-P□

- Sensing range has been increased remarkably!
- Repeatability has been improved!

## Application

### Mounting on a moving base

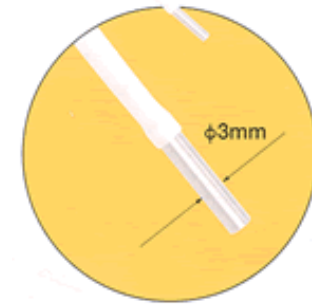
The sensing range has been increased remarkably by virtue of the fiber core consisting of 2.5mm X 7 flexible strands. Further, the repeatability at the same sensing range has been improved compared with the previous 4-strand fiber core.



**Number of fiber strands**

The amount of light has been doubled by increasing the number of fiber strands from the previous 4 strands X 2 to 7 strands X 2. Due to this improvement, a sensing distance of 70mm is possible. The stability has also been increased.

14



Reflective type 3mm flexible fiber  
**FD-P50**

**Bending capability**

The minimum bending radius has been reduced to R4mm. A higher bending capability has been realized; the confinement of the light beam is 90% or more when the fiber is bent by 90° to make the letter 'L'.

4

**Flexibility**

The flexibility has been improved remarkably; the fiber can withstand repeated bending of one million cycles or more (for R 10mm). Since this fiber has strong resistance against repeated bending, it is most suitable for mounting on moving machinery.

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Reflective type M4 flexible fiber  
**FD-P60**



# Reflective-type Flexible Fiber **FD-P□**

## SPECIFICATIONS

Type		Non-threaded type	Threaded type
Item	Model No.	FD-P50	FD-P60
Applicable amplifier		Red LED type of FX-D1/A1/M1 series (Note 1)	
Sensing range		70mm (Note 2)	
Repeatability		Along sensing axis: 0.2mm or less, Perpendicular to sensing axis: 0.05mm or less	
Allowable bending radius		R4mm or more	
Bending durability		1,000,000 cycles or more (for R10mm)	
Fiber length		2m free-cut	
Ambient temperature		-40 to +60°C, (No dew condensation or icing allowed), Storage: -40 to +60°C	
Ambient humidity		35 to 85% RH, Storage: 35 to 85% RH	
Material	Fiber core	Acrylic	
	Sheath	Vinyl chloride	
	Head	Stainless steel (SUS303)	
Weight		8g approx.	9g approx.
Accessories		FX-CT1(Fiber cutter): 1 No., FX-AT13( $\phi$ 1.3mm fiber attachment): 1 set	

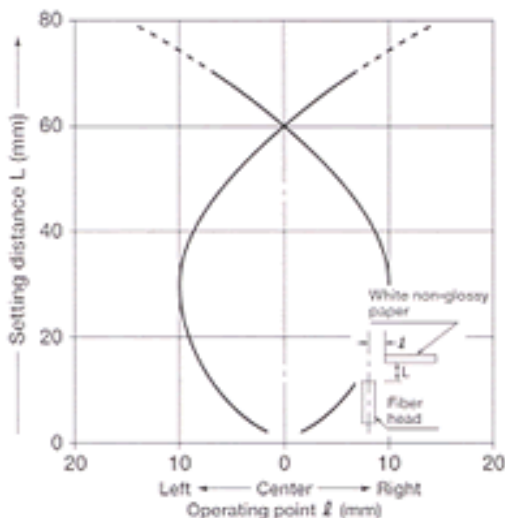
### Notes:

- 1) Refer to the general catalog or FX series catalog for the details of applicable amplifier.
- 2) The sensing range is specified for white non-glossy paper (200 X 200mm) as the object.

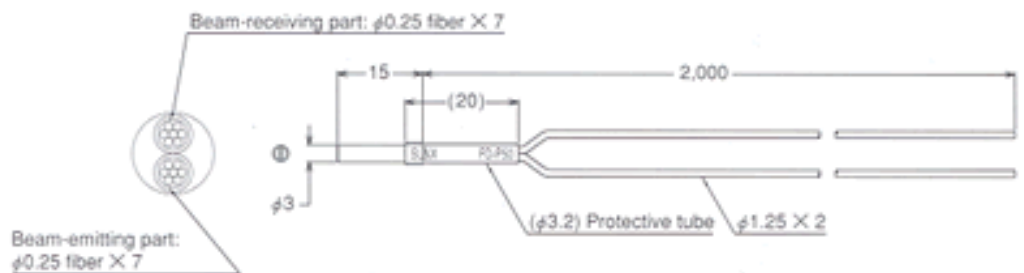
## SENSING CHARACTERISTICS (TYPICAL)

## DIMENSIONS (Unit: mm)

FD-P50 Reflective Type



FD-P50 Free-cut



FD-P60 Reflective Type

FD-P60 Free-cut

