

### Super High Quality Fiber Head

Thru-beam type fiber

Reflective type fiber

FT-□

FD-□

MJEC-FT40 No.0076-63V

Thank you very much for purchasing Panasonic products. Please read this Instruction Manual carefully and thoroughly for the correct and optimum use of this product. Kindly keep this manual in a convenient place for quick reference.

## 1 PRODUCT OUTLINE

- This product has high equivalent performance due to less individual differences.

## 2 CAUTIONS

- This product has been developed / produced for industrial use only.
- Take care that the sensing performance may deteriorate depending on the connecting condition to the fiber amplifier.
- Keep the sensing surface intact. If it is scratched, the detectability will deteriorate.
- If the sensing surface gets dirty, wipe dirt or stain from the sensing faces with a soft cloth. Do not expose the fiber cable to any organic solvent.
- Do not apply excessive tensile force to the fiber cable.

Model No.	Tensile force
FT-40, FT-S30 FD-60	30N or less
FT-30, FT-S20 FD-30, FD-40, FD-S30	10N or less

- The allowable bending radius of the fiber is shown in table below. If using this product around maximum detecting distance, the bending radius of the fiber must be R10mm or more. Furthermore, when stable displayed value is desired, we recommend R50mm or more of the bending radius of the fiber since the displayed values may have variation with using hardly bending fibers.

Model No.	Tensile force
FT-40, FT-S30 FD-60	R4mm or more
FT-30, FT-S20 FD-30, FD-40, FD-S30	R2mm or more

- When adding stress to fiber of the fiber head portion or the inserted portion, the fiber may break.
- When inserting this product to a fiber amplifier, use fiber attachment FX-AT2 (optional).
- Do not cut off a fixed length fiber type with a tool such as nipper. Furthermore, do not use the cut fiber.
- Make sure not applying an excessive stress like bending or tension after installing to a fiber amplifier.
- Take care that the sensor must not be directly exposed from fluorescent lamp of a rapid-starter lamp or a high frequency lighting device or sunlight etc., as it may affect the sensing performance.
- Avoid dust, dirt, and steam.
- Take care that the product does not come in contact with oil, grease, organic solvents such as thinner, etc., strong acid or alkaline.
- Avoid using this product at vibrating or impact location.

## 3 MOUNTING

- Tightening torque should be less than value in tables below.

### Mounting with nuts (screw type)

Model No.	Modifying dimension
FT-30	0.39N·m
FT-40, FD-40	0.58N·m
FD-30	0.36N·m
FD-60	0.98N·m

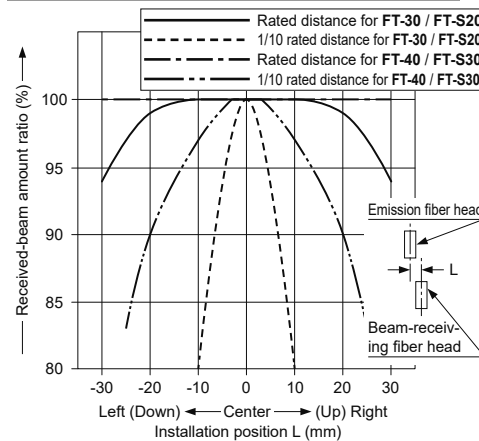
### Mounting with a set M3 screw (cup point)

Model No.	Tightening range (Note)	Tightening torque
FT-S20	2 to 5mm	0.25N·m
FD-30	-	0.29N·m
FT-S30	2 to 7mm	0.39N·m
FD-S30	2 to 6mm	
FT-30, FT-40 FD-40, FD-60	-	0.49N·m

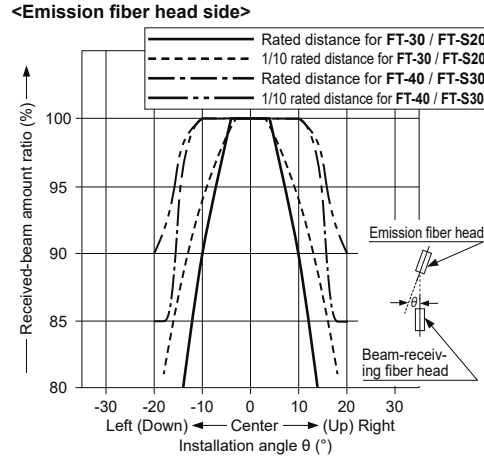
Note Tightening range is distance from end of the fiber.

- This product was designed for avoiding difference of displayed values in the fiber amplifiers.
- When mounting the fiber head to a fiber amplifier (FX-500 series), refer to a drawing shown below

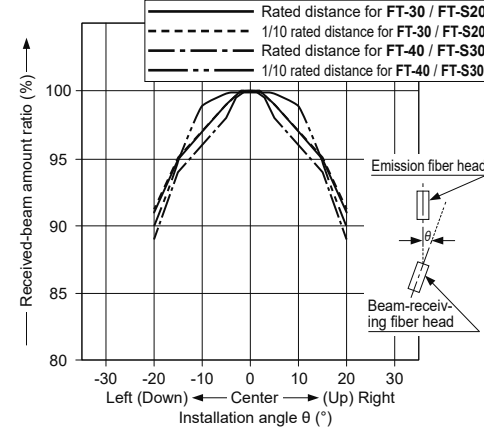
### Received-beam amount ratio in Installation positions (FT-30 / FT-40 / FT-S20 / FT-S30)



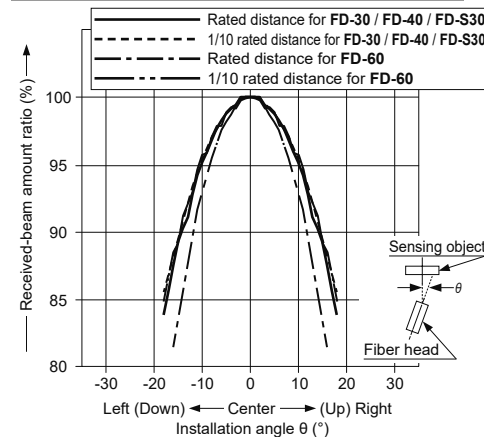
### Received-beam amount ratio in Installation angles (FT-30 / FT-40 / FT-S20 / FT-S30)



### Beam-received fiber cable head



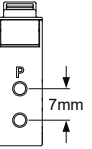
### Received-beam amount ratio in Installation angles (FD-30 / FD-40 / FD-S30 / FD-60)



## 4 FIBER ATTACHMENT FX-AT2 (Accessory)

### <Summary of product characteristics>

- When inserting emitter and receiver fibers to fiber amplifier (FX-500 series, etc.), improve workability and reduce possibility of mistake from mis-inserting the fibers by using the fiber attachment FX-AT2 (accessory).



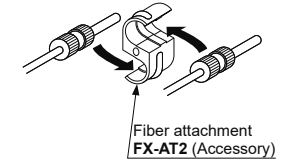
### <Cautions>

- Take care that it is not possible to use the fiber amplifier whose distance between emitter and receiver is other than 7mm.

### <How to connect>

For details, refer to instruction manual enclosed with the fibers amplifier.

- Mount the plug part of the fibers in the fiber attachment. (The resin plug has a groove to be held)



- Connect the fibers like condition 1. above, to the fiber sensor amplifier.

Panasonic Corporation

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