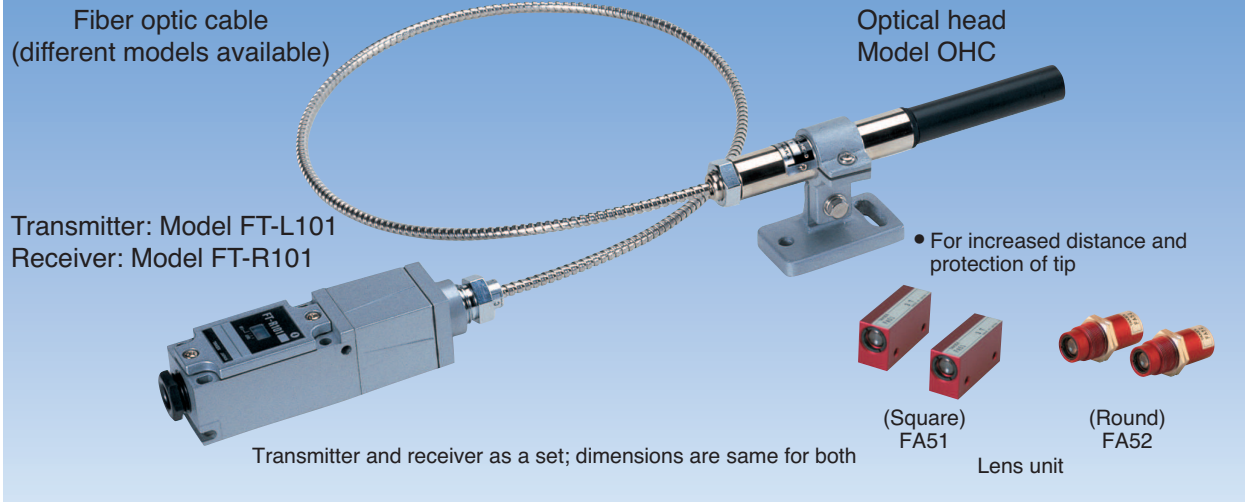


Ultra small detecting head



The photo sensor is composed of an optical head and amplifier connected with a fiber optic cable.

This allows installation of the detecting head that contains no electronic components at a high temperature location and of the amplifier containing electronic components at a remote location.

Features

- Wide power supply range
Wide range of power voltage 100-240 VAC.
- Light emission monitor and 3-point level indicator
The transmitter is provided with light emission monitor circuit, which outputs alarm signal when light emission stops due to failure, etc. The receiver has 3 LEDs for checking the received light intensity level, offering easy checking of stability and light axis alignment

Type/Price

Type	Model	Overview	
Amplifier	FT-L101	Transmitter	
	FT-R101	Receiver	
Fiber optic cable	GT205AD	Fiber length	0.5m
	GT21AD		1m
	GT22AD		2m
	GT23AD		3m
	GT25AD		5m
	GT27AD		7m
	GT210AD		10m
Optical head	OHC	Heat resistance 200°C, IP 67	
Lens unit	FA51	Square	
	FA52	Round	
Adapter	FT101-AD2	Adapter for OHA	

Adapter

- An adapter is required to use an OHA optical head.
Adapter for OHA
Model FT101-AD2

Simplified combination

Detecting distance: 1.5-2.7 m (depending on fiber optic cable)

Order example

Product name		Model	Quantity
Sensor main unit	Transmitter	FT-L101	1
	Receiver	FT-R101	1
Lens unit		(Respective model)	2
Fiber optic cable		(Respective model)	2

Standard combination

Detecting distance: 12-22 m (depending on fiber optic cable)

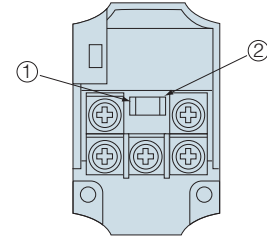
Order example

Product name		Model	Quantity
Sensor main unit	Transmitter	FT-L101	1
	Receiver	FT-R101	1
Optical head		OHC	2
Fiber optic cable		(Respective model)	2

Rating/Performance/Specification/Environmental Specification

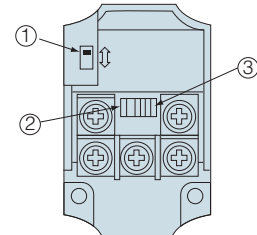
Output specification																																									
Transmitter model	FT-L101																																								
Light source	Infrared LED																																								
Light emission monitor output	Relay output 1c																																								
Operation	Power ON OFF																																								
	Monitor Normal Abnormal																																								
	Light emission monitor ON OFF																																								
	Output ON OFF																																								
Rating	250VAC 2A or less (Resistive load)																																								
Receiver model FT-R101																																									
Output type	Relay output 1c																																								
Rating	250VAC 2A or less (Resistive load)																																								
Operation mode	Light ON / Dark ON (selectable with switch)																																								
Response time	20ms or less																																								
General specification																																									
Detecting distance	<table border="1"> <thead> <tr> <th>Fiber</th> <th>Only Fiber</th> <th>on FA51/52</th> <th>on OHC</th> <th>on OHA</th> </tr> </thead> <tbody> <tr> <td>GT205AD</td> <td>0.55m</td> <td>2.7m</td> <td>22m</td> <td>45m</td> </tr> <tr> <td>GT21AD</td> <td>0.55m</td> <td>2.7m</td> <td>22m</td> <td>45m</td> </tr> <tr> <td>GT22AD</td> <td>0.5 m</td> <td>2.5m</td> <td>20m</td> <td>40m</td> </tr> <tr> <td>GT23AD</td> <td>0.45m</td> <td>2.2m</td> <td>18m</td> <td>35m</td> </tr> <tr> <td>GT25AD</td> <td>0.4 m</td> <td>2.0m</td> <td>16m</td> <td>30m</td> </tr> <tr> <td>GT27AD</td> <td>0.35m</td> <td>1.8m</td> <td>14m</td> <td>27m</td> </tr> <tr> <td>GT210AD</td> <td>0.3 m</td> <td>1.5m</td> <td>12m</td> <td>25m</td> </tr> </tbody> </table>	Fiber	Only Fiber	on FA51/52	on OHC	on OHA	GT205AD	0.55m	2.7m	22m	45m	GT21AD	0.55m	2.7m	22m	45m	GT22AD	0.5 m	2.5m	20m	40m	GT23AD	0.45m	2.2m	18m	35m	GT25AD	0.4 m	2.0m	16m	30m	GT27AD	0.35m	1.8m	14m	27m	GT210AD	0.3 m	1.5m	12m	25m
	Fiber	Only Fiber	on FA51/52	on OHC	on OHA																																				
	GT205AD	0.55m	2.7m	22m	45m																																				
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	GT27AD	0.35m	1.8m	14m	27m																																				
GT210AD	0.3 m	1.5m	12m	25m																																					
Fiber optic cable allowable bending radius	50mm																																								
Power Supply	100-240 VAC ±10%, 50/60 Hz																																								
Power consumption	Transmitter: 2 W or less Receiver: 2 W or less																																								
Indicator	Transmitter. Power indicator: Green LED, Monitor indicator: Red LED																																								
	Receiver. Power indicator: Green LED, Monitor indicator: Red LED																																								
Connection	Terminal block (screw: M3.5, width: 8.1mm)																																								
Ambient temperature	Optical head, Fiber: -25°C to 200°C Amplifier: -25°C to 55°C (Non-freezing)																																								
Storage temperature	-40°C to 70°C (Non-freezing, non-condensing)																																								
Ambient humidity	35 -85%RH (Non-condensing)																																								
Ambient light	10000 lx (incandescent lamp)																																								
Protective structure	IP66																																								
Vibration	10-55 Hz / 1.5 mm double amplitude / 2 hours each in 3 directions																																								
Shock	500 m/s ² / 3 times each in 3 directions																																								
Dielectric withstanding	Input/Output - Case, Input - Output 2000VAC for 1 minute																																								
Insulation resistance	500 VDC 20MΩ or higher																																								
Case material	Zinc die-cast																																								
Weight	Transmitter: Approx.720g, Receiver : Approx.720g																																								
Accessories	Operation manual, Mounting bracket																																								

Operation and Switch Setting Transmitter



- ①P.L: power indicator
- ②OP.L: light emission monitoring operation indicator
Illuminated when transmitter is functioning normally.

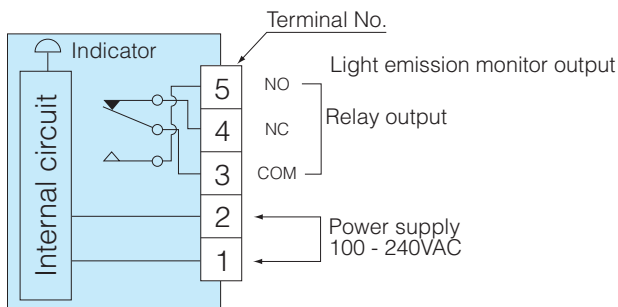
Receiver



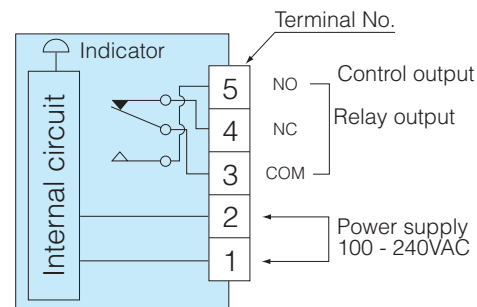
- ①Light ON/Dark ON selector switch
Set according to the situation
L.ON: signal output when light from transmitter is received.
D.ON: signal output when light is blocked.
- ②Operation indicator
Illuminated when output is activated.
- ③Level indicator
A set of 3 LEDs indicates stability.
LEVEL 1: illuminated when light intensity of about twice as much as operation level is detected.
LEVEL 2: illuminated when light intensity of about four times as much as operation level is detected.
LEVEL 3: illuminated when light intensity of about eight times as much as operation level is detected.

Input/Output Circuit and Connection

Transmitter



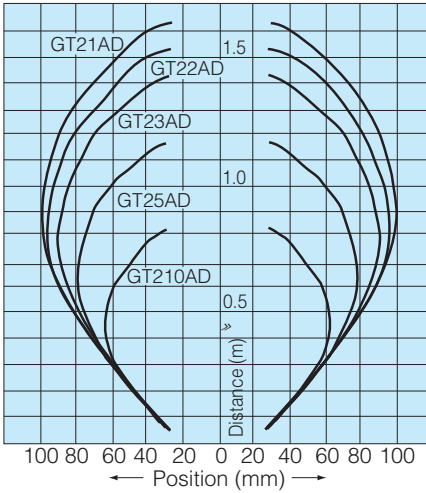
Receiver



FT101

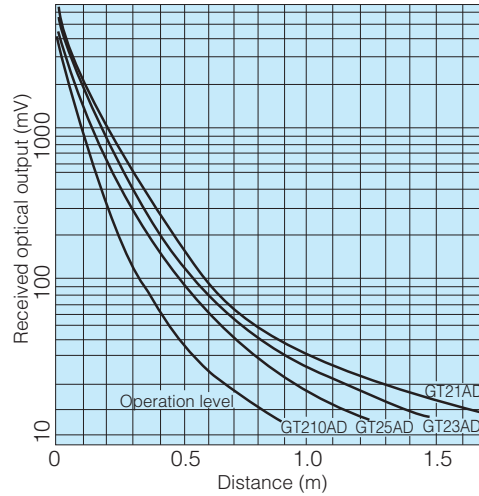
Response Curves: Beam Pattern (Typical)

- Fiber optic cable only

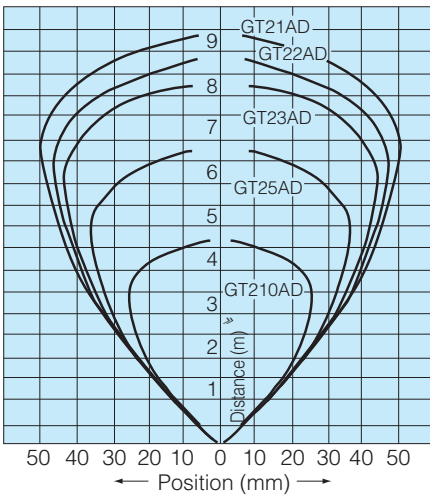


Excess Gain Curves (Typical)

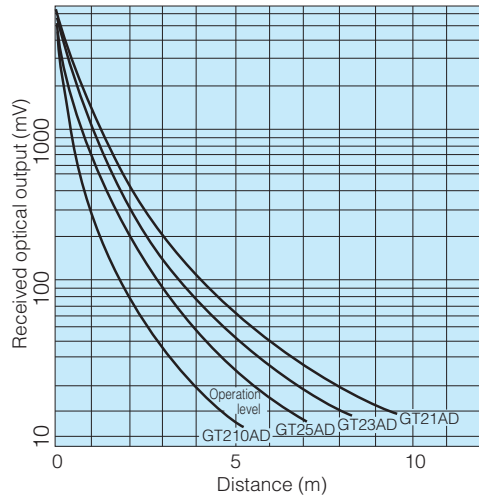
- Fiber optic cable only



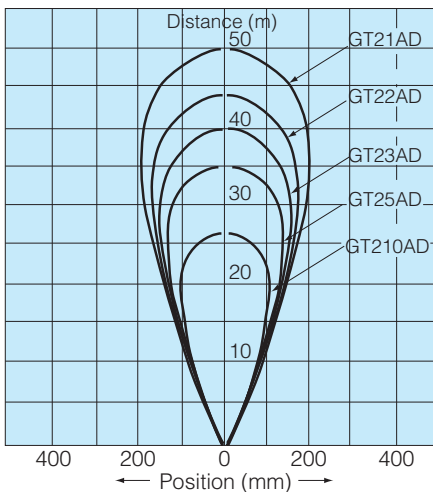
- With lens unit FA51/52 attached



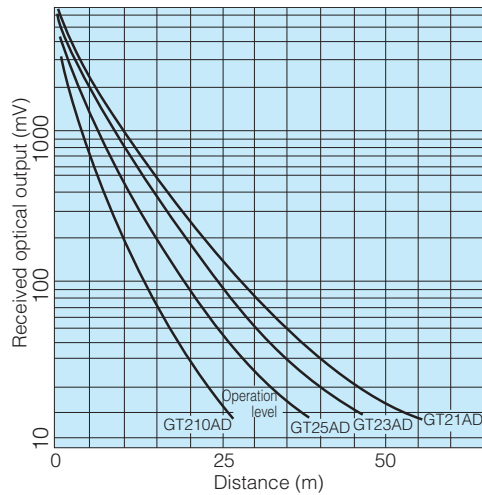
- With lens unit FA51/52 attached



- With optical head OHC attached



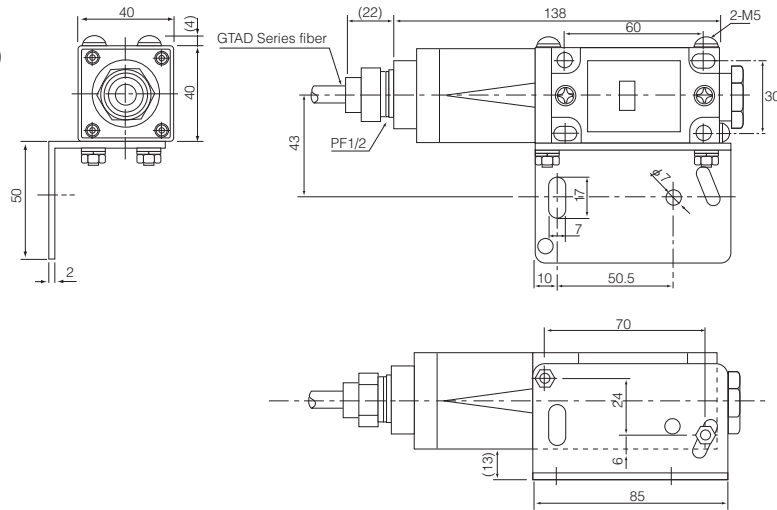
- With optical head OHC attached



Dimensions (in mm; for transmitter and receiver)

Sensor main unit (with attached bracket)

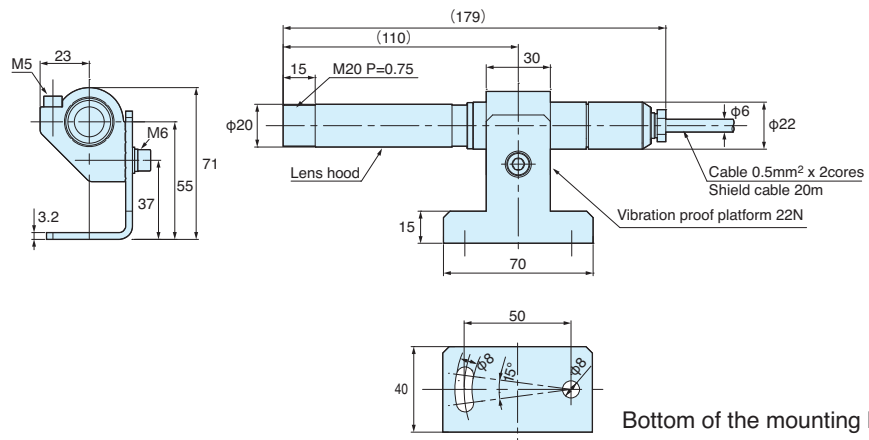
CAD



Clamping torque: 10N · m or less

Optical head

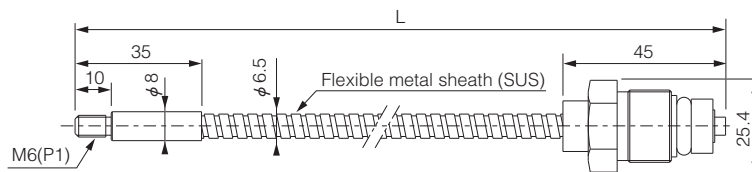
CAD



Bottom of the mounting bracket

Fiber optic cable

CAD

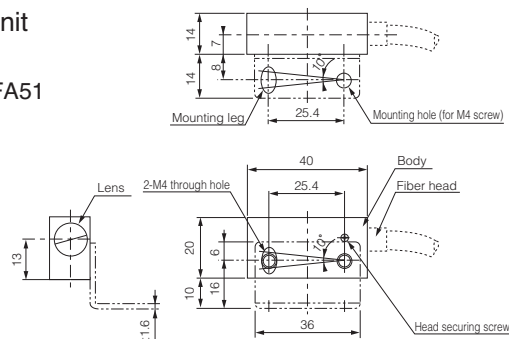


For fiber length (L), see Type

Lens unit

Model FA51

CAD



Model FA52

