



Space-saving with thickness 3.5mm!
5 kinds of amplifier built-in/ultra-small type photo sensor are lined-up!

Feature

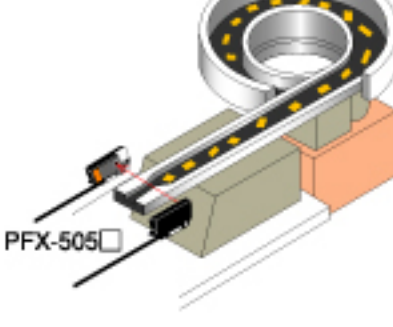
- ▶ Flat type design
Thickness is 3.5mm and it is possible to install at the too narrow space.
- ▶ Easy to see the indication lamps from the back side
Stable lamp(green LED) and output lamp(orange LED) provides and it is easy to see them from the back side and to check when optical axis adjustment.
- ▶ Easy to make a wiring
It is easy to make a wiring because cable from the sensor is tilting.
- ▶ High-speed response time
Response time is 0.5msec.
- ▶ Water-proof structure
Protective structure is IP67.

Typical applications

Through-beam type

Detection of blocked parts on parts-feeder

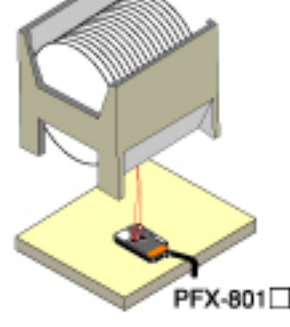
It can detect the object with 2mm in diameter stably.



Diffuse-reflection type

Position detection of wafer cassette

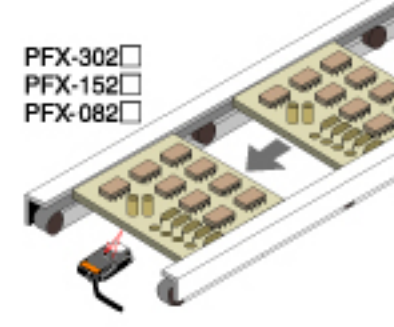
It is possible to install at the plane position.



Limited-reflection type

PCB existing detection

It is possible to install at the narrow space.



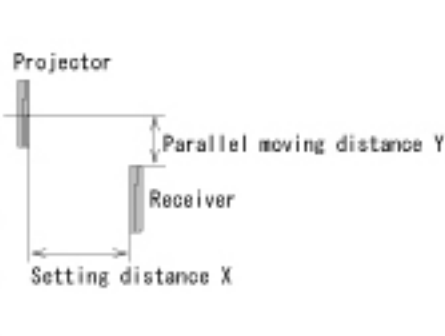
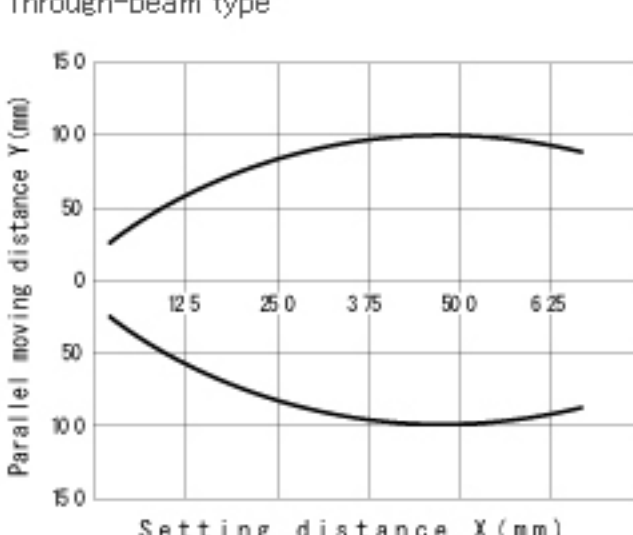
Specifications

Kind	Through-beam	Diffuse-reflection	Limited-reflection								
			Long		Middle		Short				
Model No.	Output	NPN	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN	PNP
	Light-ON	PFX-505T	PFX-505S	PFX-801T	PFX-801S	PFX-302T	PFX-302S	PFX-152T	PFX-152S	PFX-082T	PFX-082S
	Dark-ON	PFX-505N	PFX-505P	PFX-801N	PFX-801P	PFX-302N	PFX-302P	PFX-152N	PFX-152P	PFX-082N	PFX-082P
Power source	12 to 24VDC(Ripple 10% or less)										
Current consumption	P : 14mA or less R: 16mA or less		20mA or less								
Light source	Red LED										
Detecting distance	500mm		80mm*1		5 to 30mm*1		2 to 15mm*1		3 to 8mm*1		
Detectable object	φ1.0mm(at 500mm)		Transparent/opaque objects								
Hysteresis	—		15% or less				10% or less				
Response time	0.5msec or less										
Operating mode	LIGHT-ON/DARK-ON changeover(depending on models)										
Control output	NPN open-collector/PNP open-collector output, 50mA 24VDC or less, Residue voltage 1.8V 50mA or less										
Indicators	Stable lamp(Green LED)*2, Output lamp(Orange LED)*2, Power lamp(Red LED)										
Connection*3	Cable type(φ2.5mm, 2m long)										
Ambient illuminance	incandescent lamp : 3,000lx or less, sun light : 10,000lx										
Ambient temperature/humidity	-25 to +55 degrees C(-40 to +70 degrees C at stored), 35 to 85%RH(35 to 95RH at stored) Not icing, not condensing										
Vibration resistance	Double amplitude 1.5mm, 10 to 55Hz, each 2 hour for X, Y and Z direction										
Impact resistance	500m/s ² , each 3 time for X, Y and Z direction										
Protective structure	IP67(IEC standard)										
Circuit stable time	100msec or less										
Case material	Polycarbonate										
Weight	Each approx. 18g		Approx. 18g								
Accessory	Mounting screw(M2×12), nut, washer										

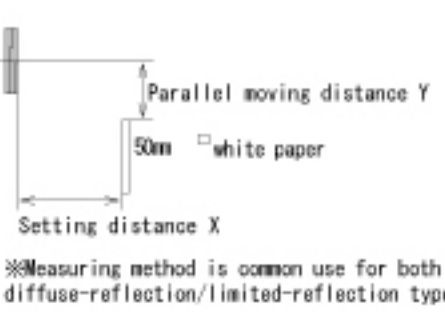
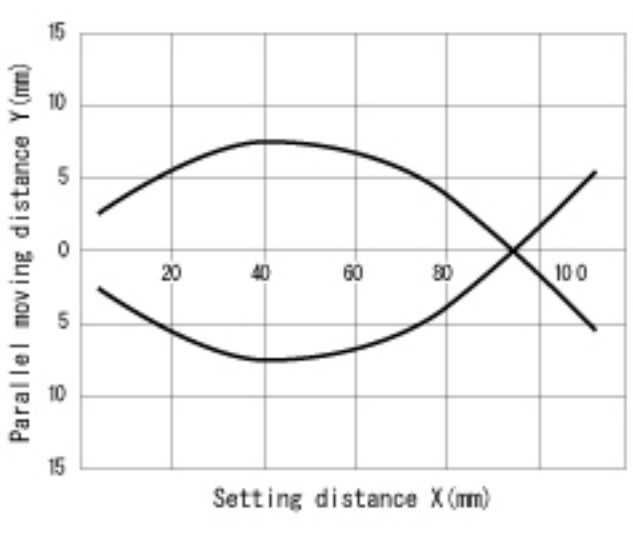
*1 Detectable is white paper with 50×50
*2 Not provided with the projector of through-beam
*3 Connector type is lined-up.

Characteristic data(Typical example)

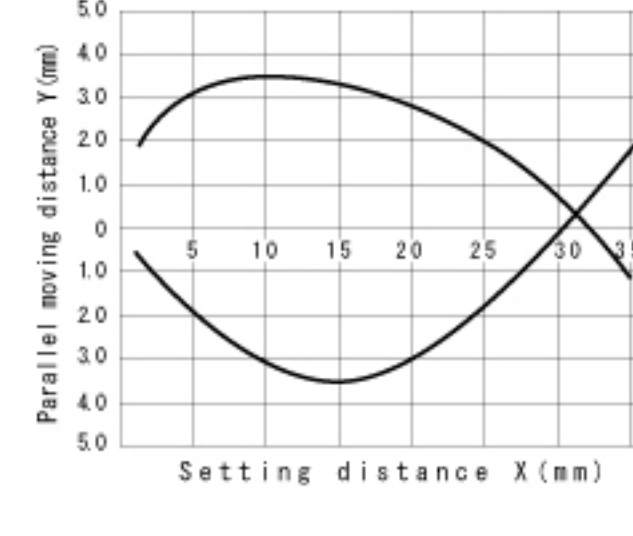
Through-beam type



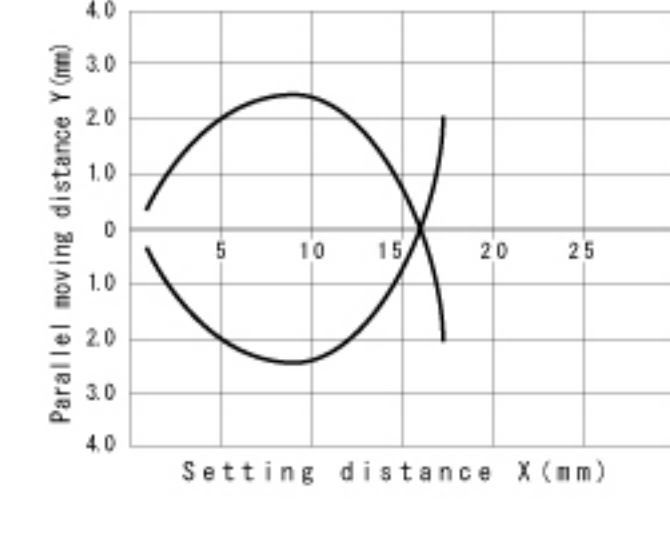
Diffuse-reflection type



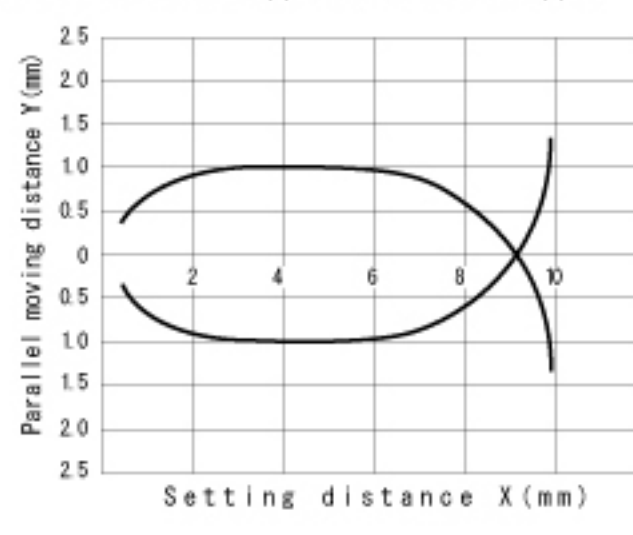
Limited-reflection type(long distance type)



Limited-reflection type(middle distance type)

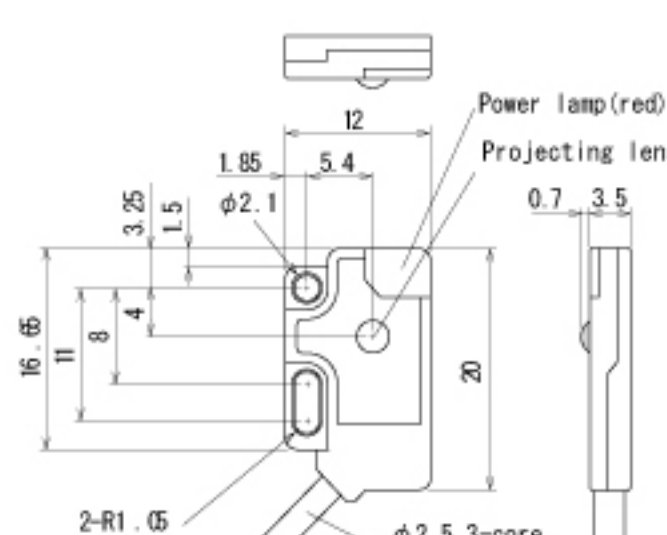


Limited-reflection type(short distance type)

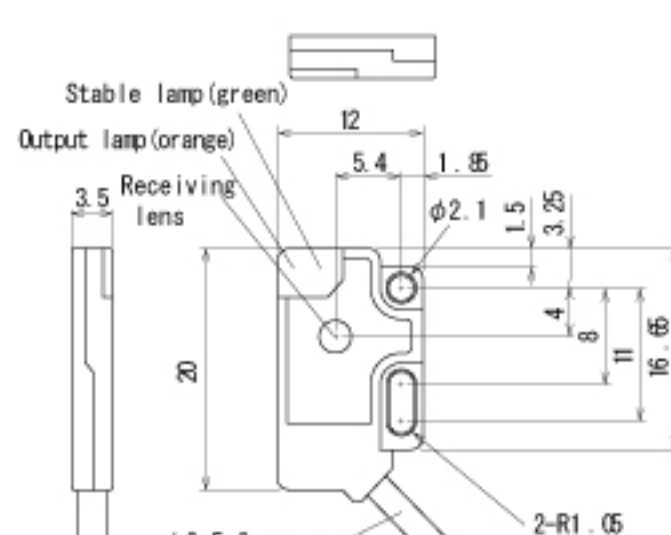


External dimension

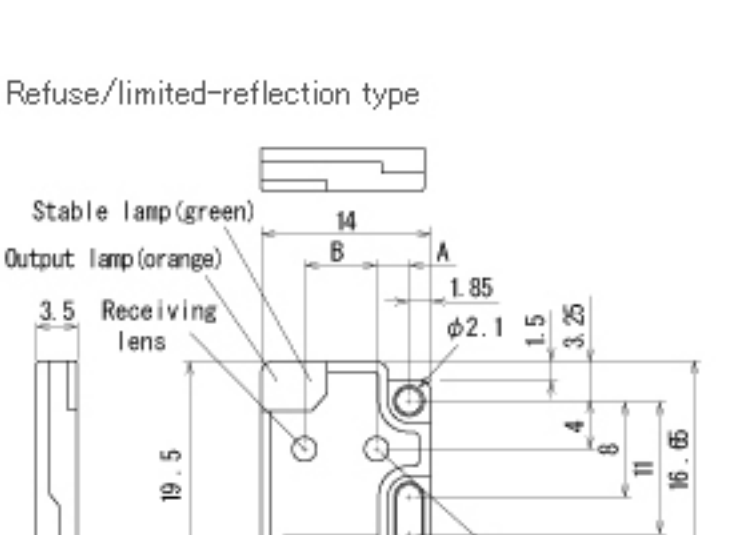
Through-beam type projector



Through-beam type receiver



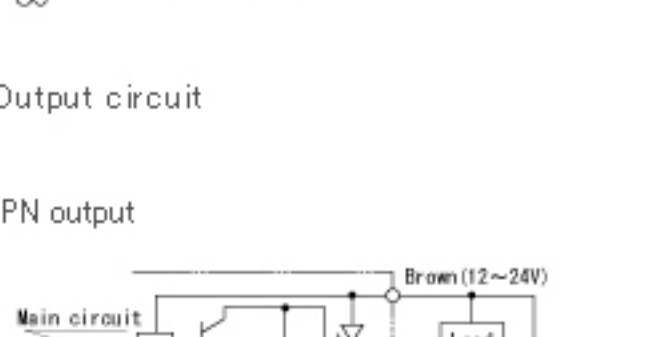
Refuse/limited-reflection type



	Diffuse-reflection	Limited-reflection		
		Long	Long	Short
A	2.75	3.25	3.45	3.65
B	5.7	5.0	4.6	4.2

Output circuit

NPN output



PNP output

