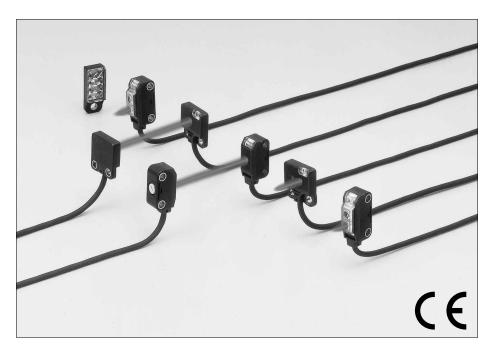


# ULTRA-COMPACT PHOTOELECTRIC SENSORS

## UZB5/6 Series

### THE SOLUTION TO YOUR REQUIREMENTS!



## Miniaturization by Using Single Chip Optical IC!

The beam-receiving photodiode and the A/D conversion circuit have been fabricated on a single chip optical IC (full custom). Hence, in spite of its miniature size, it has a performance and reliability which is equal to or better than the conventional product.



### Long Sensing Range Realized

The **UZB5/6** series achieves long distance sensing [thru-beam type: 2m 6.562ft, retroreflective type: 200mm 7.874inch (when using the attached reflector), diffuse reflective type: 160mm 6.300inch], despite its miniature size. Hence, it is usable even on a wide conveyor.

### Waterproof IP67

The sensor can be hosed down because of its IP67 construction.

## Clear Beam Spot by Using a Red LED Dot Light Source.

The emission area of a dot light source is smaller than that of a conventional LED flat light source, and it is possible to design a high power, narrow beam. Since a red LED dot light source is used, the red beam spot is clear even at a far place, so that alignment and confirmation of sensing position is easy. Further, since the thru-beam type, too, incorporates a visible narrow beam, it can also reliably detect small parts, such as, chip components, lead frames, etc.

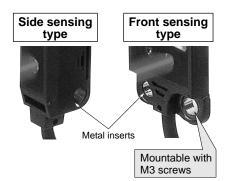
## Incorporates a Sensitivity Adjuster Even in this Size.

The sensor incorporates a sensitivity adjuster in spite of its miniature size. It is convenient when you need fine adjustment. Further, the receiver of the thrubeam, side sensing type sensor incorporates an operation mode switch which can change the output operation.



### **Mounting Section Reinforced**

It can be tightened with M3 screws. Moreover, metal inserts have been provided in the mounting holes so that the product is not damaged even in case of excess tightening.



### **Bright Two-color Indicator**

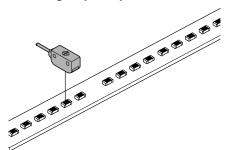
Bright two-color indicator has been incorporated in all types.

### Slit Mask is Available

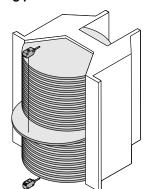
 $\phi$ 0.5mm  $\phi$ .020inch round slit mask and 0.5 × 3mm .020inch × .118inch rectangular slit mask are available for both side sensing type and front sensing type.

### **APPLICATIONS**

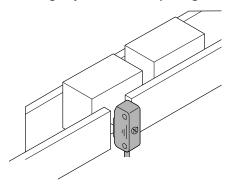
### **Detecting chip components**



### Checking protrusion of water



### Sensing objects from an opening



### **ORDER GUIDE**

Туре			Appearance	Sensing range	Model No.	Output	Output operation	
		ng			UZB501	NPN open-collector transistor	Light-ON	
Ĥ	Thru-beam	nt sensing		1m	UZB5015	PNP open-collector transistor	Light-ON	
				3.281ft	UZB502	NPN open-collector transistor	Devile ON	
		Front :	U U		UZB5025	PNP open-collector transistor	Dark-ON	
		Side sensing		2m	UZB610	NPN open-collector transistor	Switchable either Light-ON or Dark-ON	
			6.56	6.562ft	UZB6105	PNP open-collector transistor		
:	Retroreflective	Side sensing			UZB641	NPN open-collector transistor	Light-ON  Dark-ON	
				30 to 200mm 1.181 to 7.874inch (Note 1) UZB6415 UZB6425	UZB6415	PNP open-collector transistor		
					UZB642	NPN open-collector transistor		
					UZB6425	PNP open-collector transistor		
	reflective	Side sensing	(67).		UZB631	NPN open-collector transistor	Light-ON Dark-ON	
Diffuse				.197 to 6.300inch	UZB6315	PNP open-collector transistor		
					UZB632	NPN open-collector transistor		
	_	Sic			UZB6325	PNP open-collector transistor		
- Ne	Diffused light type	Ingni type Front sensing		0.4.05	UZB561	NPN open-collector transistor	Light-ON	
			ensi		2 to 25mm .078 to .984inch	UZB5615	PNP open-collector transistor	Light Oiv
lecti				(Convergent point: 10mm .393inch)	UZB562	NPN open-collector transistor	Dark-ON	
t ref					UZB5625	PNP open-collector transistor	Daik-ON	
Convergent reflective	Small spot light type	light type Side sensing	(67).		UZB671	NPN open-collector transistor	Light-ON	
			ensir		6 to 14mm .236 to .551inch	UZB6715	PNP open-collector transistor	Ligiti-ON
		de s	side side	(Convergent point: 10mm .393inch)	UZB672	NPN open-collector transistor	Dark-ON	
		Sic			UZB6725	PNP open-collector transistor	Daik-Oiv	
Narrow-view reflective	Long distance spot	Side sensing	(57) <sub>k</sub>		UZB681	NPN open-collector transistor	Light-ON	
			ensi		45 to 115mm	UZB6815	PNP open-collector transistor	Light-ON
		de s		1.772 to 4.528inch	UZB682	NPN open-collector transistor	Dark-ON	
ž		Sic	ij		UZB6825	PNP open-collector transistor	Daik-Oiv	

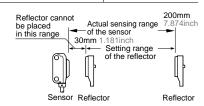
Notes: 1) The sensing range of the retroreflective type sensor is specified for the UZZ113 reflector.

Further, the sensing range is the possible setting range for the reflector.

The sensor can detect an object less than 30mm 1.181inch away. However, if the reflector is set 100mm or less away, the sensing object should be opaque.

2) In case of using this product at a sensing range of 50mm 1.969inch or less, take care that

the sensitivity adjustment range becomes extremely narrow.



Package without reflector

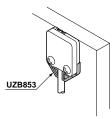
**UXB64** is also available without the reflector **UZZ113** when ordering this type, add suffix '-Y' at the end of the model No. Ex.: **UZB64** Y is **UZB64** without the reflector.

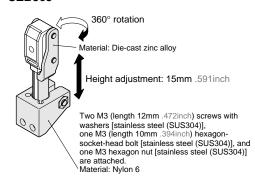
### **OPTIONS**

OPTIONS						
Designa	tion	Model No.	Description			
	For front sensing type	UZB855 (Slit size	Slit on one side • Sensing range: 200mm 7.874inch • Min. sensing object: $\phi$ 2.6mm $\phi$ .102inch			
ik i type)	For front sensing	<b>φ</b> 0.5mm φ.020inch)	Slit on both side • Sensing range: 40mm 1.575inch • Min. sensing object: φ0.5mm φ.020inch			
Round slit mask (For thru-beam type)	For side sensing type	UZB865 (Slit size	Slit on one side • Sensing range: 350mm 13.780inch • Min. sensing object: $\phi$ 3mm $\phi$ .118inch			
Round (For th		$\phi$ 0.5mm $\phi$ .020inch)	Slit on both side • Sensing range: 70mm 2.756inch • Min. sensing object: $\phi$ 0.5mm $\phi$ .020inch			
	For front sensing type	<b>UZB856</b> (Slit size 0.5 × 3mm	Slit on one side • Sensing range: 600mm 23.622inch • Min. sensing object: \$\phi 2.6mm \phi.102inch			
it mask type)		.020×. 118inch)	Slit on both side • Sensing range: 300mm 11.811 • Min. sensing object: 0.5 × 3mm	inch .020×.118inch		
Rectangular slit mask /For thru-beam type) \sensor only	For side sensing type	UZB866 (Slit size	Slit on one side Sensing range: 800mm 13.780incl			
Rectar (For th		φ <b>0.5mm</b> φ.020inch <b>)</b>	Slit on both side  • Sensing range: 400mm 15.748inch  • Min. sensing object: 0.5 × 3mm .020×.118inch			
Reflector (For retre- flective to sensor	ore- \	UZZ110	<ul> <li>Sensing range: 50 to 400mm 1.969 to 15.748inch</li> <li>Min. sensing object φ30mm φ1.181inch</li> </ul>			
Reflector mounting bracket		UZZ1100	Protective mounting bracket for <b>UZZ110</b> Protects the reflector from damage and maintains alignment.			
Reflective			Ambient temperature: -25 to +50°C       -13 to 122°F       Ambient humidity: 35 to 85% RH	• Sensing range: 70 to 200mm 2.756 to 7.874inch		
flective			Notes I) Keep the tape free from stress. If it is pressed too much, its capability may deteriorate.  ii) Do not cut the tape. It will deteriorate the sensing performance	• Sensing range: 60 to 280mm 2.362 to 11.024inch		
		UZB851	Back angled mounting bracket for front sensing (The thru-beam type sensor needs two brackets			
Sensor	1	UZB861	Foot angled mounting bracket for side sensing type (The thru-beam type sensor needs two brackets)			
bracket		UZB852	L-shaped mounting bracket for front sensing type (The thru-beam type sensor needs two brackets)			
		UZB861	Back angled mounting bracket for side sensing type (The thru-beam type sensor needs two brackets)			
Universal sensor mounting bracket [For UZB610(5) only]  Mounting spacer (For front sensing type only)		UZB863	It can adjust the height and the angle of the sensor. (Two brackets are needed.)			
		<b>UZB853</b> (1 set: 10 Nos.)	It is used when mounting the front sensing type from the rear side. (The thru-beam type sensor needs two brackets)			

## Mounting spacer UZB853

## Universal sensor mounting bracket UZB863





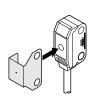
### Round slit mask

Fitted on the front face of the sensor with one-touch.

UZB855

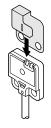
UZB865

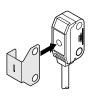




### Rectangular slit mask

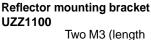
Fitted on the front face of the sensor with one-touch. **UZB856 UZB866** 





## Reflector UZZ110







**UZZ102** 

12mm .472inch) screws with washers are attached.

## Reflective tape UZZ101



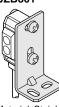


## Sensor mounting bracket UZB851



Material: Stainless steel (SUS304) Two M3 (length 5mm .197inch) pan head screws [stainless steel (SUS304)] are attached.

### UZB861



Material: Stainless steel (SUS304) Two M3 (length 14mm .551inch) screws with washers [stainless steel (SUS304)] are attached.

### UZB852



Material: Stainless steel (SUS304) Two M3 (length 5mm .197inch) pan head screws [stainless steel

(SUS304)] are attached.

### UZB862

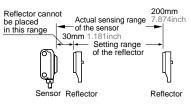


Material: Stainless steel (SUS304) Two M3 (length 14mm .551inch) screws with washers [stainless steel (SUS304)] are attached.

### **SPECIFICATIONS**

		Thru-beam		Retroreflective	Diffuse reflective	Convergent reflective		Narrow-view reflective	
	Type					Diffused light type	Small spot light type	Long distance spot light type	
		Front sensing	Side sensing	Side sensing	Side sensing	Front sensing	Side sensing	Side sensing	
\ M	lodel Light-ON	UZB501(5)	UZB610(5)	UZB641(5)	UZB631(5)	UZB561(5)	UZB671(5)	UZB681(5)	
Item\ N	o. Dark-ON	UZB502(5)	026610(3)	UZB642(5)	UZB632(5)	UZB562(5)	UZB672(5)	UZB682(5)	
Sensing	range	<b>1m</b> 3.281ft	<b>2m</b> 6.562ft	30 to 200mm 1.181 to 7.874inch (Note 2)	5 to 160mm .197 to 6.300inch (Note 3) / with 200 × 200mm 7.874 × 7.874inch white non-glosy paper	2 to 25mm .079 to .984inch (Conv. point: 10mm .394inch) / with 50 × 50mm 1.969 × 1.969inch white non-glosy paper	6 to 14mm .236 to .551inch (Conv. point: 10mm .394inch) / with 50 x 50mm 1.969 x 1.969inch white non- glosy paper, spot diam- eter \$\phi\$ 1mm \$\phi\$.039inch at setting distance 10mm \lambda 394inch	45 to 115mm 1.772 to 4.528inch with 100 × 100mm 3.937 × 3.937inch white non-glosy paper, spot diameter φ5mm φ.197inch at setting distance 80mm 3.150inch	
Sensing	object	Min. \$\phi 2.6mm\$\$\text{\$\phi\$.102inch}\$\$ opaque object \text{ Setting distance between emitter and receiver: 1m} \text{3.281ft}\$	Min. \$\phi 3mm \\ \phi.118inch \\ \text{opaque object} \\ \text{Setting distance between emitter and receiver: 2m} \\ 6.562ft \end{array}	φ15mm φ.591inch or more opaque or translucent object (Note 2)	Opaque, trans- lucent or trans- parent object	Min. \( \phi 0.1 mm \) \( \phi .004 inch copper wire \) \( \text{Setting distance: 10mm} \) \( .394 inch \)	Min. \( \phi 0.1 mm \) \( \phi .004 inch copper wire \) \( \text{Setting distance: 10mm} \) \( .394 inch \)	Opaque, translucent or transparent object  Min. \$\phi\$1mm  \$\phi\$.039inch copper wire at setting distance  80mm 3.150inch	
Hysteres	is		_			15% or less of or	peration distance		
Repeata (Perpend sensing	dicular to	<b>0.05mm</b> .002	2inch or less	0.5mm .020inch or less	0.3mm .012inch or less	0.1mm .004inch or less (Setting distance: 10mm .394inch)	0.05mm .002inch or less (Setting distance: 10mm .394inch)	0.3mm .012inch or less	
Supply v	oltage			12 to 24V DC:	±10% Ripple P-I	2: 10% or less			
Current	consumption	Emitter : 10mA or less, Receiver : 15mA or less							
Output		(NPN output type) NPN open-collector transistor • Maximum sink current : 50mA • Applied voltage : 30V DC or less (between output and 0V) • Residual voltage : 1V or less (at 50mA sink current)  0.4V or less (at 16mA sink current)  (PNP output type) PNP open-collector transistor • Maximum source current : 50mA • Applied voltage : 30V DC or less (between output and + V) • Residual voltage : 1V or less (at 50mA source current) 0.4V or less (at 16mA source current)							
	tion category	DC-12 or DC-13							
	circuit protection	Incorporated							
Respons		0.5ms or less							
Operatio	n indicator	Orange LED (lights up when output is ON) (thru-beam type: located on the receiver)							
Stability	indicator	light received cond	Green LED (lights up under stable ght received condition or stable dark condition), located on the receiver				dark condition)		
	ty adjuster	_	Continuously variable adjuster, located on the emitter	Continuously v	ariable adjuster	_	Continuously v	ariable adjuster	
	mode switch	_	Located on the receiver			_			
	ion degree			3 (Ir	ndustrial environm	nent)			
Prote Ambie Ambie EMC Voltage Vibrat Vibrat		IP67 (IEC)							
Sign Ambie	nt temperature	-25 to +55°C -13 to +131°F (No dew condensation or icing allowed), Storage:-30 to +70°C - 22 to +158°F							
Ambie	ent humidity	35 to 85%RH, Storage : 35 to 85%RH							
EMC Alliple	ent Illuminance	Sun light: 10,000 lux at the light-receiving face, Incandescent: 3,000 lux at the light-receiving face							
SMS Voltage	withstandability	Emission: EN50081-2, Immunity: EN50082-2							
O Incula	tion resistance	1,000V AC for one min. between all supply terminals connected together and enclosure  20MΩ or more with 250V DC megger between all supply terminals connected together and enclosure							
Vibrat	ion resistance					in X, Y and Z dire			
_	k resistance	10 10 300						urs caori.	
Emitting element		500m/s <sup>2</sup> acceleration {50G approx.}in X, Y and Z directions for three times each.  Red LED (modulated)							
Material		Enclosure : Polyethylene terephthalate, Lens : Polyalylate							
Cable									
Cable extension		0.1mm <sup>2</sup> 3-cores (thru-beam type sensor emitter: 2-core) cabtyre cable, 2m 6.562ft long  Extension up to total 50m 164.04ft is possible with 0.3mm <sup>2</sup> , or more, cable (thru-beam type: both emitter and receiver)							
Weight		Emitter: 20g .	071oz approx.	TE 13 POSSIDIE WILL		e, cable (triru-bear 20g .071oz approx		or and receiver)	
Accesso	ries	Receiver: 20g	Adjusting screw- driver: 1 No.	UZZ113 (Reflector): 1 No. Adjusting screwdriver: 1 No.	Adjusting screw- driver: 1 No.	_		ewdriver: 1 No.	
N. 4 ::	=	l		, rajuoting solowullvel. I No.	univer. I IVO.				

Notes: 1) Either Light-ON or Dark-ON can be selected by the operation mode switch (located on the re-

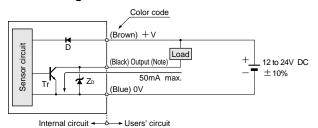


<sup>1)</sup> Either Light-ON of Dark-ON can be selected by the operation mode switch (located on the receiver).
2) The sensing range and the sensing object of the retroreflective type sensor is specified for the UZZ113 reflector. Further, the sensing range is the possible setting range for the reflector. The sensor can detect an object less than 30mm 1.181inch away. However, if the reflector is set 100mm 3.937inch or less away, the sensing object should be opaque.
3) In case of using this product at a sensing range of 50mm 1.969inch or less, take care that the sensitivity adjustment range becomes extremely narrow.

### I/O CIRCUIT AND WIRING DIAGRAMS

### **NPN** output type

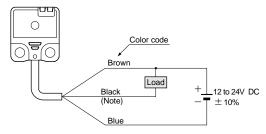
### I/O circuit diagram



Note: The thru-beam type sensor emitter does not incorporated the output.

Symbol...D: Reverse supply polarity protection diode Z<sub>D</sub>: Surge absorption zener diode Tr: NPN output transistor

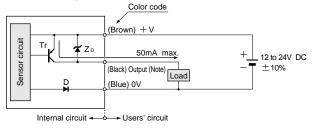
### Wiring diagram



Note: The thru-beam type sensor emitter does not incorporate the black wire.

### PNP output type

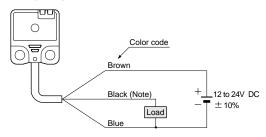
### I/O circuit diagram



Note: The thru-beam type sensor emitter does not incorporated the output.

Symbol...D: Reverse supply polarity protection diode Zp: Surge absorption zener diode Tr: NPN output transistor

### Wiring diagram



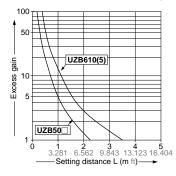
Note: The thru-beam type sensor emitter does not incorporate the black wire.

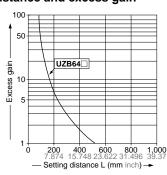
Thru-beam type

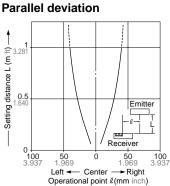
### **SENSING CHARACTERISTICS (TYPICAL)**

UZB50□ UZB610(5) UZB64□ UZB63□

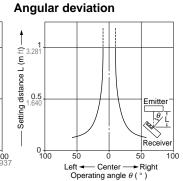
### Correlation between setting distance and excess gain

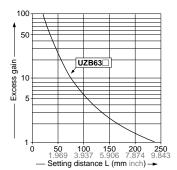


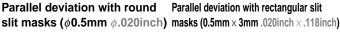


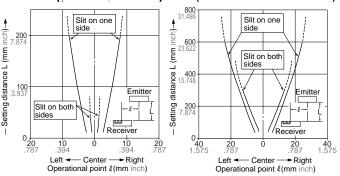


UZB50□









### **SENSING CHARACTERISTICS (TYPICAL)**

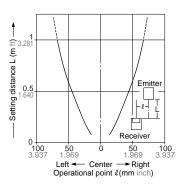
UZB610(5)

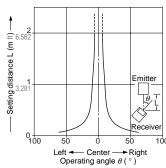
Thru-beam type

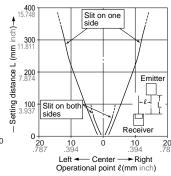
Parallel deviation

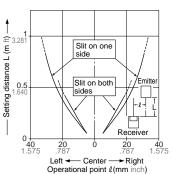
### Angular deviation

Parallel deviation with round Parallel deviation with rectangular slit slit masks ( $\phi$ 0.5mm  $\phi$ .020inch) masks (0.5mm $\times$ 3mm.020inch $\times$ .118inch)





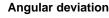


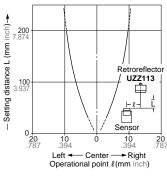


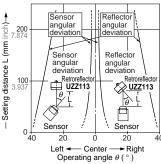
UZB64□

Retroreflective type

#### Parallel deviation





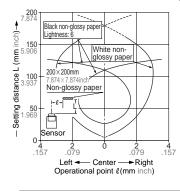


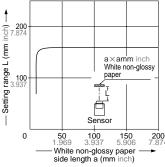
UZB63□

Diffuse reflective type

### Sensing field

## Correlation between object size and sensing range





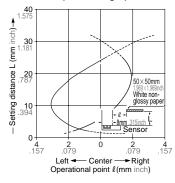
As the object size becomes smaller than the standard size (white non-glossy paper 200×200mm 7.874×7.874inch), the sensing range shortens, as shown in the left graph.

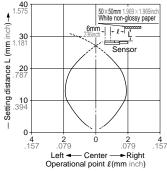
UZB56□

Convergent reflective type

### Sensing field

• Horizontal (left and right) direction • Vertical (up and down) direction



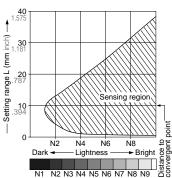


### **SENSING CHARACTERISTICS (TYPICAL)**

UZB56□

Convergent reflective type

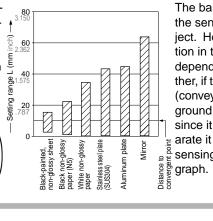
### Correlation between lightness and sensing range



The sensing region is represented by oblique lines in the left figure. However, the sensitivity should be set with enough margin because of slight variation in products.

Lightness shown on the left may differ slightly from the actual object condition.

### Correlation between material (50 × 50mm 1.969 × 1.969inch) and sensing range



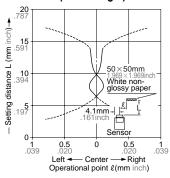
The bars on the graph indicate the sensing range with each object. However, there is a variation in the sensing range depending on the product. Further, if there is a reflective object (conveyor, etc.) in the background of the sensing object, since it affects the sensing, separate it by more than twice the sensing range shown in the left graph.

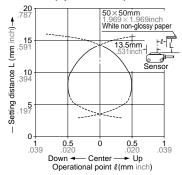
UZB67□

Convergent reflective type

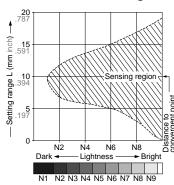
### Sensing field

### • Horizontal (left and right) direction • Vertical (up and down) direction





### Correlation between lightness and sensing range

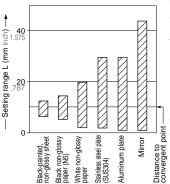


The sensing region is represented by oblique lines in the left figure. However, the sensitivity should be set with enough margin because of slight variation in products.

The graph is drawn for the maximum sensitivity setting.

Lightness shown on the left may differ slightly from the actual object condition.

### Correlation between material (50 $\times$ 50mm 1.969 $\times$ 1.969inch) and sensing range



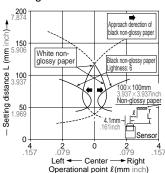
The bars on the graph indicate the sensing range with each object. However, there is a variation in the sensing range depending on the product. Further, if there is a reflective object (conveyor, etc.) in the background of the sensing object, since it affects the sensing, separate it by more than twice the sensing range shown in the left graph, or adjust

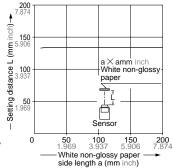
The graph is drawn for the maximum sensitivity setting.

UZB68

Narrow-view reflective type

### Sensing field





Correlation between object size and sensing range

As the object size becomes smaller than the standard size (white non-glossy paper 100×100mm 3.937×3.937inch), the sensing range shortens, as shown in the left graph.

### PRECAUTIONS FOR PROPER USE

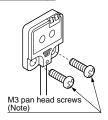


This product is not a safety sensor. Its use is not intended or designed to protect life and prevent body injury or property damage from dangerous parts of machinery. It is a normal object detection sensor.

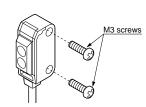
#### Mounting

 Mount using M3 screws. The tightening torque should be 0.5N•m or less.

### Front sensing



### Side sensing

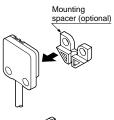


Note: When mounting the front sensing type sensor, use M3 pan head screws without washers, etc.

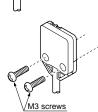
• When mounting the front sensing type from the backside, fit the mounting spacer **UZB853** and fix with screws.

#### **Mounting method**

Fit the mounting spacer on the sensor.



(2) Align the mounting holes of the mounting spacer and the sensor and mount with M3 screws. The tightening torque should be 0.5N•m or less.



### Sensitivity adjustment (Side sensing type only)

Step	Sensitivity adjuster	Description		
1	MAX	Turn the sensitivity adjuster fully counterclockwise to the minimum sensitivity position (• mark).		
2	MAX A	In the light received condition, turn the sensitivity adjuster slowly clockwise and confirm the point ${\mathbb A}$ where the sensor enters the 'Light' state operation.		
3	® MAX	In the dark condition, turn the sensitivity adjuster further clockwise until the sensor enters the 'Light' state operation and then bring it back to confirm point B where the sensor just returns to the 'Dark' state operation.  If the sensor does not enter the 'Light' state operation even when the sensitivity adjuster is turned fully clockwise, this extreme position is point B.		
4	Optimum position  (B)  (B)  (B)  (C)  (B)  (C)  (C)  (C)	The position at the middle of points ${\tt A}$ and ${\tt B}$ is the optimum sensing position.		

Notes: 1) Use the accessory adjusting screwdriver to turn the adjuster slowly. Turning with excessive strength will damage the adjuster

In case of using UZB63

 at a sensing distance of 50mm

 1.969inch or less, take care that the sensitivity adjustment
 range becomes extremely narrow.

### Operation mode switch UZB610(5) only

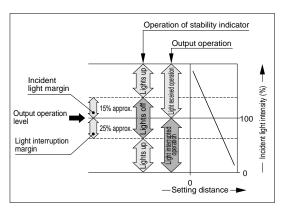
•	
Switch position	Description
	Light-ON mode is obtained when the operation mode switch (located on the receiver) is turned fully clockwise (L side).
L	Dark-ON mode is obtained when the operation mode switch (located on the receiver) is turned fully counterclockwise (D side).

Note: Operation mode switch should be turned fully till it stops.

#### Stability indicator

 The stability indicator (green) lights up when the incident signal light intensity has sufficient margin with respect to the operation level.

If the incident light intensity level is such that the stability indicator lights up, stable sensing can be done without the light received operation and the light interrupted operation being affected by a change in ambient temperature or supply voltage.



#### Wiring

- Make sure to carry out the wiring in the power supply off condition.
- Verify that the supply voltage variation is within the rating.
- If power is supplied from a commercial switching regulator, ensure that the frame ground (F.G.) terminal of the power supply is connected to an actual ground.
- In case noise generating equipment (switching regulator, inverter motor, etc.) is used in the vicinity of this sensor, connect the frame ground (F.G.) terminal of the equipment to an actual ground
- Do not run the wires together with high voltage lines or power lines or put them in the same raceway. This can cause malfunction due to induction.

#### Others

- Do not use during the initial transient time (50ms) after the power supply is switched on.
- Avoid dust, dirt, and steam.
- Take care that the sensor does not come in direct contact with water, oil, grease, or organic solvents, such as, thinner, etc.
- Take care that the sensor is not directly exposed to fluorescent light from a rapid-starter lamp or a high frequency lighting device, as it may affect the sensing performance.
- If sensors are mounted close together and the ambient temperature is near the maximum rated value, provide for enough heat radiation/ventilation.

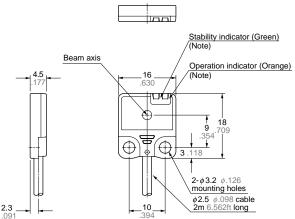
### **DIMENSIONS (Unit: mm inch)**

UZB50□

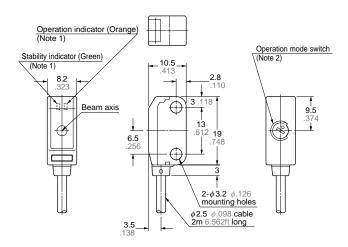
Sensor

UZB610(5)

Sensor



Note: Not incorporated on the emitter.



Note: 1) Not incorporated on the emitter.

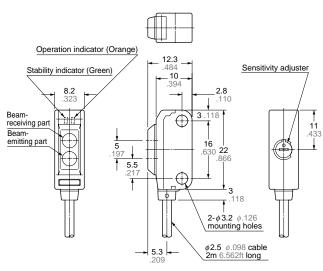
2) It is the sensitivity adjuster on the emitter.

UZB64 UZB63 UZB67 UZB68

ZB68 Sensor

UZB56□

Sensor



Sensitivity adjuster

Beam-emitting part

Beam-receiving part

16
630
Operation indicator (Orange)

17
11
11
13
3 .118

2.\$\phi\$ .354

2.\$\phi\$ .354

2.\$\phi\$ .354

2.\$\phi\$ .354

2.\$\phi\$ .394

Stability indicator (Orange)

4.5

10
2.5 \$\phi\$ .098 cable

2.6 .3.2 \$\phi\$ .126

mounting holes

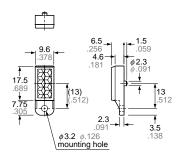
\$\phi\$ .394

**UZZ113** 

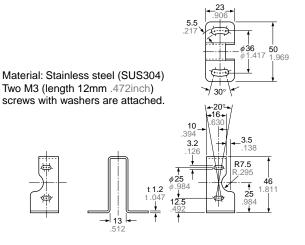
Reflector (Accessory for the retroreflective type sensor)

**UZZ1100** 

Reflector mounting bracket for UZZ110 (Optional)



Material: Acrylic (Reflector) ABS (Base)



### **DIMENSIONS (Unit: mm inch)**

### **UZB851**

Sensor mounting bracket (Optional)

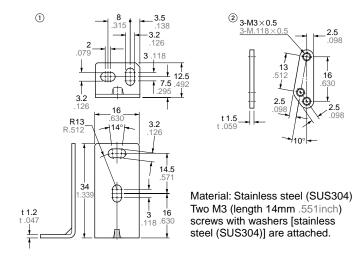
11.5 1.069 10.5 1.161 1.161 1.161 1.161 1.161 1.161 1.197 1.197 1.20 1.197 1.20 1.20 1.354 .748

Material: Stainless steel (SUS304)

Two M3 (length 5mm .197inch) pan head screws [stainless steel (SUS304)] are attached.

### **UZB861**

Sensor mounting bracket (Optional)

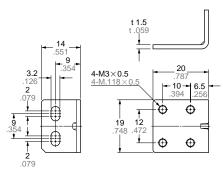


### **UZB852**

Sensor mounting bracket (Optional)

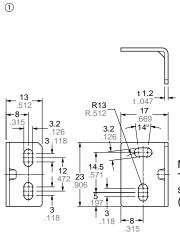
### **UZB862**

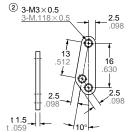
Sensor mounting bracket (Optional)



Material: Stainless steel (SUS304)

Two M3 (length 5mm .197inch) pan head screws [stainless steel (SUS304)] are attached.

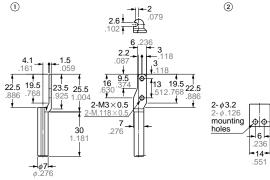




Material: Stainless steel (SUS304) Two M3 (length 14mm .551inch) screws with washers [stainless steel (SUS304)] are attached.

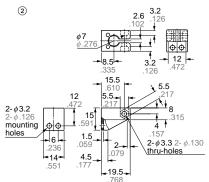
### **UZB863**

Universal sensor mounting bracket (Optional)



Material: Die-cast zinc alloy

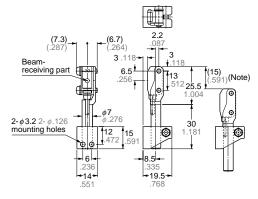
Two M3 (length 12mm .472inch) screws with washers [stainless steel (SUS304)], one M3 (length 10mm .394inch) hexagon-socket-head bolt, and one M3 hexagon nut [stainless steel (SUS304)] are attached.



Material: Nylon 6

### **Assembly dimensions**

Mounting drawing with the receiver of UZB610(5)



Note: This is the adjustable range of the movable part.