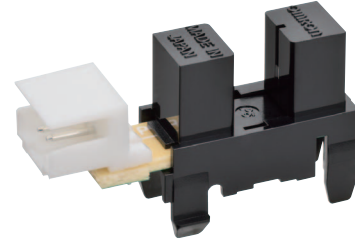


Photomicrosensor (Transmissive)

EE-SX3239-P2

Slot/Snap-in Mounted Type (Slot Width: 5 mm)

- Can be used with three sizes of substrates and panels ($t = 1, 1.2, 1.6$ mm)
- Featuring enhanced maintainability thanks to a snap-in mounted structure in which mounting screws are unnecessary and through use of an all-purpose CT connector manufactured by TE Connectivity.
- Photo IC output (Dark-ON)

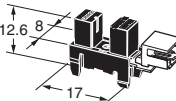


! Be sure to read *Safety Precautions* on Page 3.

RoHS Compliant

Ordering Information

Photomicrosensor

Appearance	Sensing method	Connecting method	Sensing distance	Aperture size (H × W) (mm)	Output type	Model	Minimum packing unit (Unit: pcs)
	Transmissive (slot type)	Connector	 5 mm (Slot width)	Both emitting side and detecting side 2.4 × 0.5	Photo IC	EE-SX3239-P2 (Dark-ON)	1

Note: Order in multiples of minimum packing unit.

Ratings, Characteristics and Exterior Specifications

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Item	Symbol	Rated value	Unit
Power supply voltage	V_{CC}	7	V
Output voltage	V_{OUT}	28	V
Output current	I_{OUT}	16	mA
Permissible output dissipation	P_{OUT}	250*	mW
Operating temperature	T_{opr}	-20 to 75	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to 85	$^\circ\text{C}$

* Refer to the temperature rating chart if the ambient temperature exceeds 25°C .

Exterior Specifications

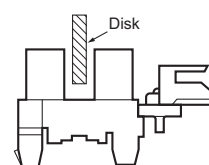
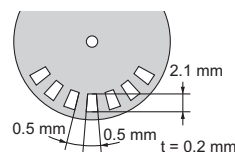
Connecting method	Weight (g)	Material
		Case
Connector	1.2	Polycarbonate

Electrical and Optical Characteristics

($T_a = 25^\circ\text{C}$, $V_{CC} = 5 \text{ V} \pm 10\%$)

Item	Symbol	Value			Unit	Condition
		MIN.	TYP.	MAX.		
Current consumption	I_{CC}	—	—	16.5	mA	With and without incident
Low-level output voltage	V_{OL}	—	—	0.35	V	$I_{OUT} = 16 \text{ mA}$ without incident
High-level output voltage	V_{OH}	$(V_{CC} \times 0.9)$		—	V	$V_{OUT} = V_{CC}$ with incident $R_L = 47 \text{ k}\Omega$
Response frequency	f	3	—	—	kHz	$V_{OUT} = V_{CC}$ $R_L = 47 \text{ k}\Omega$ *

* The value of the response frequency is measured by rotating the disk as shown below.



Engineering Data (Reference Value)

Fig 1. Output Allowable Dissipation vs. Ambient Temperature Characteristics

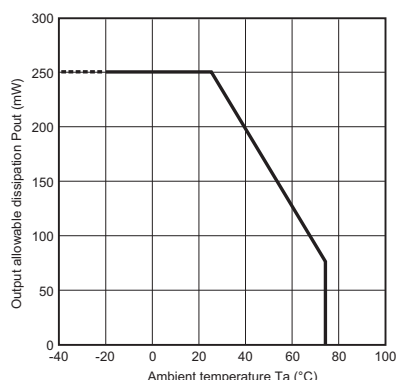


Fig 2. Sensing Position Characteristics (Typical)

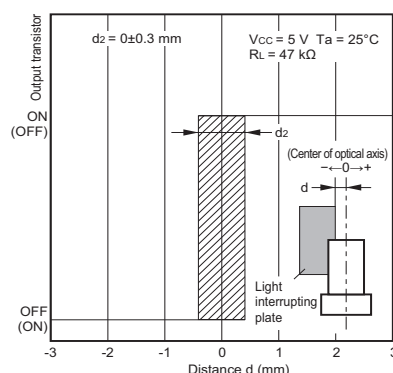
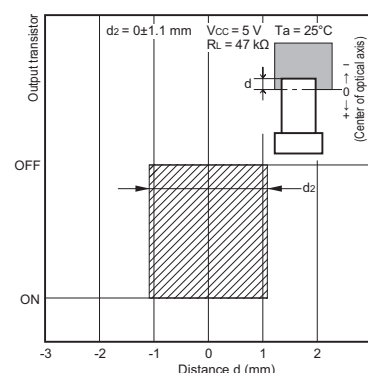
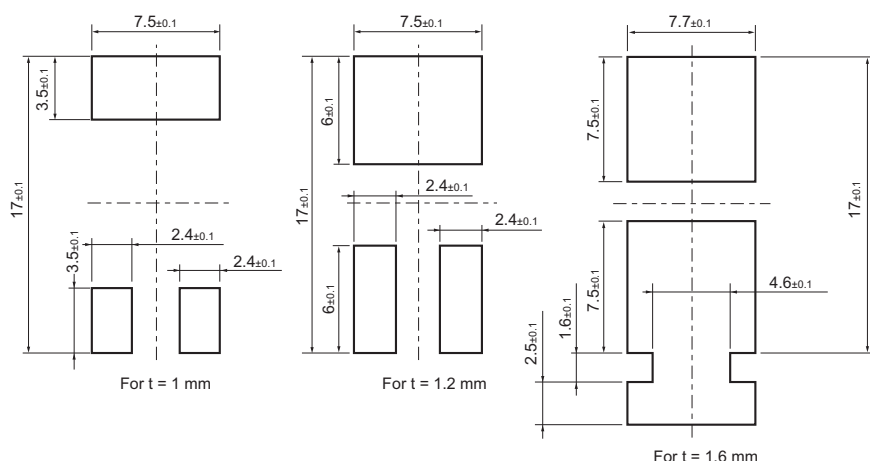


Fig 3. Sensing Position Characteristics (Typical)



Recommended Mounting Holes



- When mounting the Photomicrosensor to a panel with a hole opened by pressing, make sure that the hole has no burrs. The mounting strength of the Photomicrosensor will decrease if the hole has burrs.
- When mounting the Photomicrosensor to a panel with a hole opened by pressing, be sure to mount the Photomicrosensor on the pressing side of the panel.
- If mounting to molded parts, be aware that it will more easily become detached if the edge is not sharp.
- The 7.5 mm hole dimensions are flexible and the mounting strength of the Photomicrosensor will increase if the Photomicrosensor is mounted to a panel with a hole that is only a little larger than the size of the Photomicrosensor, in which case, however, it will be difficult to mount the Photomicrosensor to the panel. The mounting strength of the Photomicrosensor will decrease if the Photomicrosensor is mounted to a panel with a hole that is comparatively larger than the size of the Photomicrosensor, in which case, however, it will be easy to mount the Photomicrosensor to the panel. When mounting the Photomicrosensor to a panel, open an appropriate hole for the Photomicrosensor according to the application.
- After mounting the Photomicrosensor to any panel, make sure that the Photomicrosensor does not wobble.

Safety Precautions

To ensure safe operation, be sure to read and follow the Instruction Manual provided with the Sensor.

CAUTION

This product is not designed or rated for ensuring safety of persons either directly or indirectly.
Do not use it for such purposes.



Precautions for Correct Use

Do not use the product in atmospheres or environments that exceed product ratings.
Dispose of this product as industrial waste.

Precautions for Safe Use

Do not use the product with a voltage or current that exceeds the rated range.

Applying a voltage or current that is higher than the rated range may result in explosion or fire.

Do not miswire such as the polarity of the power supply voltage.

Otherwise the product may be damaged or it may burn.

Do not short-circuit the load.

Otherwise explosion or burning may occur.

This product does not resist water. Do not use the product in places where water or oil may be sprayed onto the product.

Dimensions and Internal Circuit

(Unit: mm)

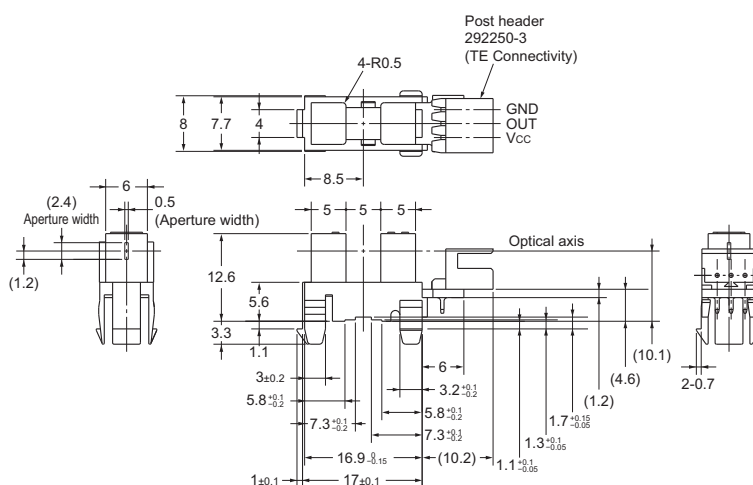
Photomicrosensor

EE-SX3239-P2



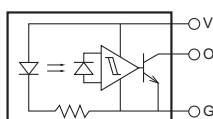
Aperture size (H × W)

Emitter	Detector
2.4 × 0.5	2.4 × 0.5



Recommended compatible connector: Connector manufactured by TE Connectivity 179228-3 (crimp type)
175778-3 (crimp type)
173977-3 (insulation displacement crimp type)

Internal circuit



Terminal No.	Name
V	Power supply (Vcc)
O	Output (OUT)
G	Ground (GND)

Unless otherwise specified, the tolerances are as shown below.

Dimensions	Tolerance
3 mm max.	±0.3
3 < mm ≤ 6	±0.375
6 < mm ≤ 10	±0.45
10 < mm ≤ 18	±0.55
18 < mm ≤ 30	±0.65

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