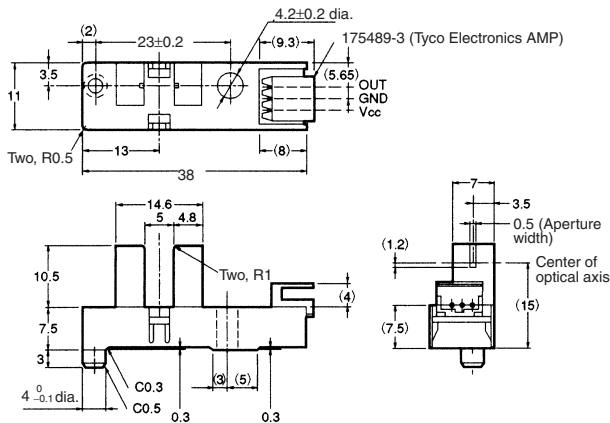


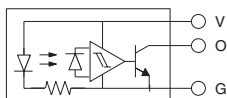
# Photomicrosensor (Transmissive) EE-SX3019-P2/-SX4019-P2

## ■ Dimensions

**Note:** All units are in millimeters unless otherwise indicated.



### Internal Circuit



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

Terminal No.	Name
V	Power supply (V <sub>CC</sub> )
O	Output (OUT)
G	Ground (GND)

### Recommended Mating Connectors:

- Tyco Electronics AMP 179228-3 (crimp connector)
- 175778-3 (crimp connector)
- 173977-3 (press-fit connector)

## ■ Features

- Screw-mounting model.
- High resolution with a 0.5-mm-wide sensing aperture.
- With a 5-mm-wide groove.
- Photo IC output signals directly connect with C-MOS and TTL.
- Connects to Tyco Electronics AMP's CT-series connectors.

## ■ Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Rated value	
Power supply voltage	V <sub>CC</sub>	7 V	
Output voltage	V <sub>OUT</sub>	28 V	
Output current	I <sub>OUT</sub>	16 mA	
Permissible output dissipation	P <sub>OUT</sub>	250 mW (see note)	
Ambient temperature	Operating	Topr	-20°C to 75°C
	Storage	Tstg	-40°C to 85°C
Soldering temperature	Tsol	---	

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

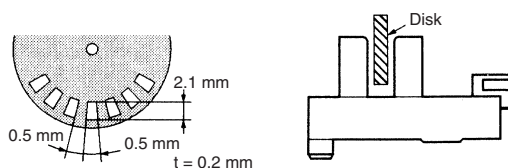
## ■ Ordering Information

Description		Model
Photomicrosensor (transmissive)	Dark ON	EE-SX3019-P2
	Light ON	EE-SX4019-P2

## ■ Electrical and Optical Characteristics (Ta = 25°C, V<sub>CC</sub> = 5 V ±10%)

Item	Symbol	Value	Condition
Current consumption	I <sub>CC</sub>	20 mA max.	With and without incident
Low-level output voltage	V <sub>OL</sub>	0.3 V max.	I <sub>OUT</sub> = 16 mA Without incident (EE-SX3019-P2) With incident (EE-SX4019-P2)
High-level output voltage	V <sub>OH</sub>	(V <sub>CC</sub> × 0.9) V min.	V <sub>OUT</sub> = V <sub>CC</sub> With incident (EE-SX3019-P2) Without incident (EE-SX4019-P2), R <sub>L</sub> = 47 kΩ
Response frequency	f	3 kHz min.	V <sub>OUT</sub> = V <sub>CC</sub> , R <sub>L</sub> = 47 kΩ (see note)

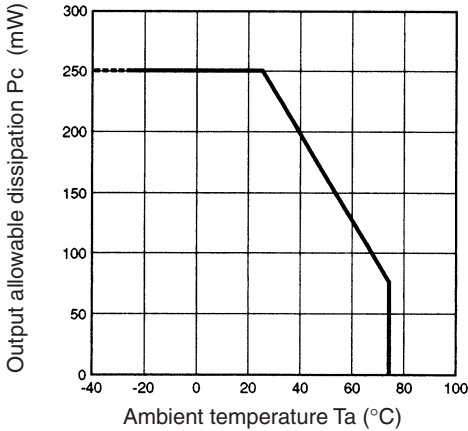
**Note:** The value of the response frequency is measured by rotating the disk as shown below.



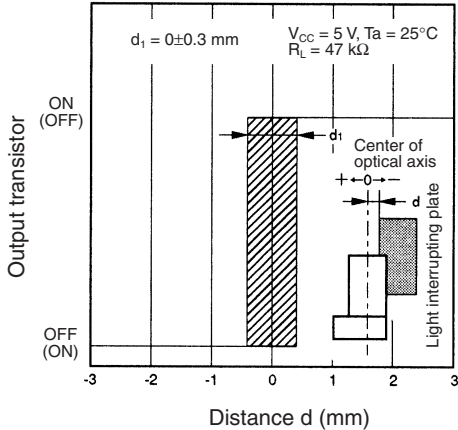
### Engineering Data

Note: The values in the parentheses apply to the EE-SX4019-P2.

#### Output Allowable Dissipation vs. Ambient Temperature Characteristics



#### Sensing Position Characteristics (Typical)



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55 E. Commerce Drive, Suite B  
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