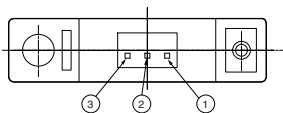
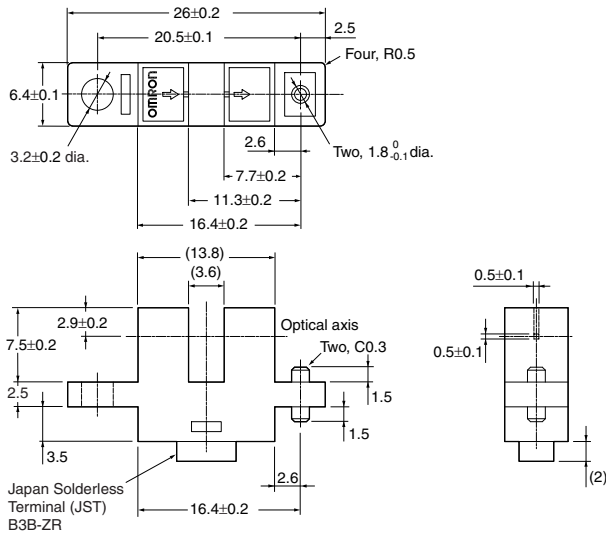


## Photo IC Output Photomicrosensor (Transmissive) EE-SX3148-P1

**⚠ Be sure to read *Precautions* on page 24.**

### ■ Dimensions

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



Unless otherwise specified, the tolerances are as shown below.

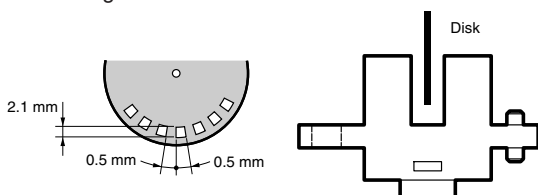
Dimensions	Tolerance
3 mm max.	±0.200
3 < mm ≤ 6	±0.240
6 < mm ≤ 10	±0.290
10 < mm ≤ 18	±0.350
18 < mm ≤ 30	±0.420

Recommended Mating Connectors:  
JST (Japan Solderless Terminal) ZHR-3 Series (crimp connector)  
03ZR Series (press-fit connector)

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

Item	Symbol	Value	Condition
Current consumption	I <sub>CC</sub>	30 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
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 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.



### ■ Features

- A boss on one side enables securing the Sensor with one M2 or M3 screw.
- Sensor can be installed from either top of bottom of mounting plate.
- High resolution both vertically and horizontally (slot dimensions: 0.5 x 0.5 mm)
- 3.6-mm-wide slot.
- Photo-IC output connects directly to CMOS and TTL devices.
- Applicable to the ZH and ZR Connector Series from JST (Japan Solderless Terminal).

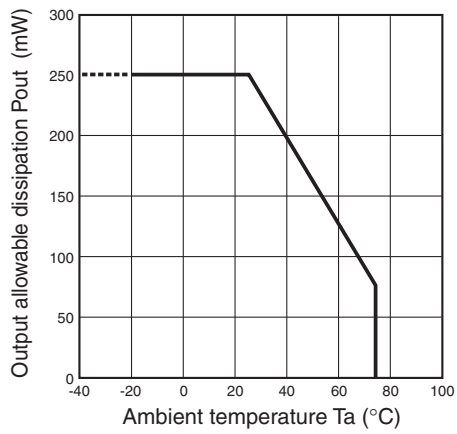
### ■ Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Rated value	
Power supply voltage	V <sub>CC</sub>	6 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	T <sub>opr</sub>	-20°C to 75°C
	Storage	T <sub>stg</sub>	-40°C to 85°C
Soldering temperature	T <sub>sol</sub>	---	

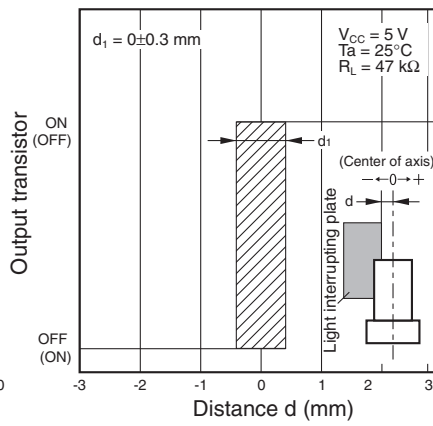
**Note:** Refer to the temperature rating chart if the ambient temperature exceeds 25°C.

■ Engineering Data

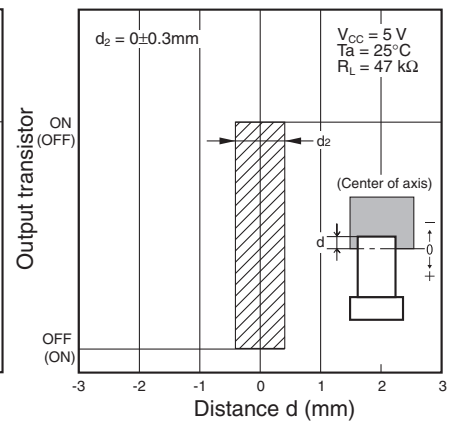
Output Allowable Dissipation vs. Ambient Temperature Characteristics



Sensing Position Characteristics (Typical)



Sensing Position Characteristics (Typical)



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