

## 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

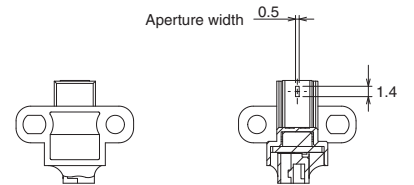
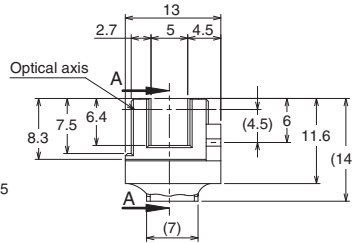
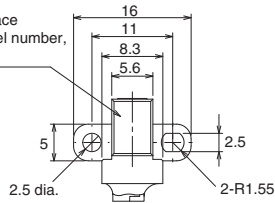
(Unit: mm)

### Photomicrosensor

EE-SX3162-P1  
 EE-SX3162-P1-Z  
 EE-SX4162-P1  
 EE-SX4162-P1-Z  
 EE-SX3162-P2  
 EE-SX4162-P2



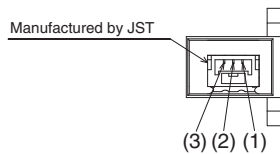
Marked surface  
 (brand, model number,  
 and lot)



Cross section view A-A  
 (Detector side)

Aperture size (H × W)

Emitter	Detector
1.4 × 1.4	1.4 × 0.5



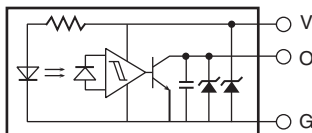
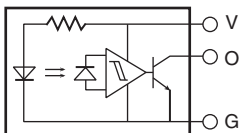
Recommended Mating Connectors:  
 JST (Japan Solderless Terminal) GHR-03

Unless otherwise specified, the tolerances are as shown below.

Dimensions	Tolerance
3 mm max.	±0.2
3 < mm ≤ 6	±0.24
6 < mm ≤ 10	±0.29
10 < mm ≤ 18	±0.35
18 < mm ≤ 30	±0.42

**Note:** Dimensions in parentheses are for reference only.

Internal Circuit



**Note:** Only with models ending in -Z.

Terminal No.	Name
(1)	Ground (GND)
(2)	Output (OUT)
(3)	Power supply (V <sub>CC</sub> )

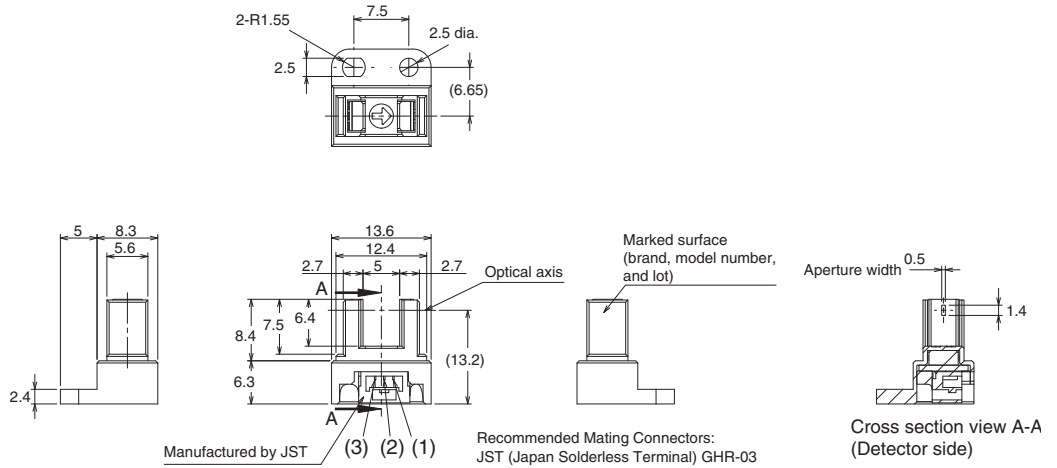
# EE-SX3162/3163/3164-P EE-SX4162/4163/4164-P

EE-SX3163-P1  
 EE-SX4163-P1  
 EE-SX3163-P2  
 EE-SX4163-P2

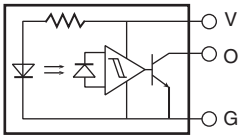


Aperture size (H x W)

Emitter	Detector
1.4 x 1.4	1.4 x 0.5



Internal Circuit



Terminal No.	Name
(1)	Ground (GND)
(2)	Output (OUT)
(3)	Power supply (Vcc)

Unless otherwise specified, the tolerances are as shown below.

Dimensions	Tolerance
3 mm max.	±0.2
3 < mm ≤ 6	±0.24
6 < mm ≤ 10	±0.29
10 < mm ≤ 18	±0.35
18 < mm ≤ 30	±0.42

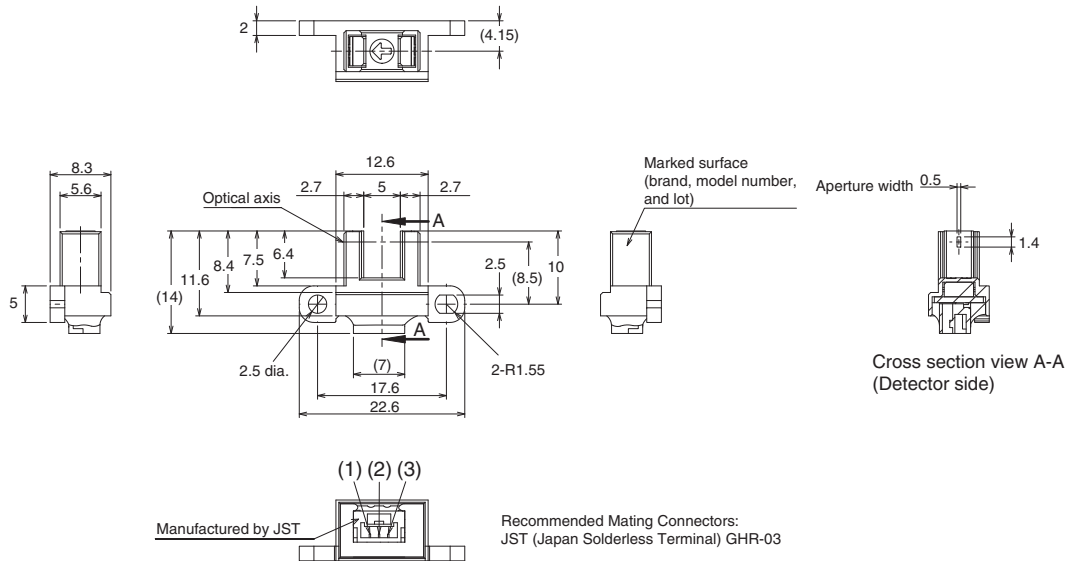
**Note:** Dimensions in parentheses are for reference only.

EE-SX3164-P1  
 EE-SX4164-P1  
 EE-SX3164-P2  
 EE-SX4164-P2

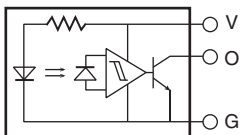


Aperture size (H x W)

Emitter	Detector
1.4 x 1.4	1.4 x 0.5



Internal Circuit



Terminal No.	Name
(1)	Ground (GND)
(2)	Output (OUT)
(3)	Power supply (Vcc)

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