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 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.

Precautions for Correct Use

Do not use the product in atmospheres or environments that exceed product ratings.

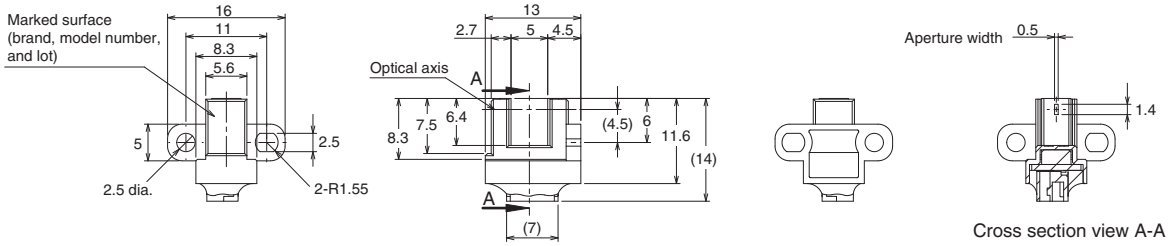
Dispose of this product as industrial waste.

Dimensions and Internal Circuit

(Unit: mm)

Photomicrosensor

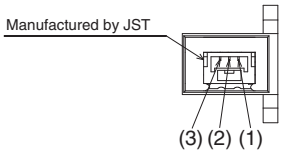
EE-SX3162-P1
EE-SX3162-P1-Z
EE-SX4162-P1
EE-SX4162-P1-Z
EE-SX3162-P2
EE-SX4162-P2



Cross section view A-A (Detector side)

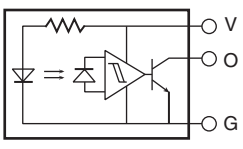
Aperture size (H × W)

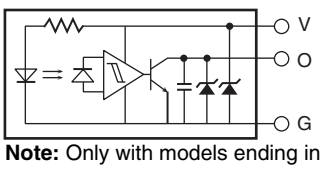
Emitter	Detector
1.4 × 1.4	1.4 × 0.5



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

Internal Circuit





Note: Only with models ending in -Z.

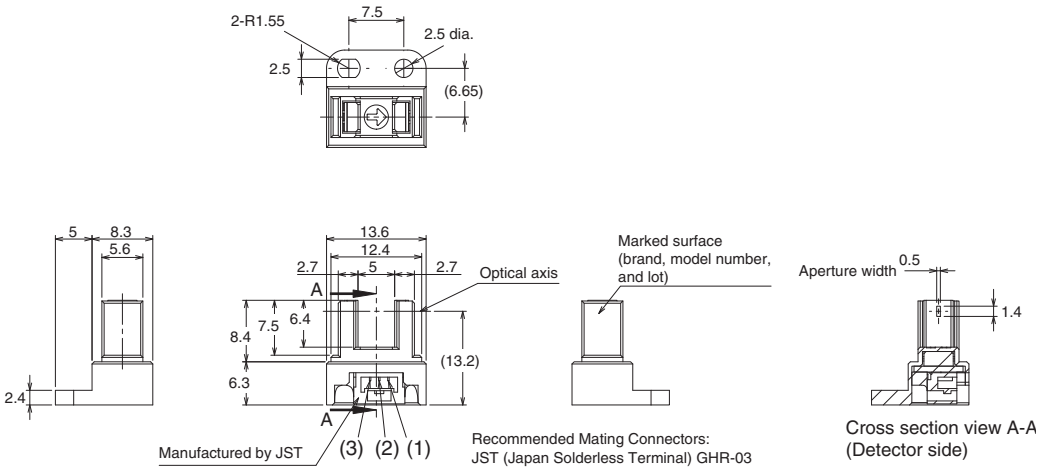
Terminal No.	Name
(1)	Ground (GND)
(2)	Output (OUT)
(3)	Power supply (V_{CC})

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.

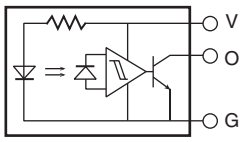
EE-SX3163-P1
EE-SX4163-P1
EE-SX3163-P2
EE-SX4163-P2



Aperture size (H × W)

Emitter	Detector
1.4 × 1.4	1.4 × 0.5

Internal Circuit



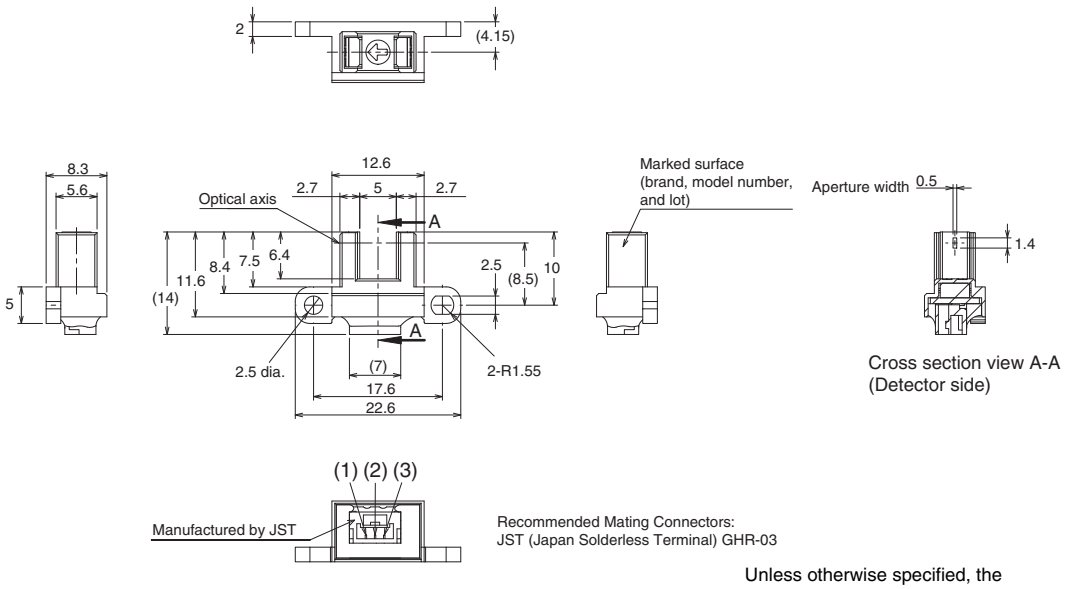
Terminal No.	Name
(1)	Ground (GND)
(2)	Output (OUT)
(3)	Power supply (Vcc)

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.

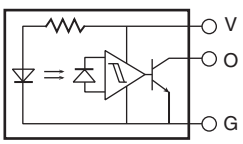
EE-SX3164-P1
EE-SX4164-P1
EE-SX3164-P2
EE-SX4164-P2



Aperture size (H × W)

Emitter	Detector
1.4 × 1.4	1.4 × 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
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10 < mm ≤ 18	±0.35
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