

### Analog voltage output model

#### ● Absolute Maximum Ratings Exterior Specifications

| Item                   | Symbol | Rated value | Unit | Remarks                       |
|------------------------|--------|-------------|------|-------------------------------|
| Power supply voltage   | Vcc    | 5.5         | V    | 4. Vcc - 2. GND               |
| Input pulse voltage *1 | Vp     | 5.5 *2      | V    | 1. Pulse - 2. GND             |
| Operating temperature  | Topr   | -10 to 60   | °C   | With no icing or condensation |
| Storage temperature    | Tstg   | -25 to 80   | °C   |                               |

\*1. DC voltage is not covered by warranty.

\*2. Pulse width: 800  $\mu$ s, frequency: 500 Hz

#### ● Exterior Specifications

| Connecting method | Weight (g)   | Material           |                |
|-------------------|--------------|--------------------|----------------|
|                   |              | Case               | Lens           |
| Connector         | Approx 3.2 g | Polycarbonate (PC) | Acrylic (PMMA) |

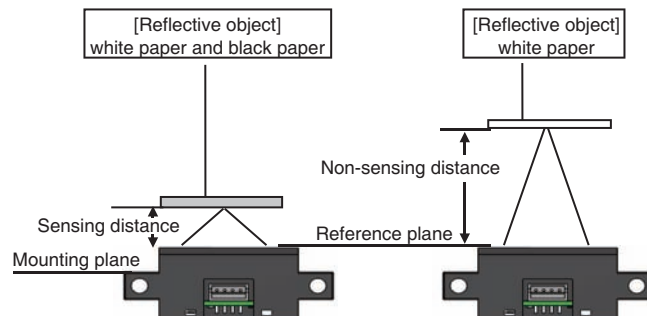
#### ● Electrical and Optical Characteristics (Ta= 25°C, Vcc= 5.0 V)

| Item                                      | Symbol | Value |      |      | Unit | Condition                       |
|-------------------------------------------|--------|-------|------|------|------|---------------------------------|
|                                           |        | MIN.  | TYP. | MAX. |      |                                 |
| Operating voltage                         | Vcc    | 4.5   | 5.0  | 5.5  | V    | ---                             |
| Operating input pulse voltage             | Vp     | 3.0   | ---  | 5.5  | V    | ---                             |
| Maximum output voltage<br>Forward voltage | Vomax  | ---   | 3.3  | ---  | V    | ---                             |
| Sensing distance<br>(Black paper)         | Lrange | 10    | ---  | 40   | mm   | Black paper,<br>Vo $\geq$ 70 mV |
| Sensing distance<br>(White paper)         | Lrange | 10    | ---  | 55   | mm   | White paper,<br>Vo $\geq$ 70 mV |
| Non-sensing distance<br>(White paper)     | L      | 85    | ---  | ---  | mm   | White paper,<br>Vo < 30 mV      |

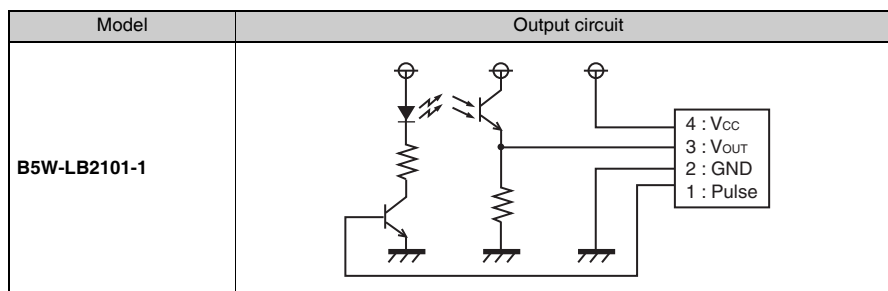
\* Frequency = 500 Hz (duty = 40%), input voltage = 5.0 V

Output voltage without reflector = 0 mV

Specified reference plane and mounting surface are as shown Below



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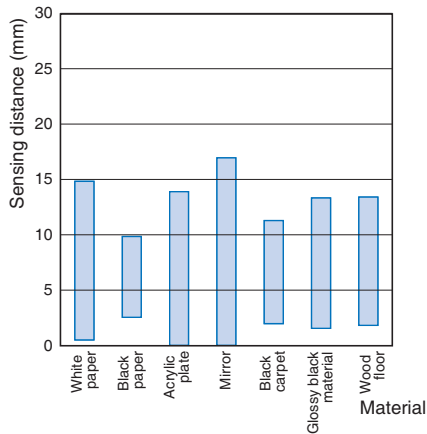


| Terminal No. | Name  |
|--------------|-------|
| 1.           | Pulse |
| 2.           | GND   |
| 3.           | Vout  |
| 3. 4.        | Vcc   |

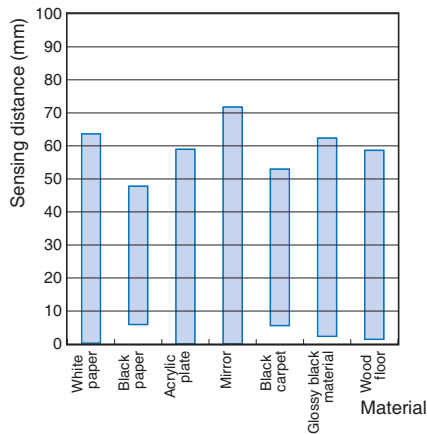
Engineering Data (Reference Value)

Distance Characteristics for Various Reflective Objects

B5W-LB1□

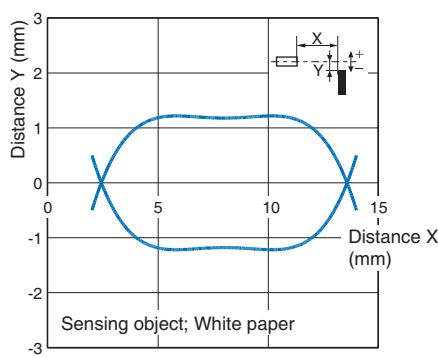


B5W-LB2□

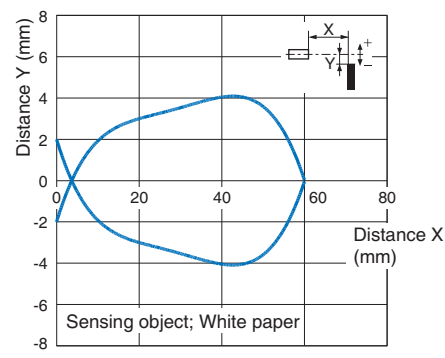


Operating Range (Left and Right)

B5W-LB1□

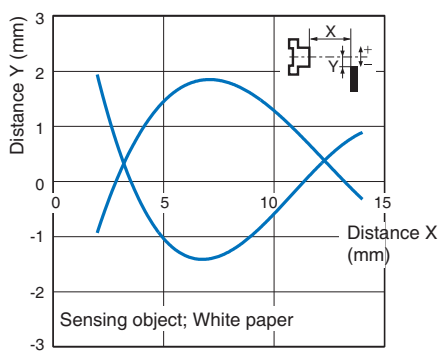


B5W-LB2□

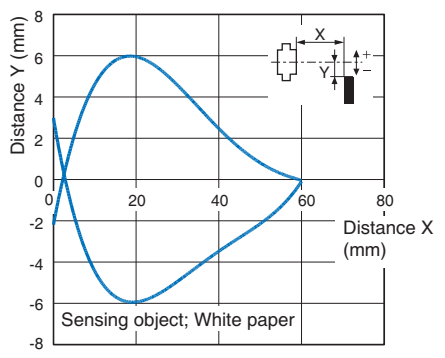


Operating Range (Up and Down)

B5W-LB1□

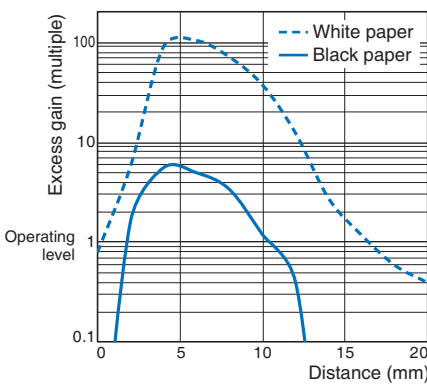


B5W-LB2□

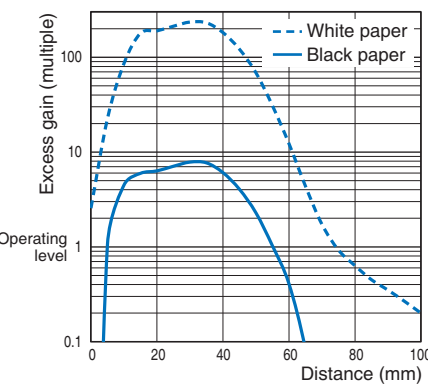


Receiver Output-Sensing Distance Characteristics

B5W-LB1□



B5W-LB2112/LB2122



B5W-LB2101

