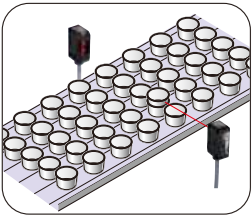


# Photoelectric Sensor S series

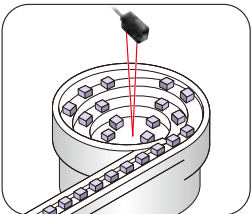


- BGS functionality built into a small package!
- Built-in polarizing filter (Retro-reflective) type.
- 100G shock resistance rating.
- M8 QD for all types.

## Applications



Double feeding of ice cream cup (ST-400)

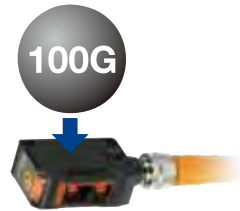
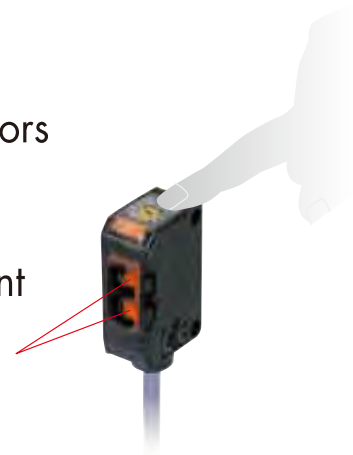


Parts feeder (BGS-S08)

Extremely small BGS type sensors (BGS-S08 and S03) are only 17×10×20 mm. Ideal for use in OEM equipment such as Printed Circuit Board processing machines.

High rigidity for 100G shock resistance / IP67

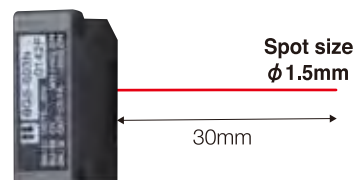
Rigid design for high resistance to mechanical shock such as contact or collision.



0.5ms high speed response



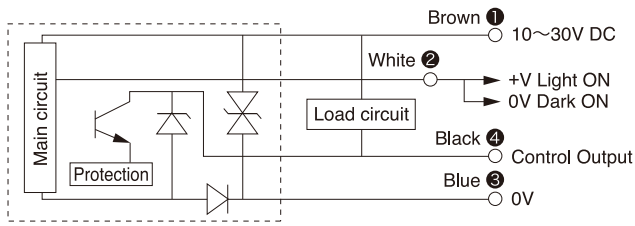
BGS-S03, with 1.5 φ spot at 30mm distance



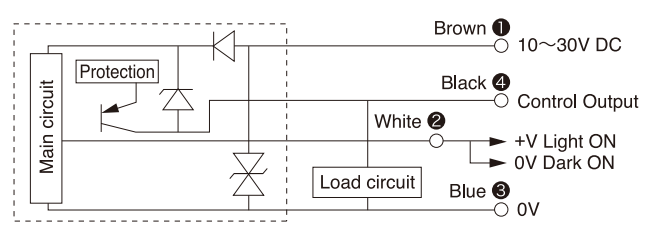
- C
- C2
- E
- J
- J2
- J3
- V
- V2
- V3
- V4
- SR-Q
- S**
- Z
- BGS-Z
- Z2
- ZM
- K
- BGS-2S
- Y
- DM-18T
- Accessory

# Circuit diagram

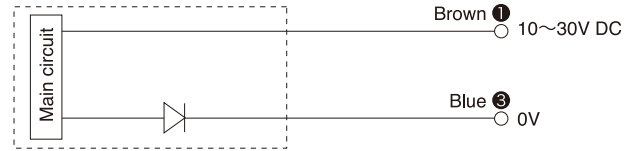
## NPN output



## PNP output



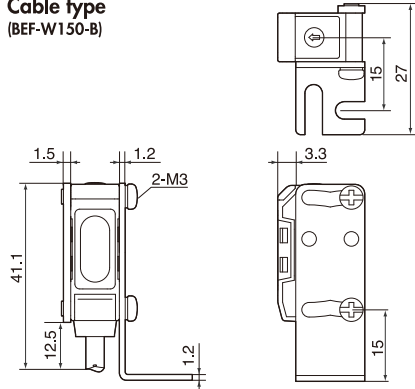
## Emitter



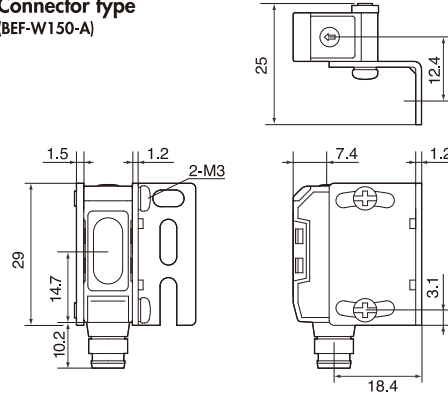
# Dimensions

## S series

Cable type (BEF-W150-B)

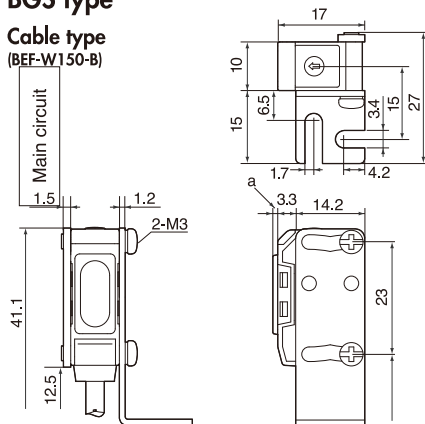


Connector type (BEF-W150-A)

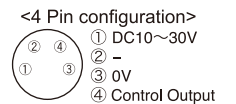
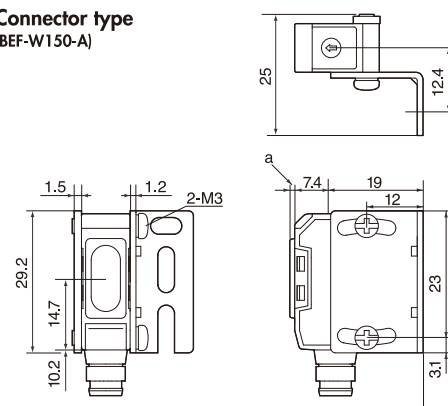


## BGS type

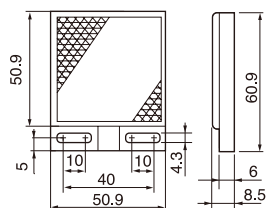
Cable type (BEF-W150-B)



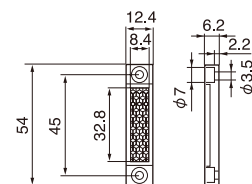
Connector type (BEF-W150-A)



## Standard reflector V-61



## Tiny reflector P-45



(Unit : mm)

# Specifications

Model	Thru-beam	Retro-reflective <small>with polarizing Filter</small>	Diffuse reflective	BGS		
Cable type	NPN	ST-400N	SR-150N	SD-20N	BGS-S08N	BGS-S03N
	PNP	ST-400P	SR-150P	SD-20P	BGS-S08P	BGS-S03P
Connector type	NPN	ST-400CN	SR-150CN	SD-20CN	BGS-S08CN	BGS-S03CN
	PNP	ST-400CP	SR-150CP	SD-20CP	BGS-S08CP	BGS-S03CP
Sensing distance	4 m	1.5 m	200 mm	10 to 80 mm	10 to 30 mm	
Supply voltage	10 to 30V DC including 10% of ripple					
Power consumption	30mA	20mA Max				
Hysteresis	—			20% MAX	10% MAX	
Minimum detectable object	φ 6 opaque object	□ 45mm opaque object	—			
Response time	0.5msec Max					
Control output	NPN or PNP Open collector, 100mA Max / 30V DC					
Operating mode	Light ON / Dark ON selectable					
Sensitivity adjustment	1-turn potentiometer				5-turn potentiometer	
LED Indicator	Red					
Operating temp / humidity	-25 to +55°C / 35 to 85%RH					
Protection category	IP67					
Environmental illuminance	Sun Light:10,000 lux max. Incandescent lamp:3,000 lux max.					
Shock resistance	100G (1,000m/S <sup>2</sup> ) X,Y,Z, axis 3 times					
Vibration resistance	10 to 55 Hz amplitude 1.5mm, X-Y-Z for 2 hours					
Connection	"Cable type: Cable length 2m φ 3.5mm (Longer cable type of 5m is available as option) Connector type: M8 x 4-pin connector"					

# Options

Standard reflector V-61



Tiny reflector P-45



Sensor stand PLN-1



Fixture of Reflector PLN-1M

JCN-S : M8 Straight type



JCN-S : 2 meter  
JCN-5S : 5 meter  
JCN-10S : 10 meter

JCN-L : M8 L-shape type



JCN-L : 2 meter  
JCN-5L : 5 meter  
JCN-10L : 10 meter

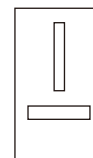
Protective mounting brackets.  
L-shape type LS-S01



Straight type LS-S02

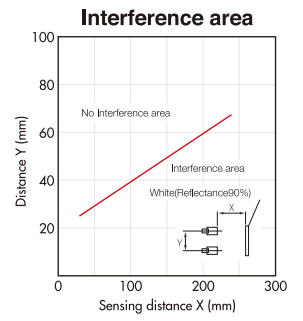
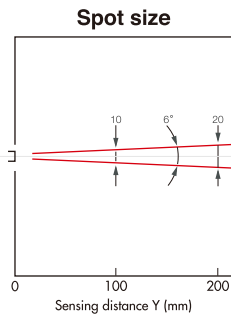
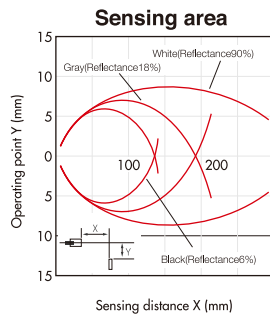
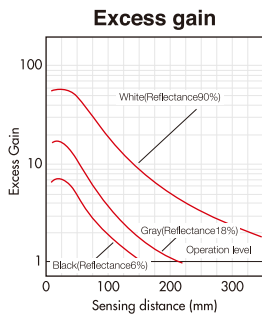


BL-150-10  
Slit mask for ST-400

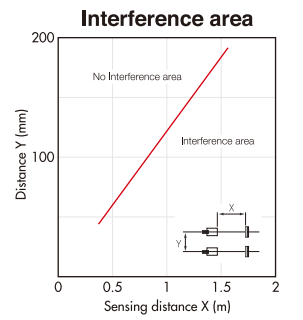
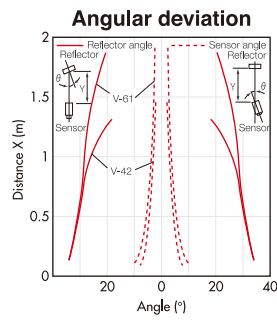
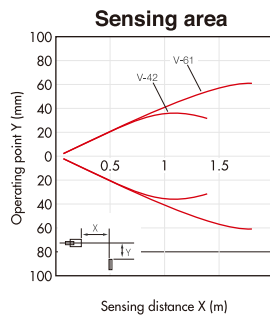
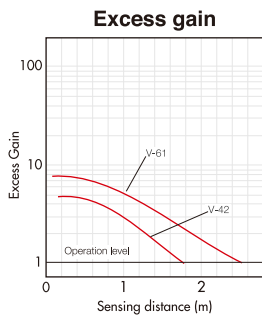


# Reference (typical)

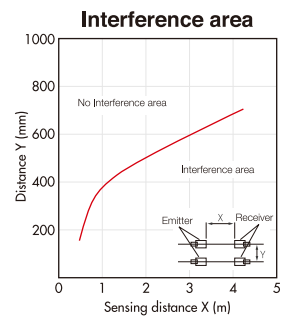
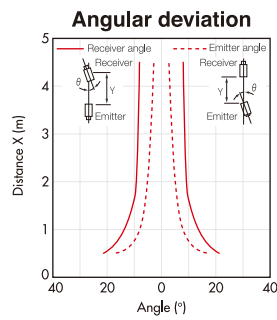
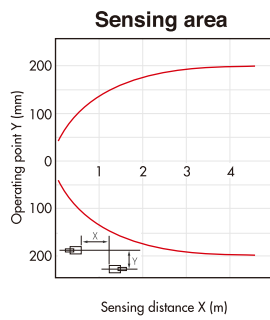
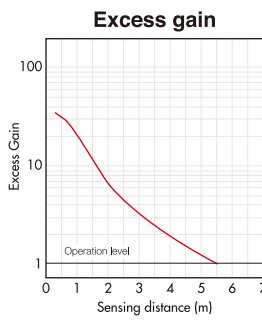
SD-20N



SR-150N



ST-400N



ST-400N & SLIT  
BL-150-10

