

# Photoelectric Sensors

Optex FA is now the second largest supplier of photoelectric sensors in Japan.

Optex provides an extensive selection of sensors to solve most applications.

All sensors are available in Cabled or M8 QD versions and are offered with a choice of NPN or PNP outputs.

# Photoelectric Sensor SR-Q series



### Cable Type

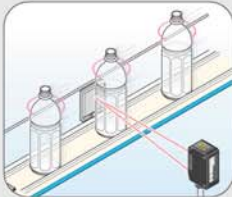
(Sensing distance : 500mm)  
 · SR-Q50NW NPN type  
 · SR-Q50PW PNP type

### M8 Connector Type

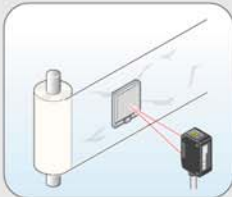
(Sensing distance : 500mm)  
 · SR-Q50CNW NPN type  
 · SR-Q50CPW PNP type

Photoelectric Sensor

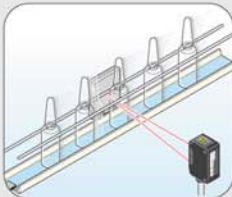
## Applications



Beverage industry



Packaging industry



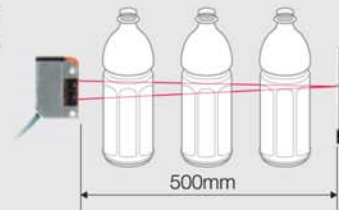
Pharmaceutical industry

- **Ideal for sensing transparent objects.**
- **100G of shock resistance rating.**
- **V-45 small reflector, good for space saving.**
- **M8 QD types are available.**

## Features

### Stable detection of transparent objects.

PET bottles with any design / configuration are easily detected. The material of the bottle does not matter.  
 CRT and TFT can be detected also.



### High durability to ambient noise

All sensors are designed to be resistant to electrical noise from relay contacts, inverters, electromagnetic fields, static, etc. The In-house testing (Fallen Test) exceeds the IEC standard.



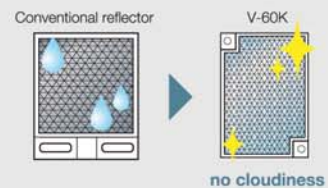
### Rigid mechanics

100G standard, tough enough to resist mechanical shock and vibration.



### V-60K (Anti-cloud reflector)

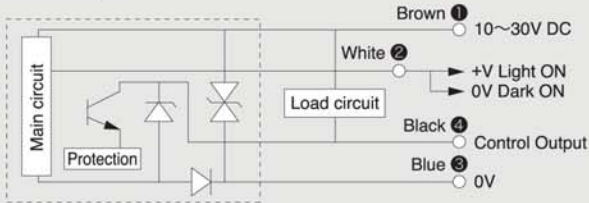
For high humidity conditions.



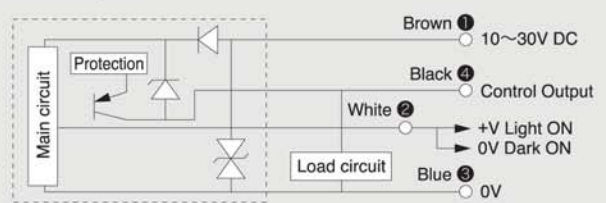
C
E
J
J2
J3
V
V2
V3
V4
<b>SR-Q</b>
S
Z
BGS-Z
K
FGS-D
BGS-D
BGS-2S
Y
DM-18T
Accessory

## Circuit diagram

### NPN output



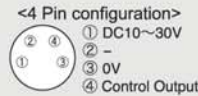
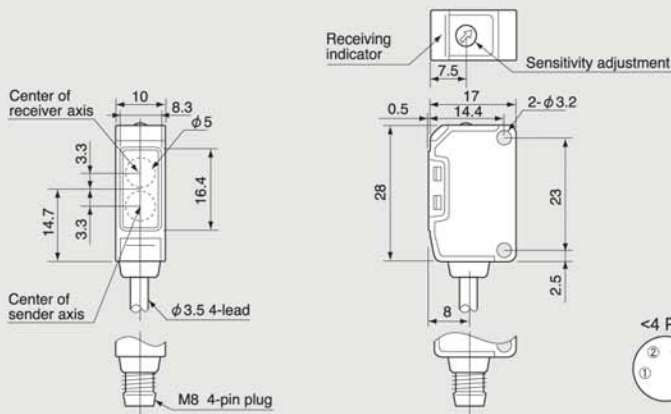
### PNP output



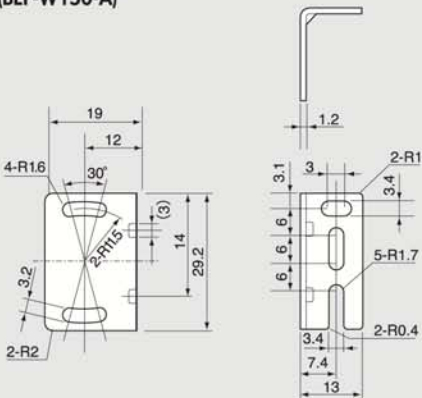
### Emitter



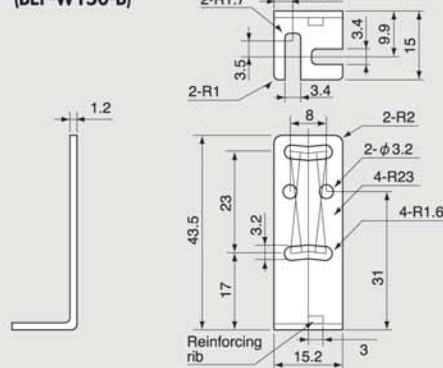
## Dimensions



### Standard Bracket for cable type (BEF-W150-A)

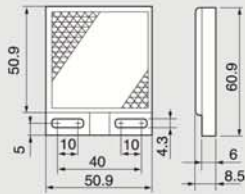


### Standard Bracket for M8 QD type (BEF-W150-B)

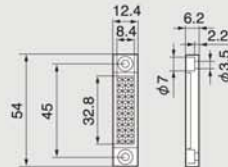


- C
- E
- J
- J2
- J3
- V
- V2
- V3
- V4
- SR-Q
- S
- Z
- BGS-Z
- K
- FGS-D
- BGS-D
- BGS-2S
- Y
- DM-18T
- Accessory

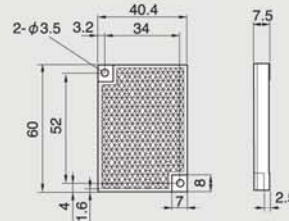
Standard reflector V-61



Tiny reflector P-45



Anti-cloud reflector V-60K



(Unit : mm)

## Specifications

Model	Cable type	Connector type
NPN output	SR-Q50NW	SR-Q50CNW
PNP output	SR-Q50PW	SR-Q50CPW
Sensing distance	500mm (With V-61)	
Light source	Red LED (660nm)	
Response time	0.5ms	
Sensitivity adjustment	Sensitivity volume adjustment (270 degrees)	
Control output	NPN/PNP open collector, max. 100mA/30VDC	
Connection	4-lead cable, 2m	M8 4-pin
Insulation resistance	20MΩ Max. (500VDC)	
Supply voltage	10 to 30VDC including 10% of ripple	
Power consumption	30mA max.	
Noise resistance	JIS Standard	C4525 500V
	IEC Standard	IEC801-2,3,4 Level 3
Operating	Temp/humidity	-25 to 55°C/35 to 85%RH
	Environmental illuminance	Sunlight 10,000 lux max. /Incandescent light 3,000 lux max.
	Vibration resistance	10 to 55Hz, Amplitude 1.5mm, X/Y/Z axis 2 hours
	Shock resistance	Approx.100G (1000m/S <sup>2</sup> ). X/Y/Z axis 3 times on each
	Protection category	IP67
Material	PSF+PBT	
Weight	Approx. 5g (Without cable)	

## Options

Standard reflector V-61



JCN-S : M8 Straight type



Tiny reflector P-45



JCN-L : M8 L-shape type



Anti-cloud reflector V-60K



Protective mounting brackets  
LS-S01



Sensor stand  
PLN-1

Fixture of Reflector  
PLN-1M



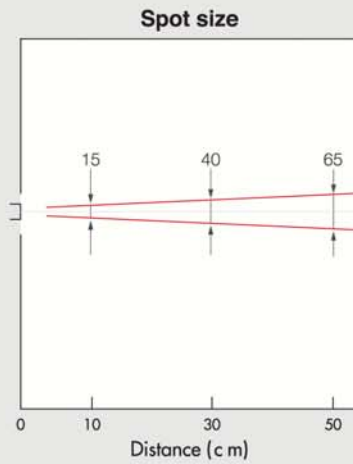
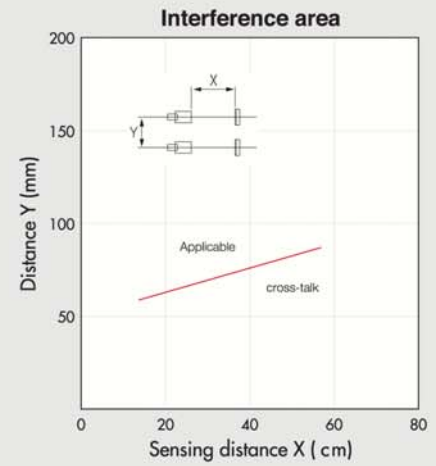
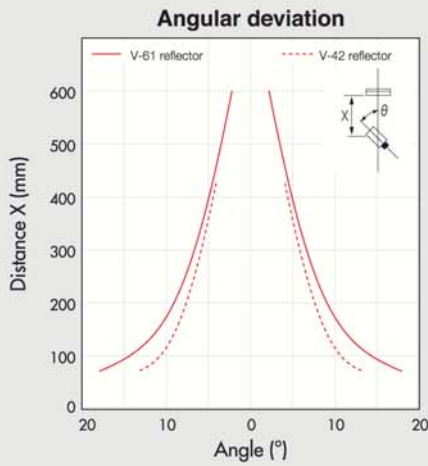
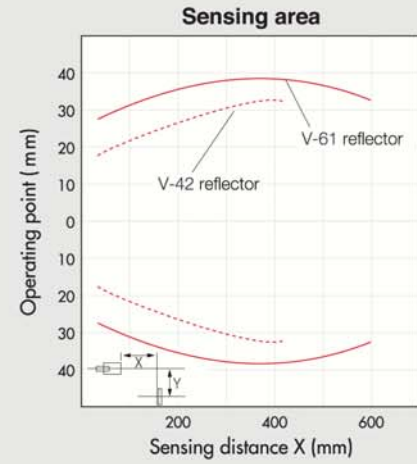
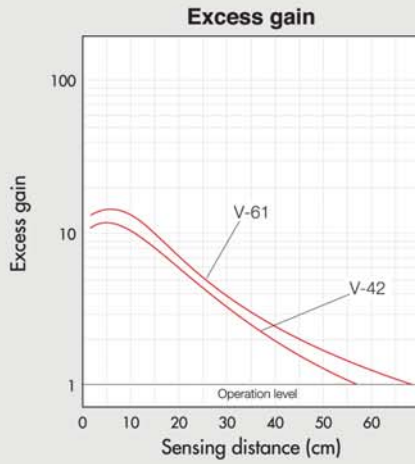
LS-S02



C
E
J
J2
J3
V
V2
V3
V4
SR-Q
S
Z
BGS-Z
K
FGS-D
BGS-D
BGS-2S
Y
DM-18T
Accessory

**Reference (typical)**

SR-Q50NW



C

E

J

J2

J3

V

V2

V3

V4

SR-Q

S

Z

BGS-Z

K

FGS-D

BGS-D

BGS-2S

Y

DM-18T

Accessory