

Best-in-class Robust and powerful

**NEW
STRUCTURE**
Hotmelt
molding



Large sensing
distance

Full-metal housing
in brass

Easy to Align even
the long distance

New C-R Series

Cylindrical photoelectric sensor with long-distance detection, robustness, and excellent usability.



Inside: hotmelt molding



The new C-R Series has much higher performance than conventional models, and is more easy-to-use.

This is a new generation photoelectric sensor with the high detection performance, cost performance ratio, and robustness that are required of cylindrical sensors.

Large Sensing Distance

Achieved 25m detection distance, the longest for through beam types!
Meets the need for long-distance application.

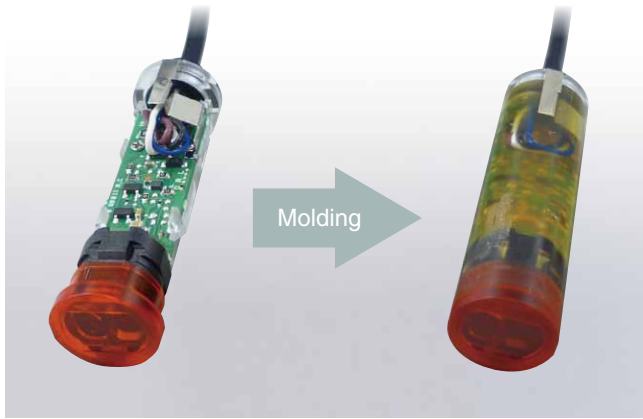


NEW STRUCTURE

Hotmelt molding

High vibration resistance

Hotmelt molding enables high vibration resistance up to 100Hz, 8 hours. (For details, see Specification)



Watertight: IP67

The C-R Series meets the conditions for the watertight IP67 rating.

Can be used on work sites or devices that are exposed to splashing water such as the food and beverage industry.



Note: Due to refraction of light resulting from water or oil on the optical surface, detections may not be performed correctly.

Full-metal Housing in Brass

Robust design

In the conventional model, the tip and the end of the housing were made of plastic.

New C-R Series achieved the high robustness by full-metal housing.



Easy to Align even the long distance

Visible red LED

Red LED, which allows easy alignment, has been adopted for all models as the light source. The spot beam location is visible, reducing the time required for alignment.

In addition, spot beam flare is minimized, which improves the visibility when compared to conventional models.

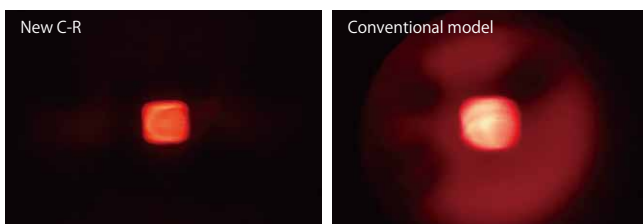


Front Output Indicator is equipped on the receiver (Through beam type)

Output indicator is equipped not only on the side of the receiver, but also on the front. When panning the emitter for alignment, the ON/OFF state of the indicator is visible from the emitter side, so alignment can be performed more easily by a single operator.

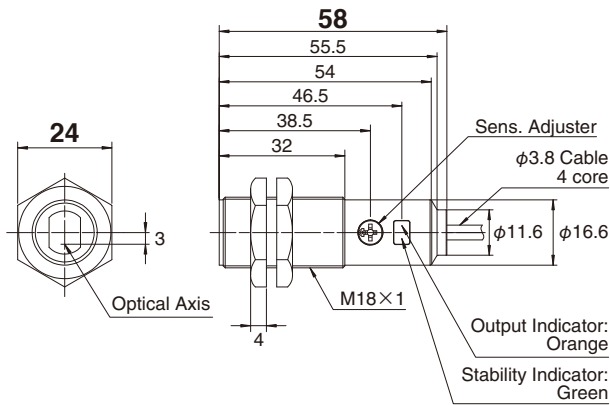
When aligned, the Front Output Indicator turns ON.

i.e.) Limited range type spot beam

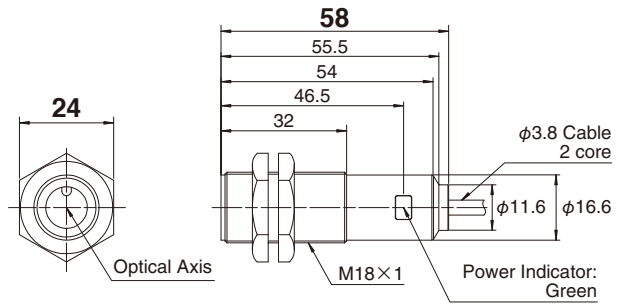


Dimensions

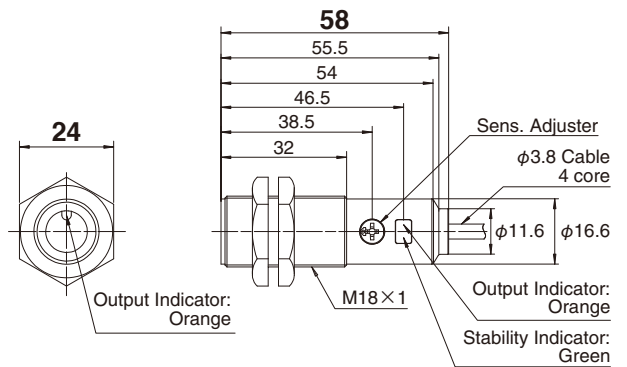
Retro Reflective, Diffuse Reflective, Limited Range



Through Beam (Emitter)

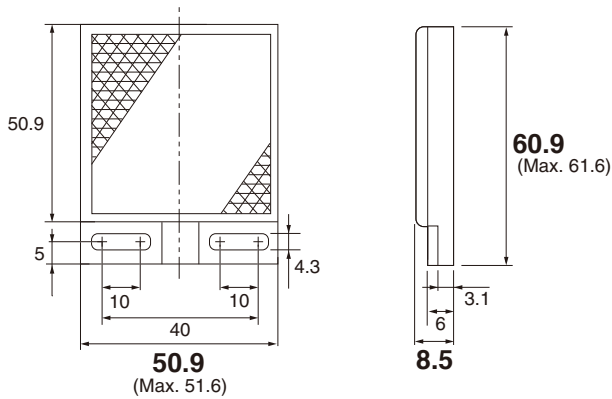


Through Beam (Receiver)

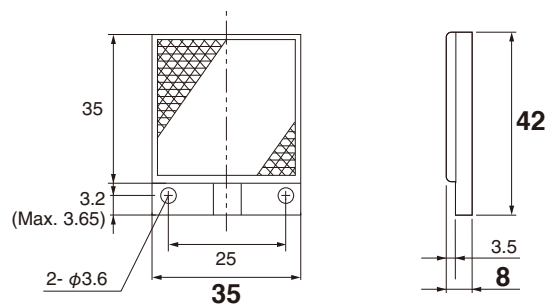


Reflectors

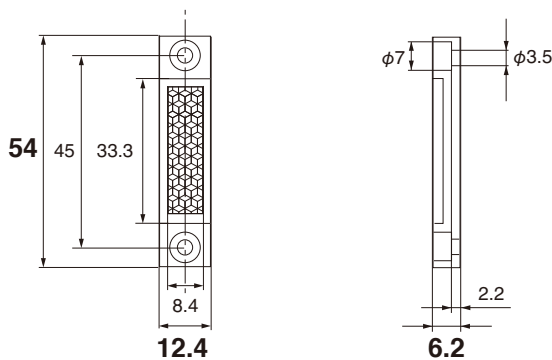
Standard Type : V-61
Sensing distance : 0.01~4m



Small Type : V-42 Optional Reflector
Sensing distance : 0.01~2.4m



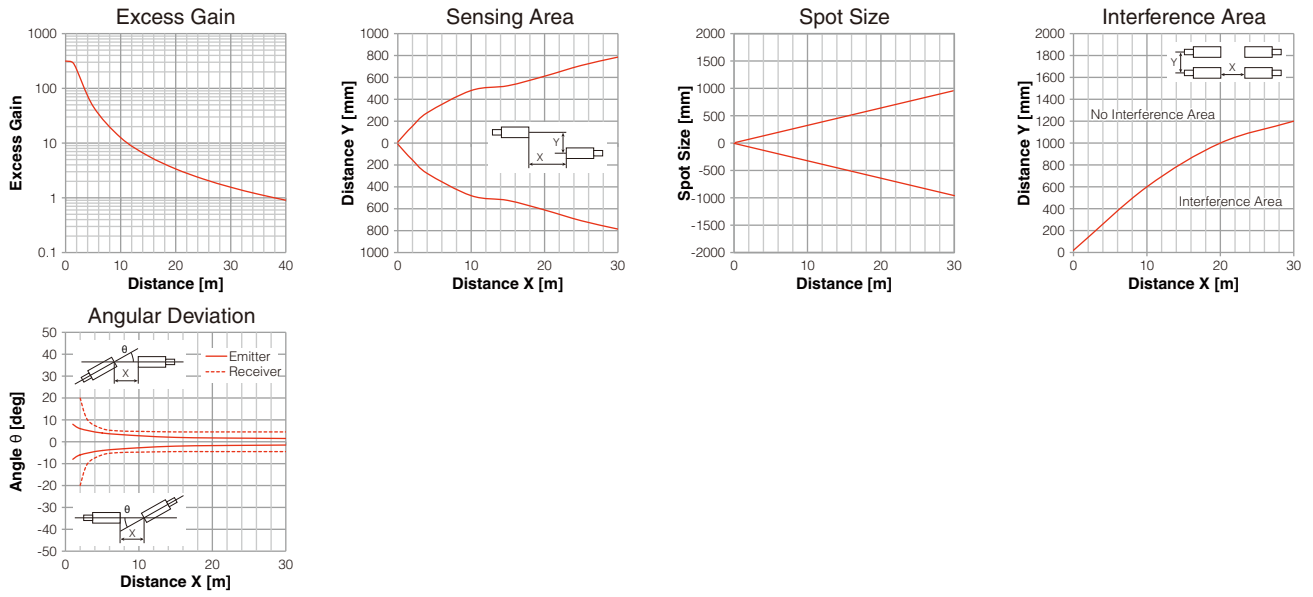
Tiny Type : P45A Optional Reflector
Sensing distance : 0.01~1.4m



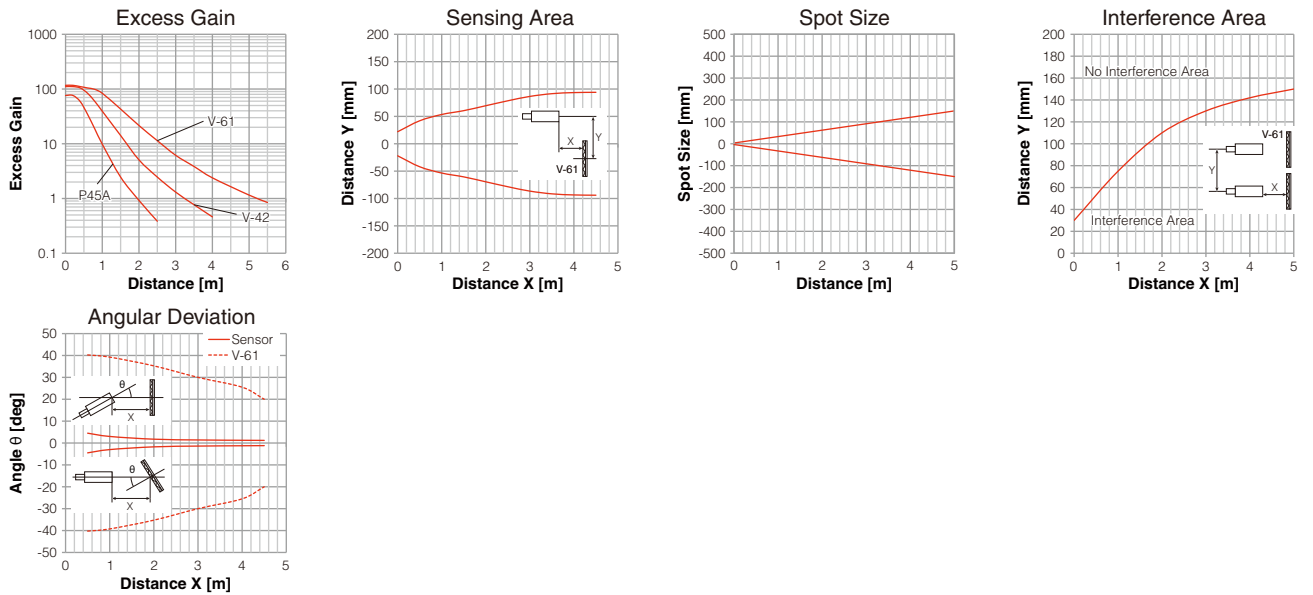
(Unit : in mm)

Typical Characteristic Data

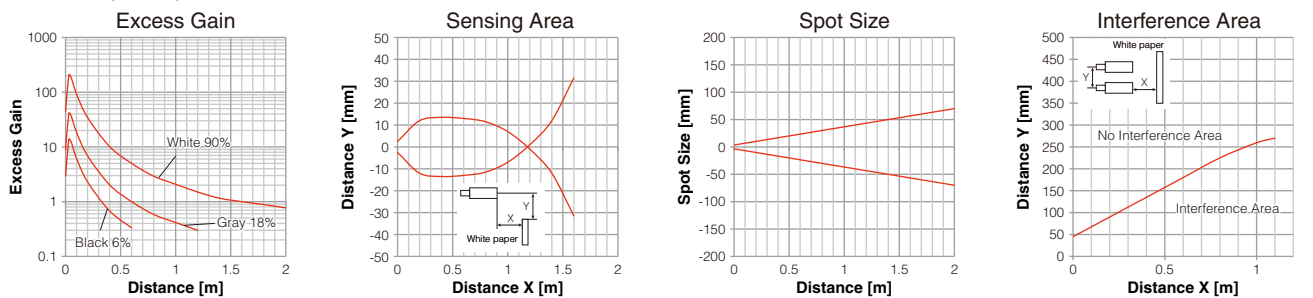
CTD-2500(N/P)-R



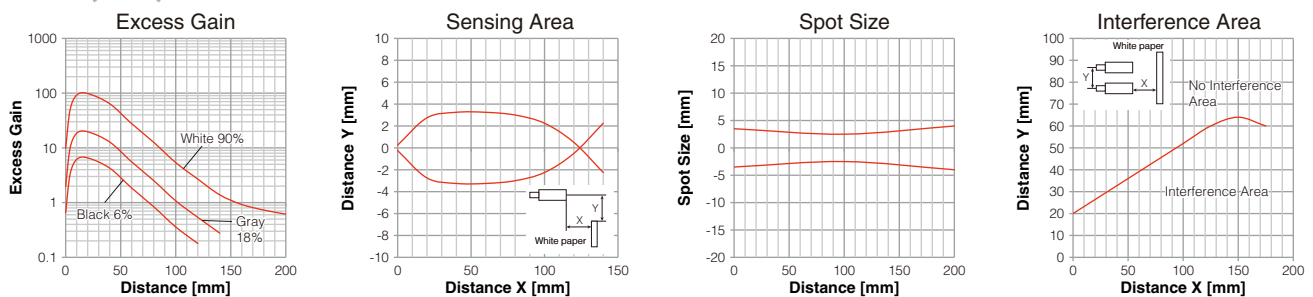
CRD-400(N/P)-R



CDD-100(N/P)-R



CDD-11(N/P)-R



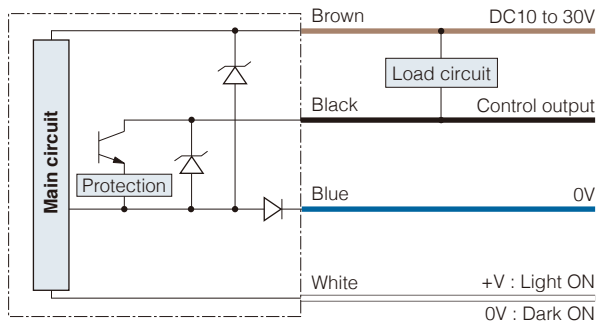
Specifications

	Through Beam	Retro Reflective	Diffuse Reflective	Limited Range
Cable type	CTD-2500(N/P)-R	CRD-400(N/P)-R	CDD-100(N/P)-R	CDD-11(N/P)-R
Sensing distance *1	25m	0.01 to 4m	0 to 1m	0 to 110mm
Light Source	Red LED			
Spot size (approx.)	φ1600mm / 25m	φ240mm / 4m	φ70mm / 1m	φ5mm / 110mm
Supply voltage	DC10 to 30V Including ripple (P-P) 10%			
Current consumption	Emitter : 20mA max.	25mA max.	30mA max.	25mA max.
	Receiver : 25mA max.			
Response time	500μs max.			
Control output	NPN/PNP Open collector 100mA max. / DC30V max. (Residual voltage 1.8V max.)			
Operation mode	Light ON, Dark ON Selectable by control wire			
Sensitivity adjustment	1 turn volume			
Indicator	Output indicator (Orange LED) / Stability indicator (Green LED)			
Vibration Resistance	10 to 100 Hz; max.1.5mm (p-p), max.150m/s ² , 8 hours in each of the X, Y, and Z directions			
Shock Resistance	Approximately 50G, 3 times in each of the X, Y, and Z directions			
Ambient temp. /humidity	-25 to 55°C/35 to 85%RH (No condensation or freezing)			
Storage temp. /humidity	-30 to 70°C/35 to 95%RH (No condensation or freezing)			
Applicable regulations/standards	EMC Directive (2014/30/EU) / IEC 60947-5-2 : 2007/A1 : 2012			
Protection category/Material	IEC 60529 : IP67 / Case : Brass Ni plated, Front Cover : PMMA			

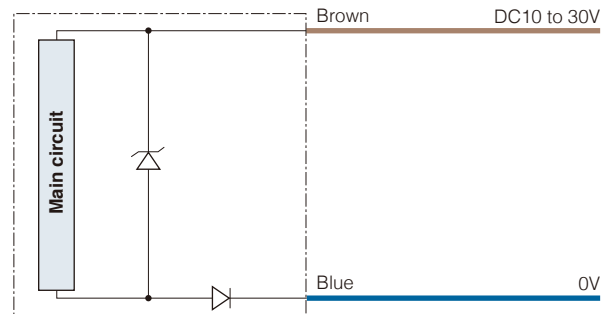
- *1 • Retro Reflective type : Reflector V-61
 • Diffuse Reflective type : White paper 90% 200x200mm
 • Limited Range type : White paper 90% 100x100mm

Circuit diagram

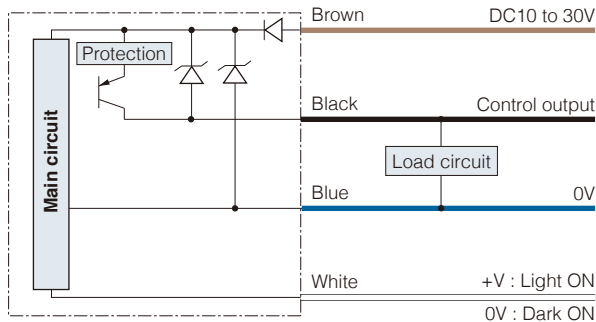
NPN type



Through Beam Emitter



PNP type



- Specifications are subject to change without prior notice.
- Specifications and technical information not mentioned here are written in Instruction Manual. Or visit our website for details.
- All the warnings and cautions to know prior to use are given in Instruction Manual.

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