

Plastic shell

It's RoHS products. Plastic material but tough mechanics.
"C2 Series" reminds you of the ecology products to buy.



The best-in-class Cylindrical Type Sensor
with custom ASIC.
40m+ as Max sensing distance.

Metal shell

It's Brass Metal shell coated with Nickel of 20µm thickness.
Coated also for inside the shell as an ultimate anti-rust housing.



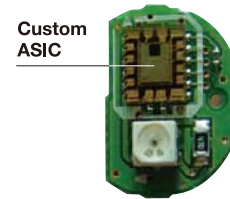
- Specifications are subject to change without prior notice.
- Specifications and technical information not mentioned here are written in Operation Manual. Or visit our website for details.
- All the warnings and cautions to know prior to use are given in Operation Manual.



Well known for its conventional shape but not conventional in quality. An ultimate cylindrical sensor designed in Japan.

Custom ASIC with Power Circuit

The electric circuit consists mainly of Optex FA's custom ASIC with only 27 electric components. The ASIC contains power circuit and this helps to avoid defects by electric damage from the power line.



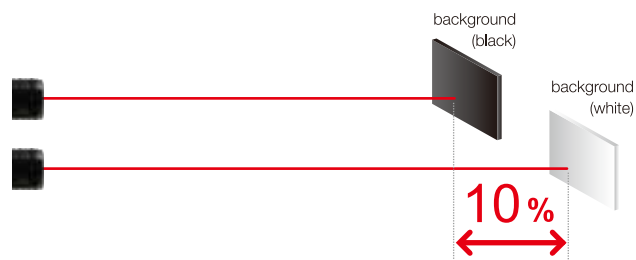
Trimmer of Silicon plastic for high durability against chemical impact.

The trimmer is tightly locked against water with IP67 rating. Silicon plastic trimmer is the best solution against water, oil, chemical and environmental heat.



Hysteresis of Max 10%. Between black/white colors.

Between black/white colors, hysteresis is Max at 10% (Diffuse type). C2DM-11 gives a sensing distance of 110mm for white object and 90mm for black object.



Easy Alignment and installation

Ample sensing area provides easy alignment when installing the thru-beam sensor. For instance, there is an allowance of 70cm to align the sensor at 10M distance. The highly bright LED is visible at long distance as well.



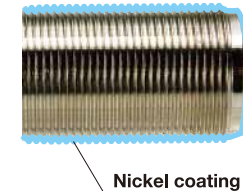
RoHS products (Plastic type)

Plastic products conform to RoHS standards. With an Eco-minded electric design, the current consumption is only 18mA (Diffuse type)



Nickel coating of 20μ thickness for anti-rust solution.

Metal type products consist of brass-nickel housing with extra nickel coating of 20μ thickness. Metal type consists of brass-nickel housing with extra nickel coating of 20u thickness. This coating is done for the external and internal of the housing. It helps protect the metal housing against rust and toughen it.



High Power sensing at Max 40m distance (Thru-beam type)

High Power LED gives a good 40M sensing distance.



Durable to 70N (7kg) of tension

The cable is firmly fixed to the internal circuit board so that it can withstand pulling tension of up to 70N (7kg).



Product family



Plastic housing

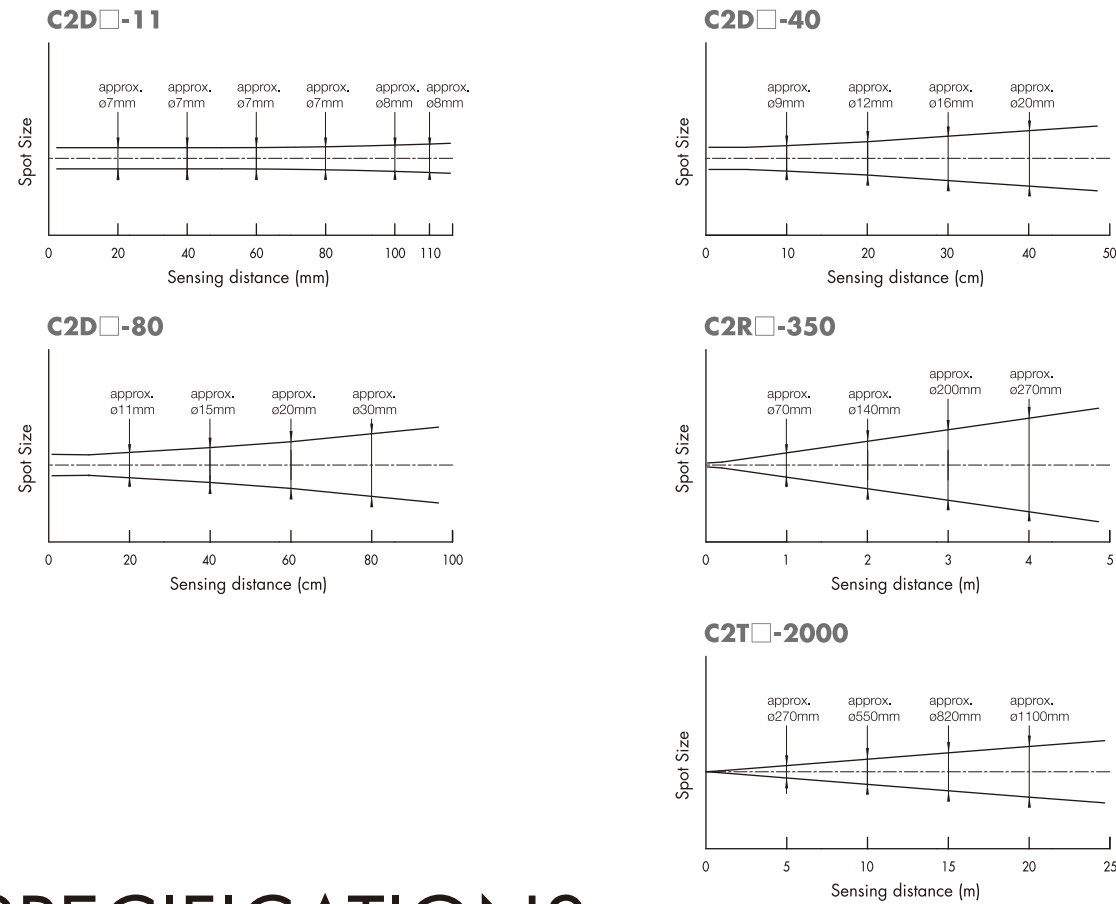


Metal housing

Plastic housing	Retro-reflective Without Polarizing filter	2m cable	NPN : C2RP-350N
		M12 connector	PNP : C2RP-350P
	Retro-reflective With Polarizing filter	2m cable	NPN : C2RP-F400N
		M12 connector	PNP : C2RP-F400C
	Diffuse-reflective Focused 110mm type	2m cable	NPN : C2DP-11N
		M12 connector	PNP : C2DP-11P
	Diffuse-reflective Energetic 400mm type	2m cable	NPN : C2DP-40N
		M12 connector	PNP : C2DP-40P
	Diffuse-reflective Energetic 800mm type	2m cable	NPN : C2DP-80N
		M12 connector	PNP : C2DP-80P
	Thru-beam	2m cable	NPN : C2TP-2000N
		M12 connector	PNP : C2TP-2000C
Metal housing	Retro-reflective With Polarizing filter	2m cable	NPN : C2RM-350N
		M12 connector	PNP : C2RM-350P
	Retro-reflective Without Polarizing filter	2m cable	NPN : C2RM-F400N
		M12 connector	PNP : C2RM-F400C
	Diffuse-reflective Focused 110mm type	2m cable	NPN : C2DM-11N
		M12 connector	PNP : C2DM-11P
	Diffuse-reflective Energetic 400mm type	2m cable	NPN : C2DM-40N
		M12 connector	PNP : C2DM-40P
	Diffuse-reflective Energetic 800mm type	2m cable	NPN : C2DM-80N
		M12 connector	PNP : C2DM-80P
	Thru-beam	2m cable	NPN : C2TM-2000N
		M12 connector	PNP : C2TM-2000C

SPOT SIZE

*common between plastic / metal housing



SPECIFICATIONS

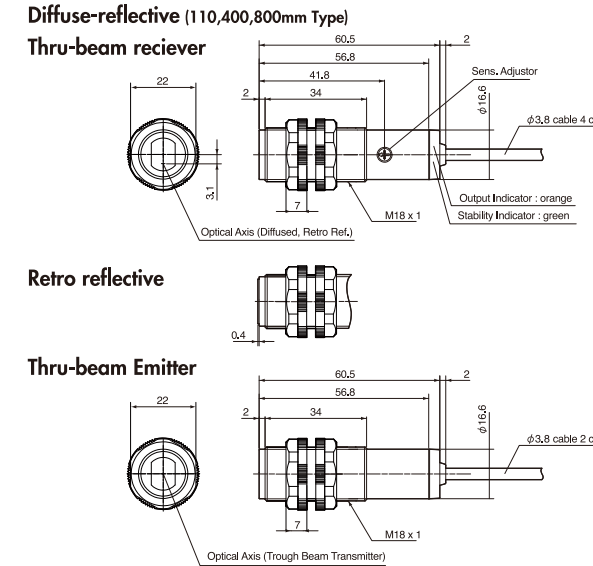
Type	Thru-beam	Retro-reflective		Diffuse-reflective			
		With polarizing filter	Without polarizing filter	110mm type	400mm type	800mm type	
Plastic housing	Cable	C2TP-2000(N,P)	C2RP-F400(N,P)	C2RP-350(N,P)	C2DP-11(N,P)	C2DP-40(N,P)	C2DP-80(N,P)
	M12 Connector	C2TP-2000C(N,P)	C2RP-F400C(N,P)	C2RP-350C(N,P)	C2DP-11C(N,P)	C2DP-40C(N,P)	C2DP-80C(N,P)
Metal housing	Cable	C2TM-2000(N,P)	C2RM-F400(N,P)	C2RM-350(N,P)	C2DM-11(N,P)	C2DM-40(N,P)	C2DM-80(N,P)
	M12 Connector	C2TM-2000C(N,P)	C2RM-F400C(N,P)	C2RM-350C(N,P)	C2DM-11C(N,P)	C2DM-40C(N,P)	C2DM-80C(N,P)
Sensing distance	20m	0.01 ~ 4m (V-61)	0.01 ~ 3.5m (V-61)	11cm ^{*1}	40cm ^{*1}	80cm ^{*1}	
Spot size	φ1100 mm / 20m	φ270 mm / 4m	φ240 mm / 3.5m	φ8 mm / 11cm	φ20 mm / 40cm	φ30 mm / 80cm	
Light source	Red LED		IR LED	Red LED			
Supply voltage	DC10~30V including ripple (P-P) 10%						
Power consumption	Emitter : 20mA Max		20mA Max				
	Receiver : 15mA Max						
Hysteresis	-			10% Max			
Response time	0.5ms Max						
Control output	NPN/PNP Open Collector 100mA Max / DC30V Max (Residual voltage Max 1.8V / 100mA Max)						
Operation mode	Light ON / Dark ON selectable by control wires						
Sensitivity adjustment	1 turn pot.						
LED indicator	Output indicator (Orange LED) / Stability indicator (Green LED)						
Environmental illuminance	Sunlight : 10,000 lux, Incandescent lamp : 3,000 lux Max						
Vibration resistance	10 ~ 55Hz amplitude 1.5mm X-Y-Z each 2 hours						
Shock resistance	500m/S ² (50G) X-Y-Z each 3 times						
Operating / Storage temperature	Operating temperature : -25 ~ +55 °C (no freezing) / Storage temperature : -30 ~ +70 °C						
Operating / Storage humidity	Operating humidity : 35 ~ 85%RH / Storage humidity : 35 ~ 95%RH						
Protection / Material	IEC IP67(common to any type) Plastic housing : PBT (glass included) / Metal housing : BSBM, Front Cover, Lens : PMMA						

*1 White Paper 90%

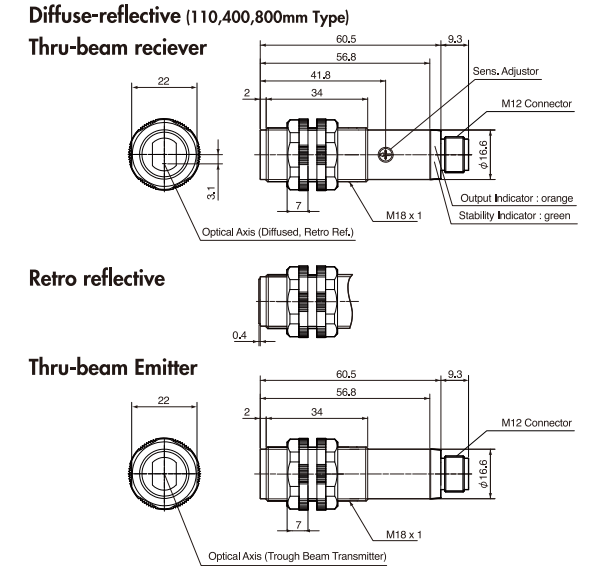
DIMENSIONS

Plastic housing

Cable type

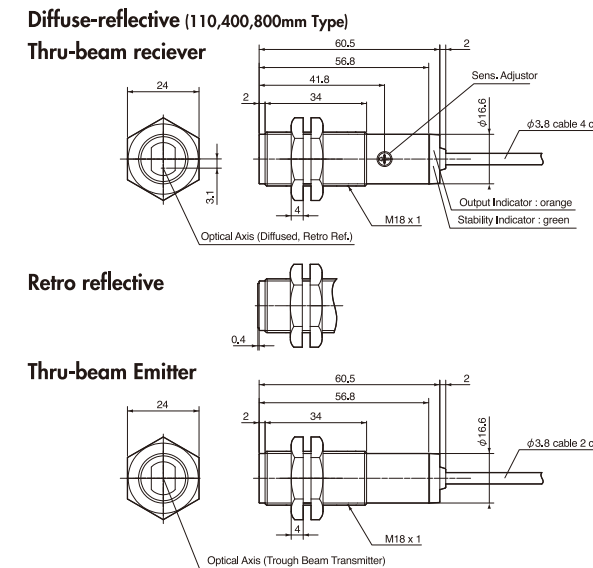


M12 Connector type

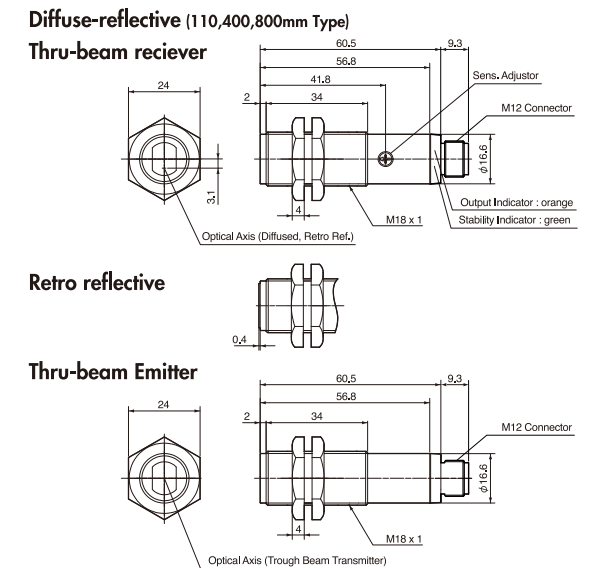


Metal housing

Cable type

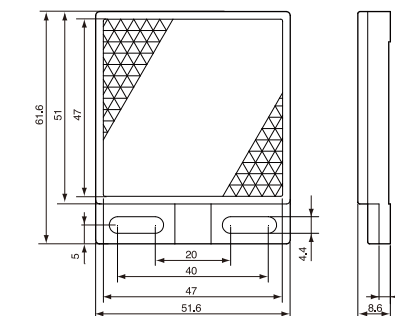


M12 Connector type

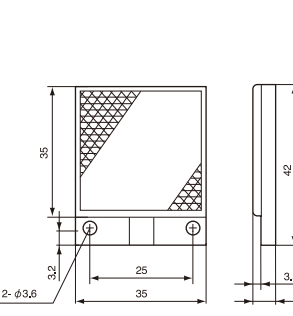


Options

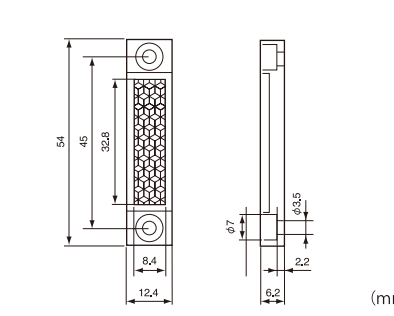
Standard reflector V-61



Small reflector V-42



Tiny reflector P-45



(mm)