

# EX-10 SERIES Ver.2

Related Information

- General terms and conditions..... F-7
- Sensor selection guide..... P.271~
- Glossary of terms / General precautions .....P.1455~ / P.1458~
- Korea's S-mark..... P.1506



[panasonic.net/id/pidsx/global](http://panasonic.net/id/pidsx/global)



PNP output type available

## Amplifier built-in extraordinarily small and slim size

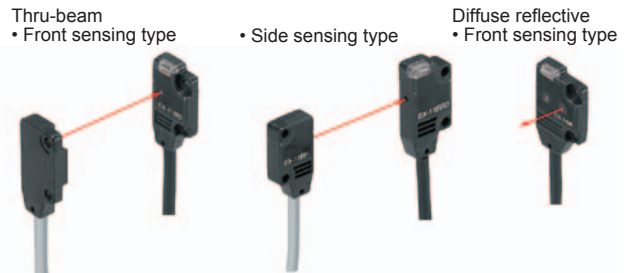
### Smallest body, just 3.5 mm 0.138 in thick

It can be mounted in a very small space as its size is just W10 × H14.5 × D3.5 mm  
**W0.394 × H0.571 × D0.138 in** (thru-beam, front sensing type).



### Flexible mounting

The diffuse reflective type sensor is front sensing and is so thin that it gives an impression of being just pasted on the mounting base. The thru-beam type is available as front sensing type, as well as, side sensing type, allowing flexible mounting.

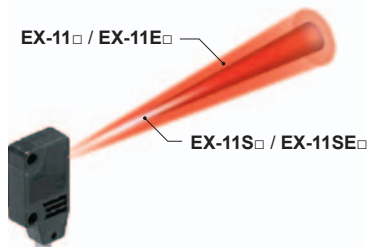


### A wide variety of narrow-beam type! Light diffusion is approx. 1/2 of standard type.

**EX-□S□**

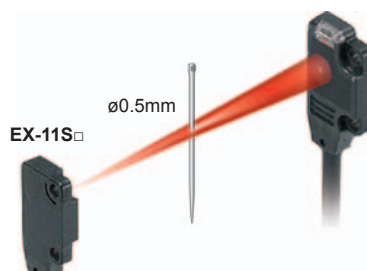
**Less interference with no slit, narrow-pitch can be set.**

The pitch of installation is 1/2 of conventional models, so that the close-installation is possible. No cost is necessary to purchase or install a slit.



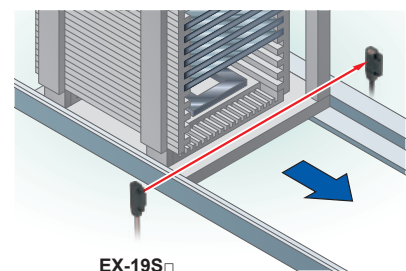
**Possible to sense a minute object less than ø0.5 mm ø0.039 in with no slit.**

The series is applicable to sense a minute object without any cost.



**Long sensing range of 1 m 3.281 ft with narrow beam**

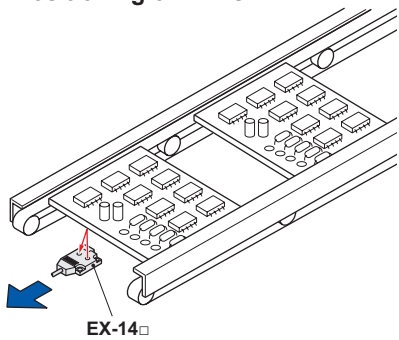
A long 1 m 3.281 ft sensing range is possible with narrow beam.



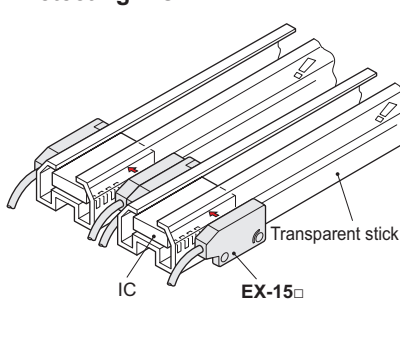
Selection Guide
Amplifier Built-in
Power Supply Built-in
Amplifier-separated
CX-400
CY-100
<b>EX-10</b>
EX-20
EX-30
EX-40
CX-440
EQ-30
EQ-500
MQ-W
RX-LS200
RX
RT-610

**APPLICATIONS**

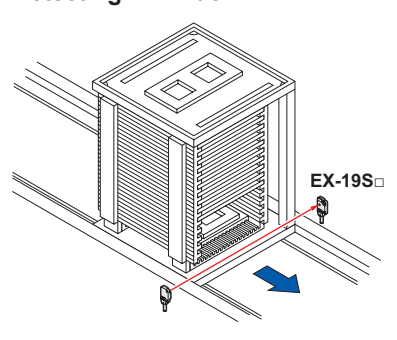
**Positioning of PCBs**



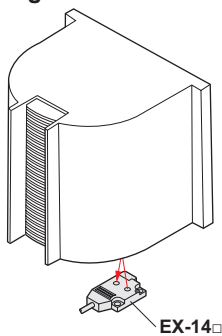
**Detecting ICs**



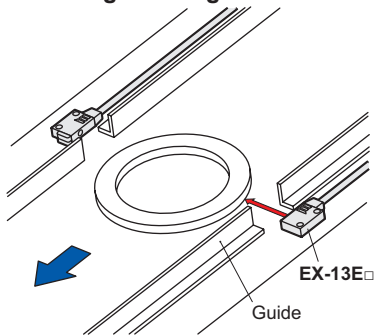
**Detecting PCB rack**



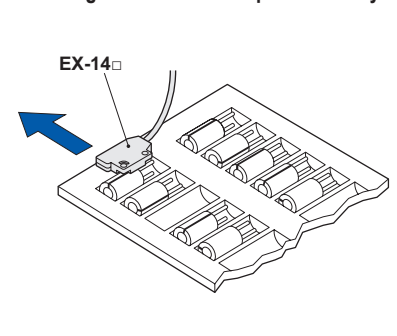
**Detecting wafer cassette**



**Detecting thin ring**



**Checking for absence of capacitor in tray**

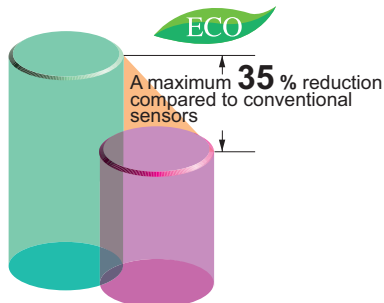


**BASIC PERFORMANCE**

**Electric power saving \***

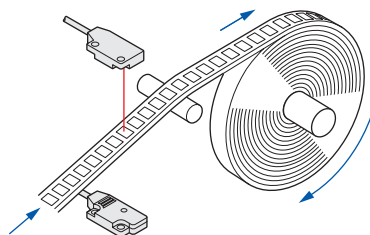
The EX-10 series achieves reductions in power consumption of up to 65%. These sensors contribute to environmental friendliness.

\* Effective from production in October 2010.



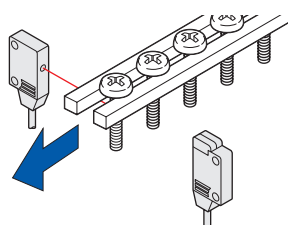
**High-speed response time: 0.5 ms**

The sensor is suitable for detecting small and high-speed traveling objects.



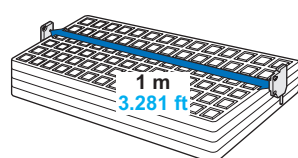
**Minimum sensing object:  $\phi 1$  mm  $\phi 0.039$  in EX-11(E), EX-15(E)**

EX-11, EX-11E, EX-15 and EX-15E are incorporated with  $\phi 1$  mm  $\phi 0.039$  in slit masks so that  $\phi 1$  mm  $\phi 0.039$  in, or more, object can be detected. Hence, they are suitable for precise positioning or small parts detection.



**Long sensing range: 1 m 3.281 ft EX-19(E)**

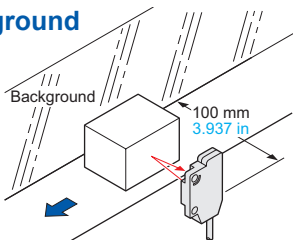
A sensing range of 1 m 3.281 ft has been realized with a slim size of just 3.5 mm 0.138 in. It can be used to detect even wide IC trays.



**Background suppression**

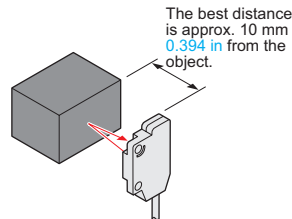
**Hardly affected by background**

Even a specular background separated by 100 mm 3.937 in, or more, is not detected. (However, the background should be directly opposite. A spherical or curved background may be detected.)



**Black object reliably detected**

It can reliably detect dark color objects since it is convergent reflective type.



The best distance is approx. 10 mm 0.394 in from the object.

FIBER SENSORS

LASER SENSORS

PHOTOELECTRIC SENSORS

MICRO PHOTOELECTRIC SENSORS

AREA SENSORS

LIGHT CURTAINS / SAFETY COMPONENTS

PRESSURE / FLOW SENSORS

INDUCTIVE PROXIMITY SENSORS

PARTICULAR USE SENSORS

SENSOR OPTIONS

SIMPLE WIRE-SAVING UNITS

WIRE-SAVING SYSTEMS

MEASUREMENT SENSORS

STATIC ELECTRICITY PREVENTION DEVICES

LASER MARKERS

PLC

HUMAN MACHINE INTERFACES

ENERGY CONSUMPTION VISUALIZATION COMPONENTS

FA COMPONENTS

MACHINE VISION SYSTEMS

UV CURING SYSTEMS

Selection Guide

Amplifier Built-in  
Power Supply Built-in  
Amplifier-separated

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CY-100

EX-10

EX-20

EX-30

EX-40

CX-440

EQ-30

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RX-LS200

RX

RT-610