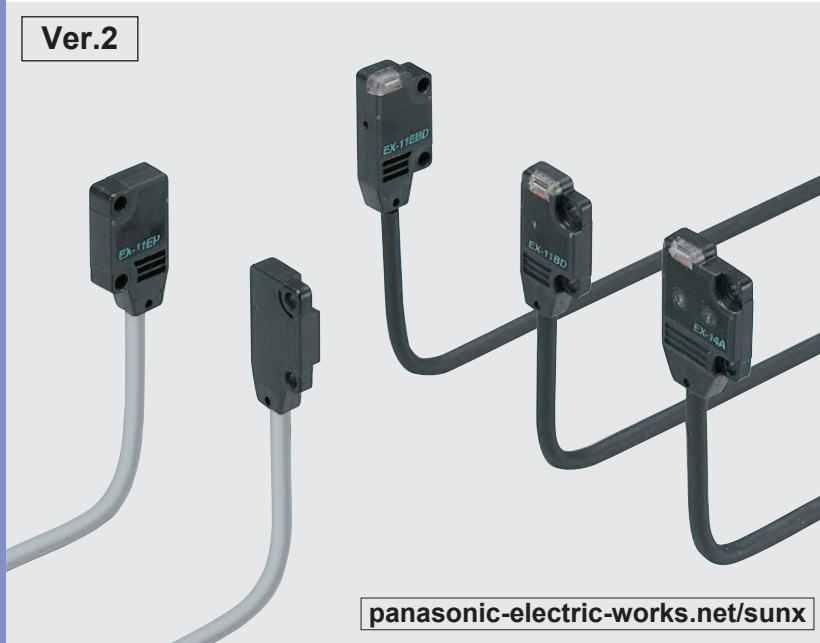


# EX-10 SERIES Ver.2

Related Information

- General terms and conditions..... F-17
- Sensor selection guide..... P.283~
- Glossary of terms / General precautions ..... P.1359~ / P.1405
- Korea's S-mark..... P.1410

Ver.2



[panasonic-electric-works.net/sunx](http://panasonic-electric-works.net/sunx)



PNP output type available

## Amplifier built-in extraordinarily small and slim size

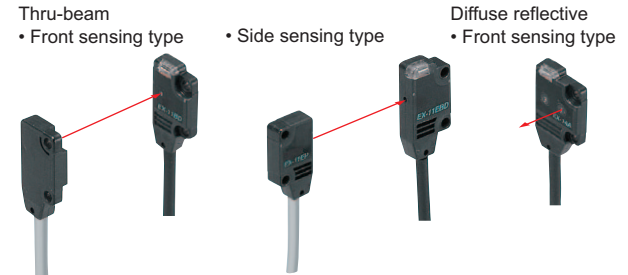
### Smallest body, just 3.5 mm 0.138 in thick

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.

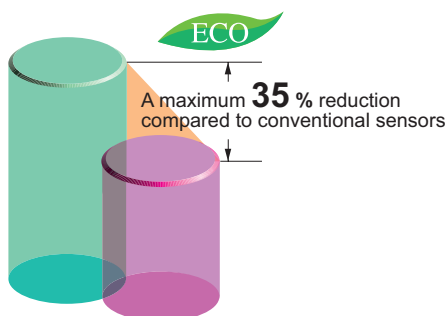


## BASIC PERFORMANCE

### Electric power saving \*

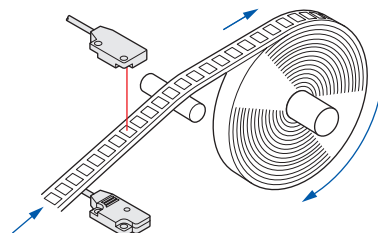
The EX-10 series achieves reductions in power consumption of up to 65%. These sensors contribute to environmental friendliness.

\* Effective from production in October 2010.

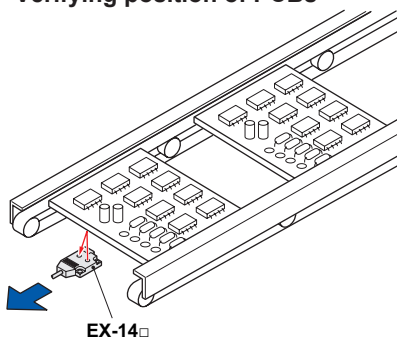
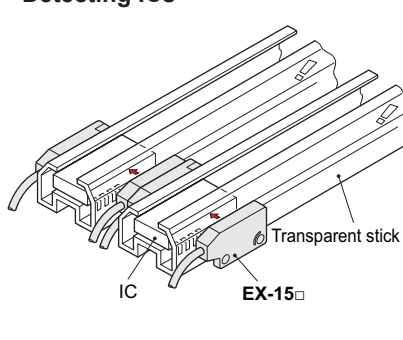
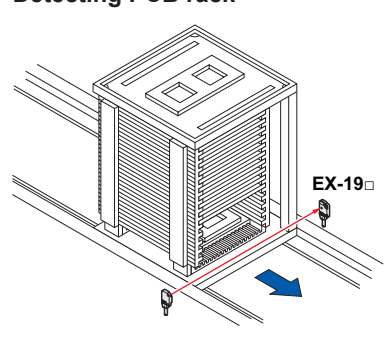
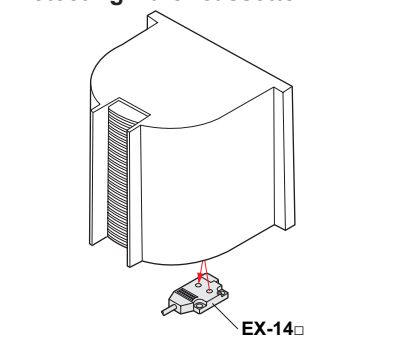
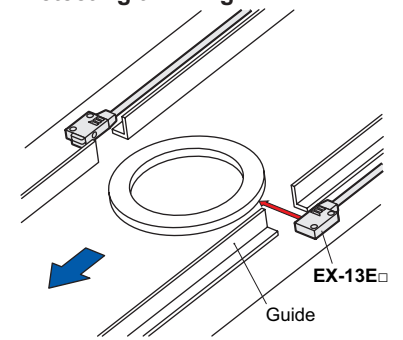
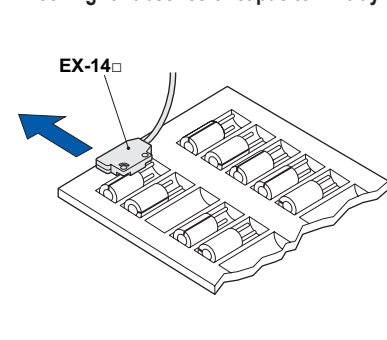


### High-speed response time: 0.5 ms

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

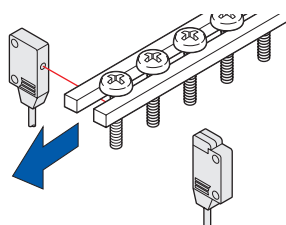


- FIBER SENSORS
- LASER SENSORS
- PHOTOELECTRIC SENSORS
- MICRO PHOTOELECTRIC SENSORS
- AREA SENSORS
- LIGHT CURTAINS
- PRESSURE / FLOW SENSORS
- INDUCTIVE PROXIMITY SENSORS
- PARTICULAR USE SENSORS
- SENSOR OPTIONS
- SIMPLE WIRE-SAVING UNITS
- WIRE-SAVING SYSTEMS
- MEASUREMENT SENSORS
- STATIC CONTROL DEVICES
- ENDOSCOPE
- LASER MARKERS
- PLC / TERMINALS
- 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
- CX-400
- EX-10
- EX-20
- EX-30
- EX-40
- CX-440
- EQ-30
- EQ-500
- MQ-W
- RX-LS200
- RX
- RT-610

**APPLICATIONS****Verifying position of PCBs****Detecting ICs****Detecting PCB rack****Detecting wafer cassette****Detecting thin ring****Checking for absence of capacitor in tray****BASIC PERFORMANCE**

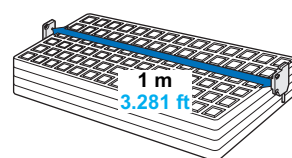
Minimum sensing object:  $\varnothing 1 \text{ mm}$   $\varnothing 0.039 \text{ in}$  **EX-11(E)**, **EX-15(E)**

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

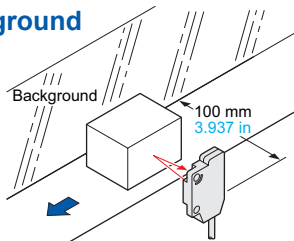


Long sensing range: **1 m** **3.281 ft** **EX-19**

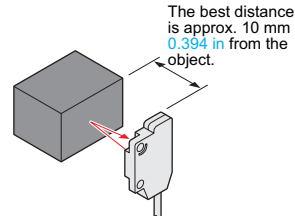
A sensing range of 1 m **3.281 ft** has been realized with a slim size of just 3.5 mm **0.138 in**. It can be used to detect even wide IC trays.

**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.)

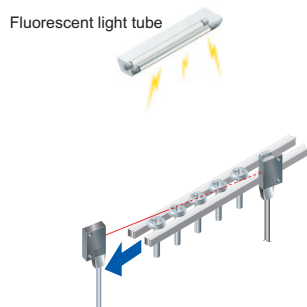
**Black object reliably detected**

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

**ENVIRONMENTAL RESISTANCE****Incorporated an inverter countermeasure circuit \***

The **EX-10** series become significantly stronger against inverter light and other extraneous light.

\* Effective from production in October 2010.

**Waterproof IP67**

The sensor can be hosed down because of its IP67 construction and the non-corrosive stainless steel mounting bracket.

Note: However, take care that if it is exposed to water splashes during operation, it may detect a water drop itself.

**Bending durability**

Flexible cable type **EX-□-R** is available. It is most suitable for moving parts, such as robot arm, etc.

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