

## EX-10 SERIES Ver.2

## Related Information

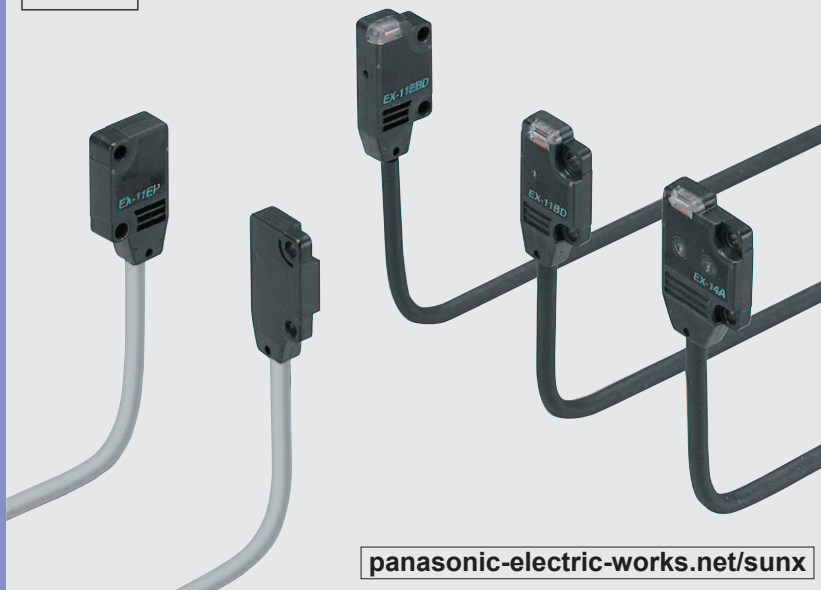
■ General terms and conditions..... F-17

■ 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)


## Amplifier built-in extraordinarily small and slim size

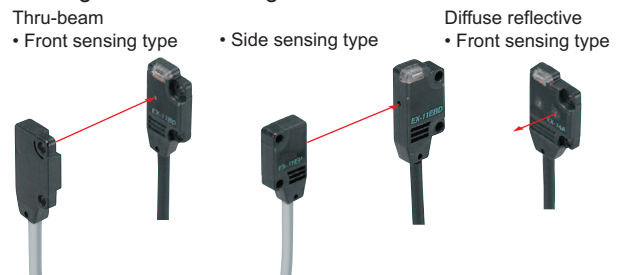
## Smallest body, just 3.5 mm 0.138 in thick

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.

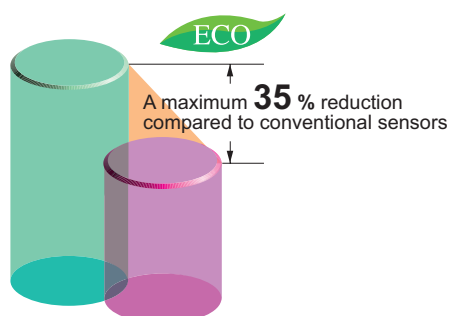


## BASIC PERFORMANCE

## Electric power saving \*

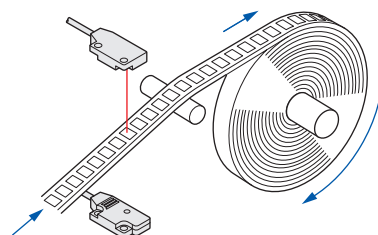
The EX-10 series achieves reductions in power consumption of up to 65 %. These sensors contribute to environmental friendliness.

\* 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  
SENSORSLASER  
SENSORSPHOTOELECTRIC  
SENSORSMICRO  
PHOTOELECTRIC  
SENSORSAREA  
SENSORSLIGHT  
CURTAINSPRESSURE /  
FLOW  
SENSORSINDUCTIVE  
PROXIMITY  
SENSORSPARTICULAR  
USE SENSORSSENSOR  
OPTIONSSIMPLE  
WIRE-SAVING  
UNITSWIRE-SAVING  
SYSTEMSMEASUREMENT  
SENSORSSTATIC CONTROL  
DEVICES

ENDOSCOPE

LASER  
MARKERSPLC /  
TERMINALSHUMAN MACHINE  
INTERFACESENERGY CONSUMPTION  
VISUALIZATION  
COMPONENTS

FA COMPONENTS

MACHINE VISION  
SYSTEMSUV CURING  
SYSTEMSSelection  
GuideAmplifier  
Built-inPower Supply  
Built-inAmplifier-  
separated

CX-400

EX-10

EX-20

EX-30

EX-40

CX-440

EQ-30

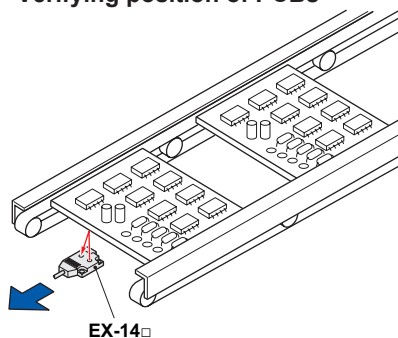
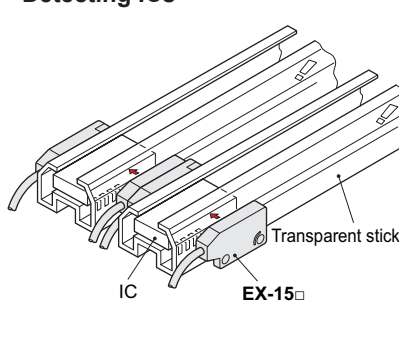
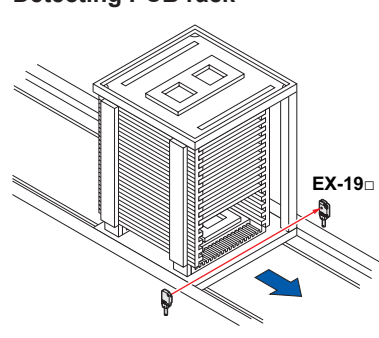
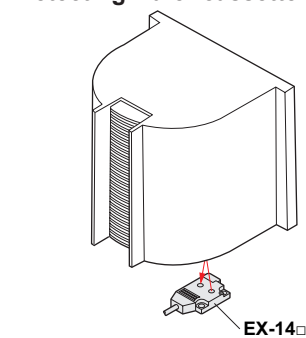
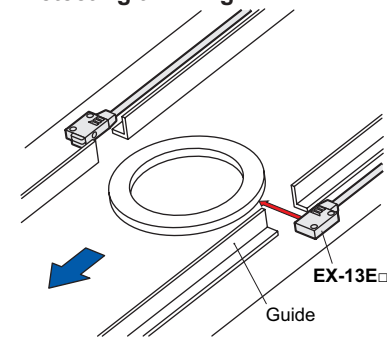
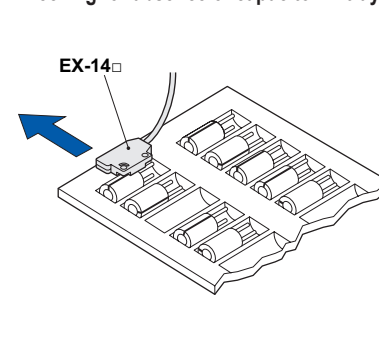
EQ-500

MQ-W

RX-LS200

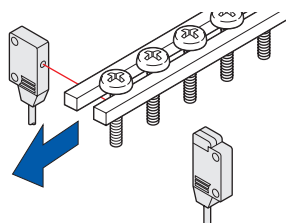
RX

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**

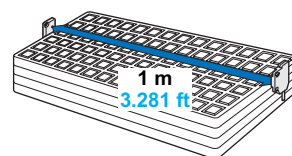
Minimum sensing object:  $\varnothing 1 \text{ mm}$   $\varnothing 0.039 \text{ in}$  **EX-11(E), EX-15(E)**

**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.

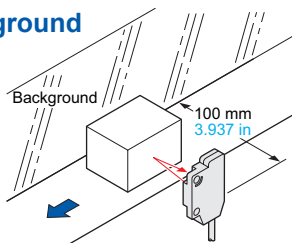


Long sensing range: **1 m 3.281 ft** **EX-19**

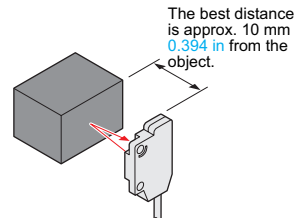
A sensing range of 1 m **3.281 ft** has been realized with a slim size of just 3.5 mm **0.138 in**. It can be used to detect even wide IC trays.

**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.)

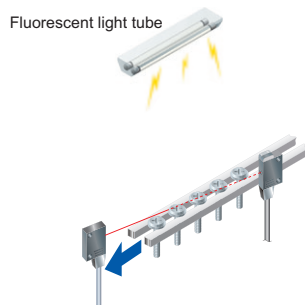
**Black object reliably detected**

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.

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**