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HIGH PRECISION

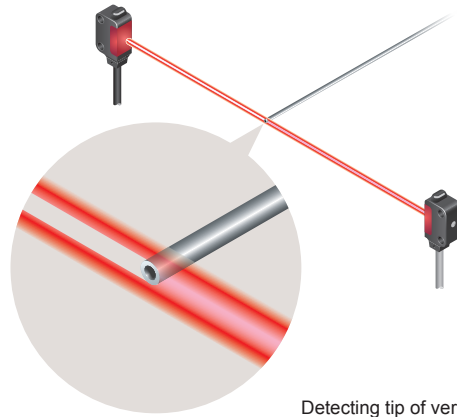
Highly accurate detection **EX-L211/L221**

Suitable for positioning and minute object detection

A repeatability of 0.02 mm **0.0008 in** or less at a range of from 100 to 200 mm **3.937 to 7.874 in** makes this type best suitable for positioning applications (**EX-L221**). Moreover, it boasts a top-class detection precision in the compact laser sensor category with the gold wire of $\varnothing 0.01$ mm **$\varnothing 0.0004$ in**.

Model No. (Minute object detection type)	Minimum sensing object (Typical)	Repeatability (Typical)
EX-L211 (Thru-beam type)	$\varnothing 0.3$ mm $\varnothing 0.012$ in	0.01 mm 0.0004 in or less
EX-L221 (Spot reflective type)	$\varnothing 0.01$ mm $\varnothing 0.0004$ in	0.02 mm 0.0008 in or less

* Typical values when the sensitivity adjuster is optimally adjusted.

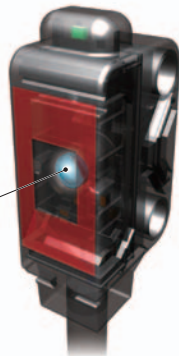


Detecting tip of very thin pipe

Dependable technology yields high precision

Incorporating a high-precision aspheric glass lens

Light aberrations are reduced and a high definition laser spot is possible by incorporating a molded aspheric glass lens.



The secret to high precision
Molded aspheric glass lenses

Small receiver aperture for precision detection **EX-L211/L212**

Errant beams are eliminated by the $\varnothing 0.5$ mm **$\varnothing 0.020$ in** receiver aperture. Only beams entering the aperture are used, making for high-precision sensing.



The secret to high precision
 $\varnothing 0.5$ mm
 $\varnothing 0.020$ in
slit

Stable convergent distance sensing

For sensing when background object presents

Due to convergent distance sensing, the background has very little effect, enabling stable sensing. Sensitivity adjuster allows you to adjust sensitivity to avoid sensing background objects when the distance between the workpiece and background objects is small.



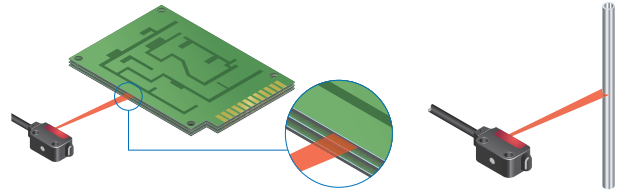
Sensitivity adjuster

For sensing unevenly-colored workpieces

Able to reliably sense unevenly-colored workpieces.

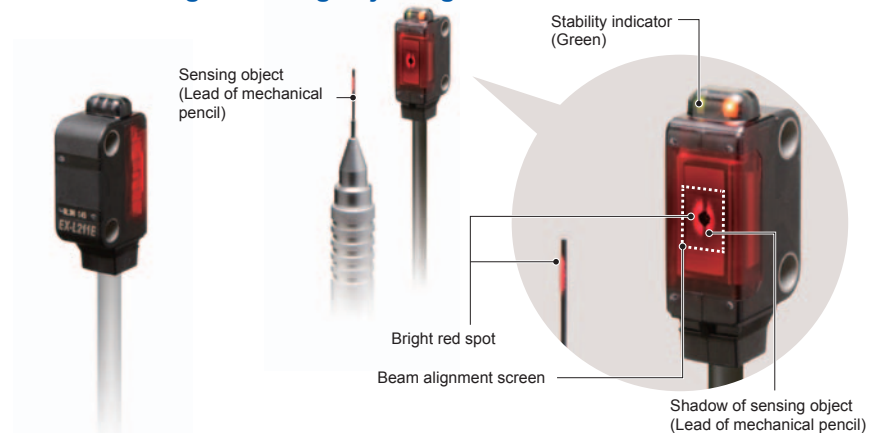
For sensing thin, glossy or curved-surface workpieces (Line spot type EX-L262)

Able to sense glossy or curved-surface workpieces, such as PCB and metallic pipes, due to a wide line laser beam.

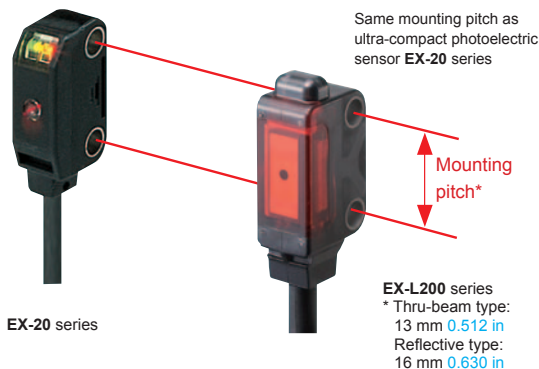


EASY ALIGNMENT**Easy beam-axis alignment****EX-L211/L212****Visual positioning is easy due to silhouetting a sensing object against a receiver.**

Visually confirm the optimal receiver position, adjusting the beam axis by aligning the objects while watching the red spot on the beam alignment screen. The diagram on the right shows an example with the lead of a mechanical pencil being detected through visual adjustment.

**EASY SETTING****Same mounting pitch as ultra-compact photoelectric sensor**

EX-L200 series has the same mounting pitch as ultra-compact photoelectric sensor **EX-20** series so that the time taken in designing is saved.

**ENVIRONMENTAL RESISTANCE****Strong against water and dust with protection structure IP67**

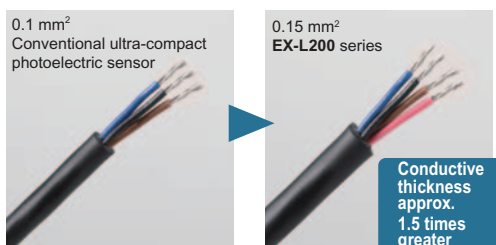
The sensor can be used even in environment where water or dust present because of its protection structure IP67.

**EASY TO USE****M3 screw used for secure tightening**

The mounting holes have metal sleeves inserted to prevent damage to the sensor due to over tightening of the screws. (Tightening torque: 0.5 N·m)

Conductor thickness 1.5 times increased to make wiring easier

The lead wire conductor's thickness is increased to 0.15 mm² from 0.1 mm² of the conventional ultra-compact photoelectric sensor. This makes it easier to perform crimping work on the cables for better workability. In addition, the tensile strength of the crimping area has become stronger.

**Sensitivity adjuster (excluding EX-L212□)**

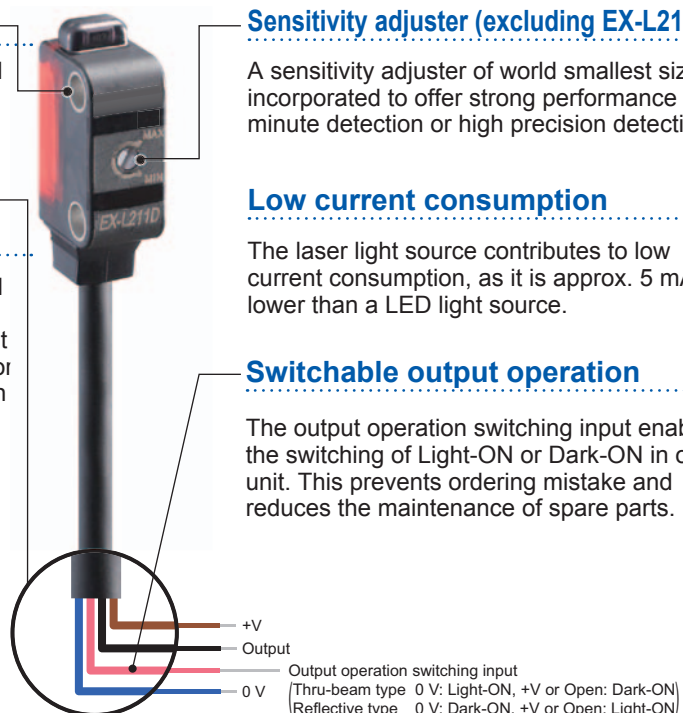
A sensitivity adjuster of world smallest size is incorporated to offer strong performance in minute detection or high precision detection.

Low current consumption

The laser light source contributes to low current consumption, as it is approx. 5 mA lower than a LED light source.

Switchable output operation

The output operation switching input enables the switching of Light-ON or Dark-ON in one unit. This prevents ordering mistake and reduces the maintenance of spare parts.



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