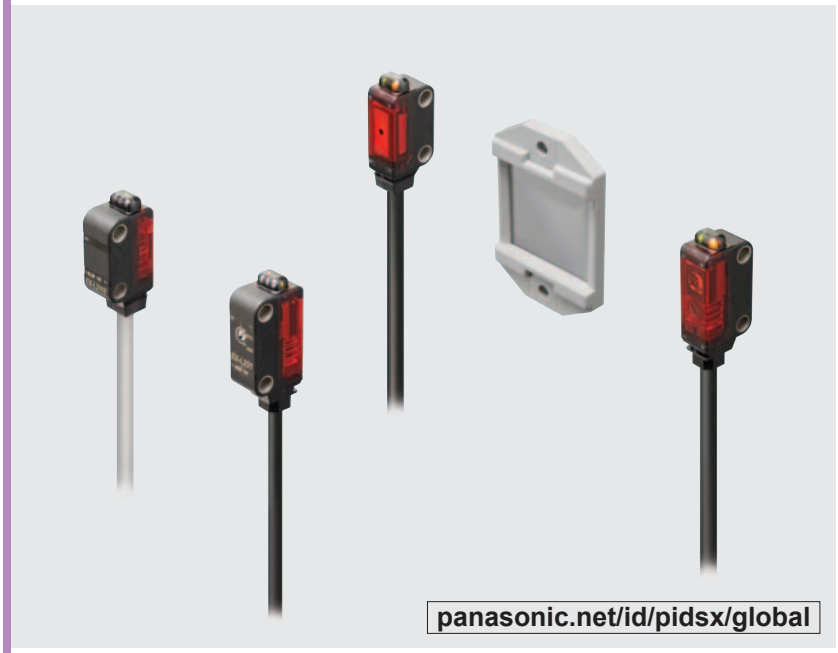
Ultra-compact Laser Sensor **Amplifier Built-in**

EX-L200 SERIES

Related Information
■ General terms and conditions..... F-7
■ Glossary of terms / General precautions. P.1455~ / P.1458~
■ Sensor selection guide ..... P.211~
■ About laser beam..... P.1499~



CE Conforming to EMC Directive

FDA Conforming to FDA regulations

This product is classified as a Class 1 Laser Product in IEC / JIS standards and in FDA* regulations. Do not look at the laser beam through optical system such as a lens.

*This product complies with 21 CFR 1040.10 and 1040.11 Laser Notice No. 50, dated June 24, 2007, issued by CDRH (Center for Devices and Radiological Health) under the FDA (Food and Drug Administration).

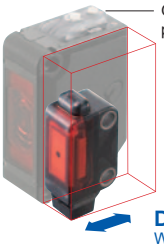
PNP output type available

Interference prevention

Introducing ultra-compact amplifier built-in laser sensor

Ultra-compact

Due to the customized IC and optical design, high precision detection is fulfilled with directivity and visibility achievable only by laser. The laser adopted is Class 1 (IEC / JIS / FDA) laser that is safe to use, so that there is no need to separate the areas of sensor usage.



Depth **12** mm **0.472** in
W8.2 × H23.4 × D12 mm
W0.323 × H0.921 × D0.472 in
(Thru-beam type)

THRU-BEAM TYPE

Minute object detection type EX-L211

Spread the beam and lower its density, thus even a minute object can be detected with a small change in the light received intensity. Spot size: 6 × 4 mm 0.236 × 0.157 in approx. (Visual reference value at a sensing distance of 1 m 3.281 ft)

Long sensing range type EX-L212

A long range detection of 3 m 9.843 ft is achieved.
High precision detection with minimum beam spread is possible even in a long range.
Spot size: 8 × 5.5 mm 0.315 × 0.217 in approx. (Visual reference value at a sensing distance of 1 m 3.281 ft)

REFLECTIVE TYPE

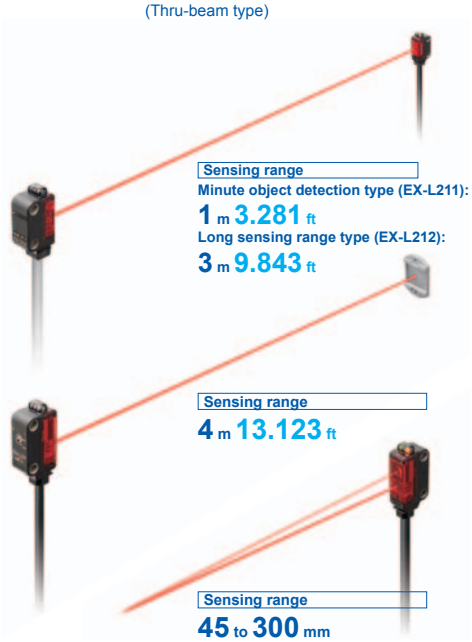
Long sensing range type EX-L291

Achieving ease of installation and 4 m 13.123 ft long sensing range.
Spot size: 6 × 4 mm 0.236 × 0.157 in approx. (Visual reference value at a sensing distance of 1 m 3.281 ft)

SPOT REFLECTIVE TYPE

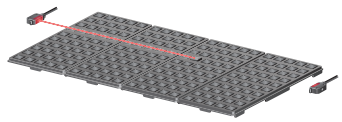
Minute object detection type EX-L221

Highly precise sensing with minimum 0.01 mm 0.0004 in diameter. Many applications are possible due to the 300 mm 11.811 in long sensing range.
Spot size: ø1 mm ø0.039 in (Visual reference value at a sensing distance of 300 mm 11.811 in)

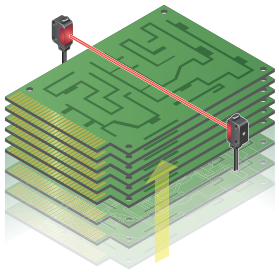


APPLICATIONS

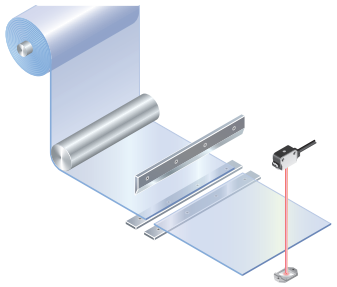
Detecting ICs that are out of position in multiple palettes



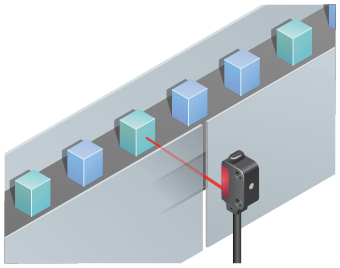
Confirming arrival of substrate



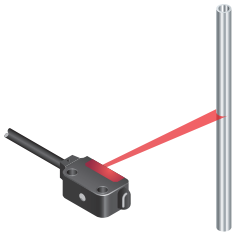
Determining cutting position of sheet



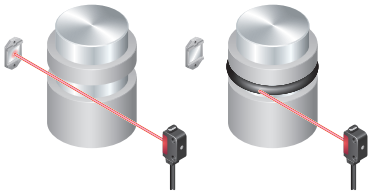
Sensing unevenly-colored workpieces



Sensing glossy or curved-surface workpiece, such as metallic pipes



Detecting O-ring



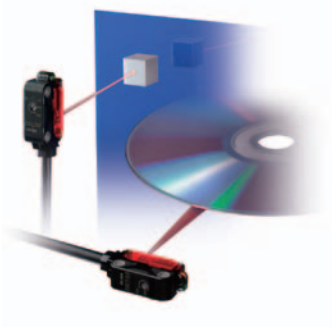
CONVERGENT REFLECTIVE TYPE

Spot type — EX-L261

Highly precise sensing with minimum 0.01 mm 0.0004 in diameter. Not affected by the background, and able to reliably sense unevenly-colored workpieces.
Spot size: ø1 mm ø0.039 in (Visual reference value at a sensing distance of 50 mm 1.969 in)

Line spot type — EX-L262

Able to sense thin, glossy or curved-surface workpieces due to line beam.
Spot size: 5 × 1 mm 0.197 × 0.039 in approx. (Visual reference value at a sensing distance of 50 mm 1.969 in)



Sensing range
Spot type (EX-L261):
20 mm to **50** mm
0.787 in to **1.969** in

Sensing range
Line spot type (EX-L262):
20 mm to **70** mm
0.787 in to **2.756** in