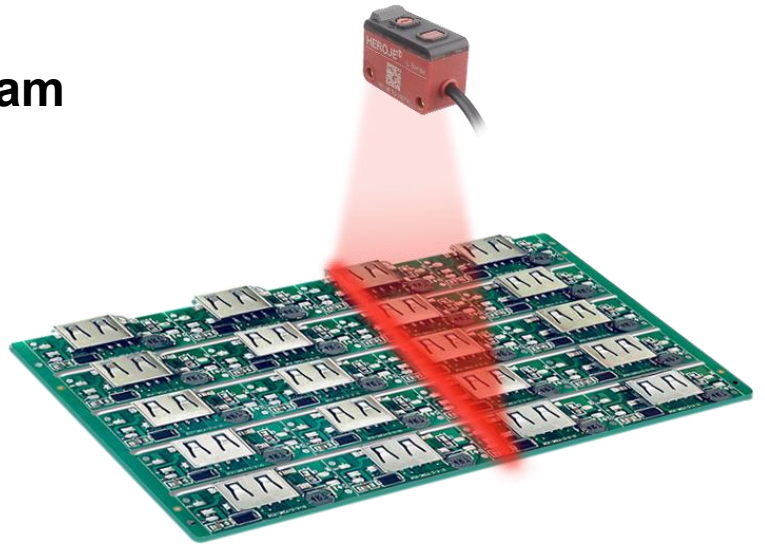


# LRL Series

## Optical Sensor with Area Beam

LRL series optical sensor is new model made by HEROJE produce a line-shaped beam that is 110 mm long (distance on 100mm), specially designed for detecting objects with gaps or holes in factory automation. Offering a simple and extremely effective standard presence detection solution for PCB(printed circuit boards), pallet cages or even bakery products.



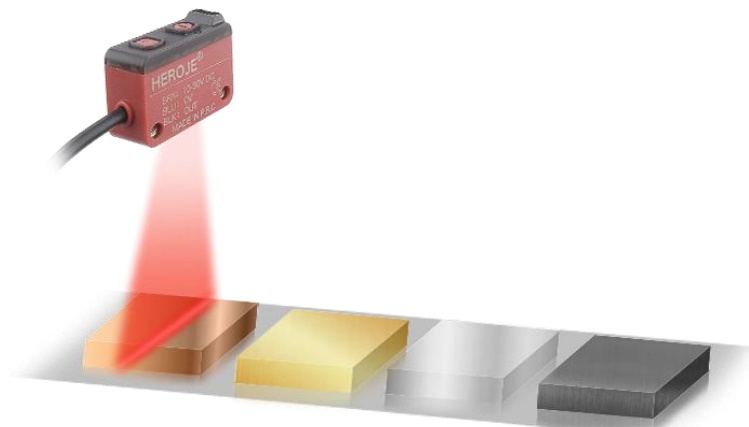
## One-Click Calibration

One-click calibration feature simplifies operation, increases efficiency and accuracy, and enhances adaptability, providing users with a more convenient and effective experience. It is particularly suitable for the needs of modern industrial automation and intelligent manufacturing.



## Background Suppression

The background suppression feature allows LRL sensor to distinguish between target objects and the background, supporting background filtering. It is less affected by production line dirt, reducing downtime and maintenance caused by environmental changes, thereby improving overall production efficiency.



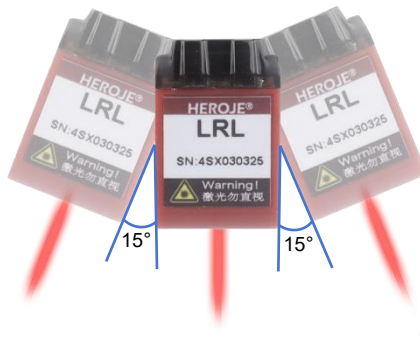
## Reliable Detection of Various Irregular Targets

The LRL series sensors are capable of detecting objects with gaps or holes as well as irregularly shaped objects, such as PCB boards, pallet cages, bakery products, engine bearings, etc.

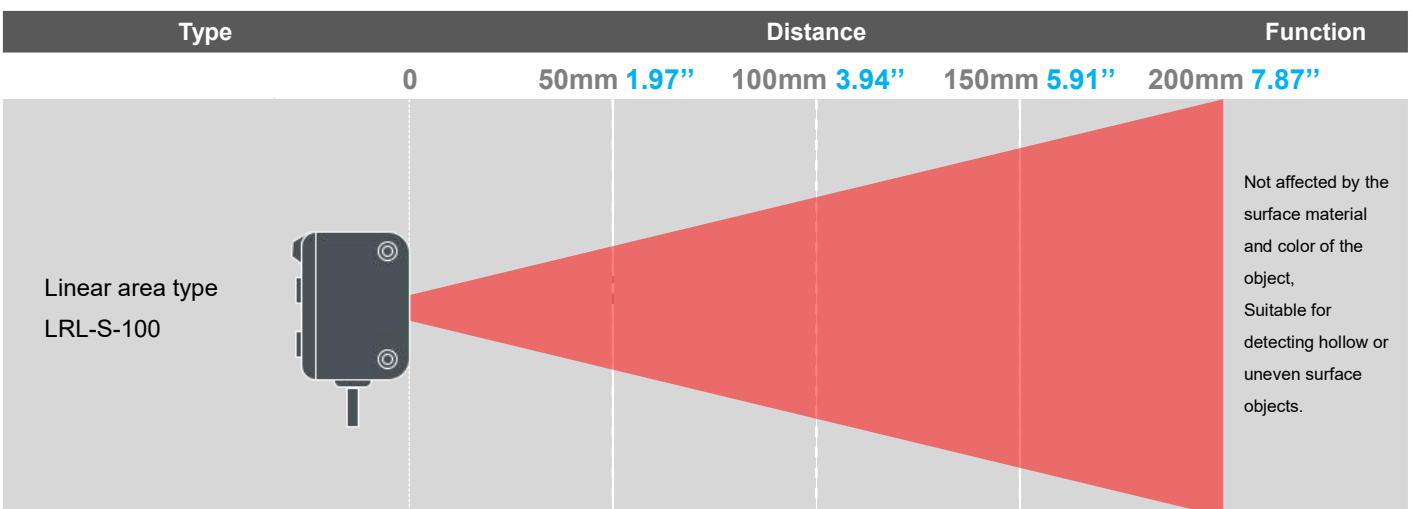


## Easy Installation and Implementation

The easy installation and implementation, along with tilt mounting capability, simplifies the installation process and provides more mounting options. It is particularly suitable for rapid deployment and diverse installation needs in modern industrial automation and smart manufacturing environments.



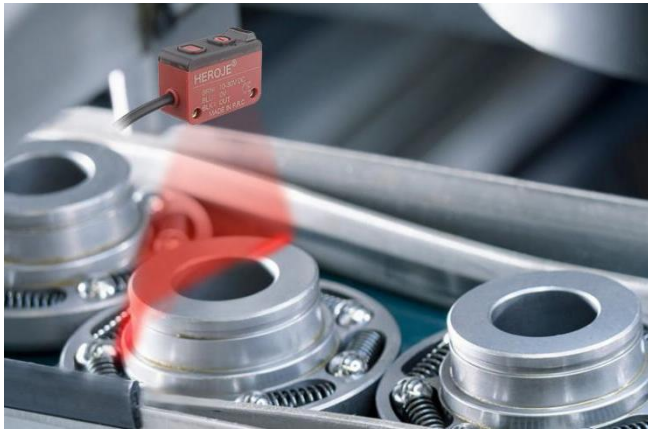
## Detection Distance and Linear Area Size



Detection Distance	50mm 1.97"	100mm 3.94"	150mm 5.91"	200mm 7.87"
Linear Area Size	60mm X 20mm(2.36"x0.79")	110mm X 30mm(4.33"x1.18")	160mm X 40mm(6.30"x1.57")	210mm X 50mm(8.27"x1.97")

## Applications

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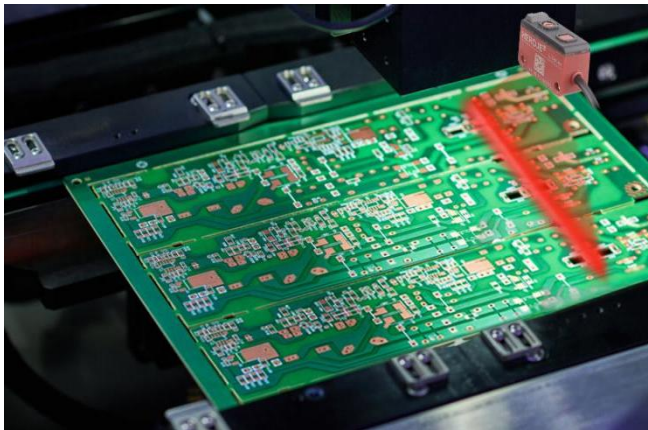
### Detection of Metal Components with Holes

Even when metal components have holes or are slightly misaligned, the LRL sensor can reliably detect them.



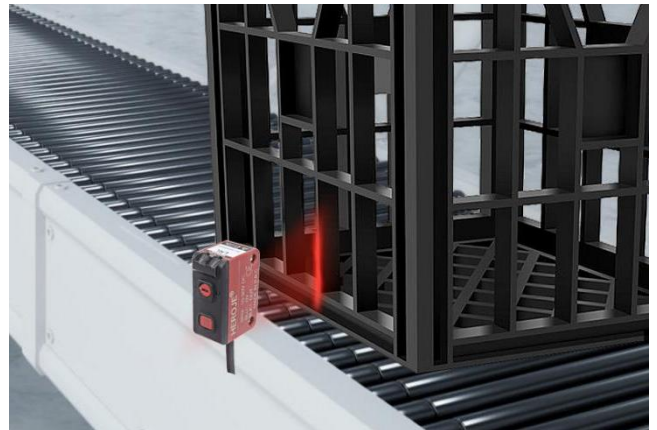
### Wire and Cable Detection

Even small wires can be accurately detected by the LRL sensor.



### PCB Detection in Production Process

Even printed circuit boards with large gaps and unevenly attached electronic components can be detected accurately by the LRL sensor.



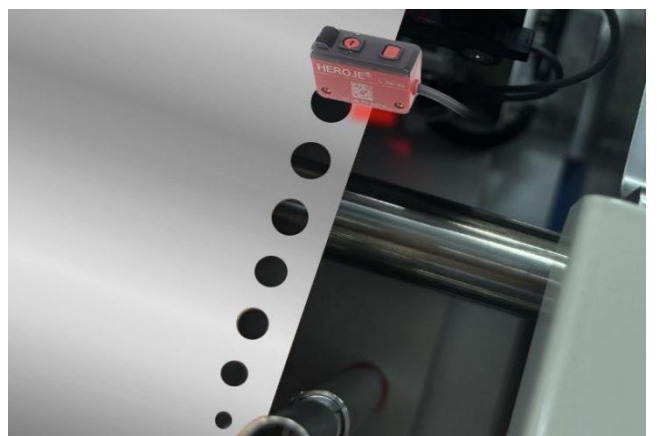
### Basket Detection in Logistics Center

Even baskets with many gaps can be accurately and stably detected by the LRL sensor.



### Irregular Shape Products Detection

The LRL sensor can reliably detect irregularly shaped products.

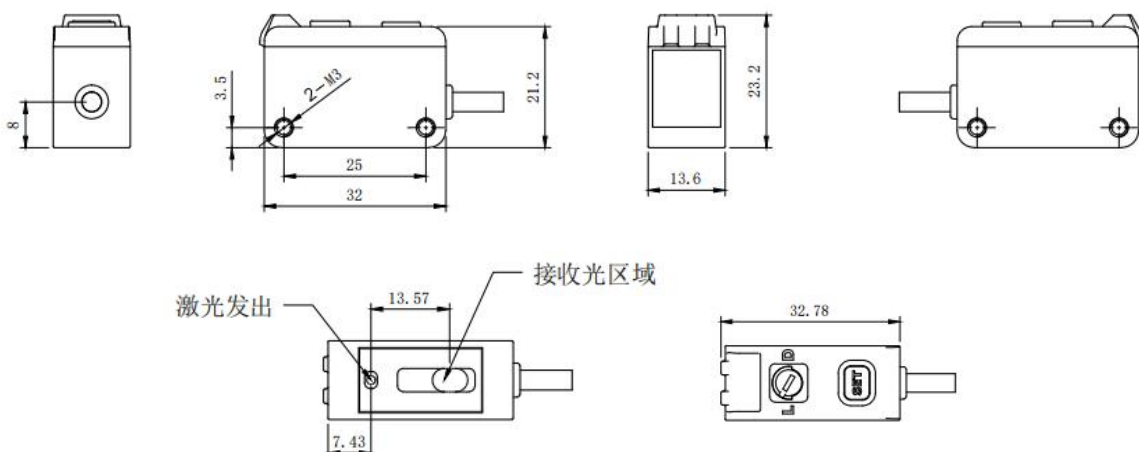


### Edge Detection of Perforated Metal Plates

The LRL sensor can reliably detect perforated metal plates, even in demanding manufacturing environments.

# TECHNICAL PARAMETERS

Model	LRL-S-100	
Detection Type	Area type	
Detectable Distance	70 to 200 mm ( 2.75" to 7.87" ), Optimal distance 100 mm (3.94")	
Standard Detectable Deviation	1mm 0.039" (100 mm 3.94")	
Light Source	Type	Visible Linear LED
	Color	Red
Function	Indicator	Tricolor LED
Area width	Approx 110 mm 4.33" (Distance 100mm 3.94")	
Response Time	128 Hz	
Control Output	NPN Open collector / PNP Open collector selectable	
	Applied Voltage	10 to 30 V DC or less
	Current	100 mA or less
	Output Operation	Light-ON / Dark-ON selectable
	Protection Circuit	Protection against reverse power connection, output overcurrent, output surge, reverse output connection
Current	Power Voltage	10 to 30 V DC V DC $\pm 10\%$ , Ripple P-P 10 % or less
	Power Consumption	450 mA or less (18mA or less at 24V, 34mA or less at 12V)
Environmental Resistance	Enclosure Rating	IP65
	Ambient Light	70 mm 2.75" (Incandescent lamp: 10000 lux or less, Sunlight: 20000 lux or less) 200mm 17.87" (Incandescent lamp: 2000 lux or less, Sunlight: 4000 lux or less)
	Ambient Temperature	-10 to +50 °C -14 to 123 °F (No dew condensation or icing allowed), Storage: -25 to +75 °C -13 to 167 °F
	Relative Humidity	35 to 85 % RH (no condensation), Storage: 35 to 85 % RH (no condensation)
	Vibration	10 to 55 Hz (period: 1 min.) frequency, 1.5 mm 0.059" double amplitude in X, Y and Z directions for two hours each
	Insulating Resistance	20 M $\Omega$ or more (500 VDC)
	Withstand Voltage	1000 VAC 50/60 Hz 1 min
Cable	3-core composite cable, 2 m 78.74" long	
Material	Enclosure: ABS Plastics, Front cover: Acrylic	
Weight	45 g approx. (with cable)	



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