Color Sensors

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🌐 www.senpum.com/en

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Built-in amplifier	Intelligent white light	**LA-W**	
	Digital display	**PC-W**	
	MINI model	**PC-N**	
	Laser-based	**PC2-L**	
	Refined	**PC2-C**	
	Fluorescent	**PC2-V**	

Color Sensors

| LA-W |
| PC-W |
| PC-N |
| PC2-L |
| PC2-C |
| PC2-V |

Selection guide Color sensors

▌ What is the color sensor ?

Color Sensors is a sensor that emits light from an emitter, is received by a receiver and detects the reflected light.
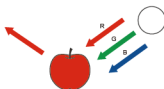The color sensor is capable of detecting the amount of light received by each of red, blue, and green, and is able to discern the color of an object.

How Color Sensors Work

A broad spectrum of wavelengths of light is emitted and then received by a receiver that distinguishes three color types in the light reflected from the target.
Regardless of the type, the amount of light received by each of red, blue, and green is detected and the percentage of light received is calculated.

Emits light containing wavelengths of red, blue, and green
Red objects reflect only red light

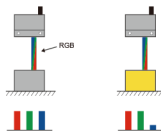White objects reflect 3 colors of red, green and blue light

* The white circle in the diagram indicates a white light source

* The white circle in the diagram indicates a white light source

The ratio of reflected red, green and blue colors varies depending on the color of the object

Color of objects	Reflected light		
	Red	Green	Blue
Red	•		
Yellow	•	•	
Green		•	
Blue			•
White	•	•	•
Black			

Calculate the ratio of the amount of light received by red, green, and blue to be able to discern differences in the color of objects

Detectable differences
Left: light ratio 1:1:1   Right: light ratio 4:4:1

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Selection Guide

Intelligent white light

LA-W series

▶ P.0367

- Stable detection of appearance (color) differences
- Stable detection even when there is a change of state or a change of distance

Digital display

PC-W series

▶ P.0371

- High-definition digital display, easy and convenient operation
- Metal casing, excellent impact resistance

MINI model

PC-N series

▶ P.0373

- Push-button operation，easy and convenient operation
- Ultra-small size for a wider range of applications

Laser-based

PC2-L series

▶ P.0375

- Linear laser meets most shapes of object detection
- Comparable two colors can be set

Refined

PC2-C series

▶ P.0377

- High quality white light source
- Detection can be performed according to the color of the target

Fluorescent

PC2-V series

▶ P.0379

- Professional fluorescent light source, stable detection of objects
- Stable detection of phosphors, ribbons, strips, etc.

Color Sensors

LA-W
PC-W
PC-N
PC2-L
PC2-C
PC2-V

Fiber Optic Sensors

Photoelectric Sensors

Color Sensors

Laser Sensors

Inductive Proximity Sensors

Precision Contact Sensors

Area/Safety Light Curtain

Laser Scanners

Digital Contact Sensors

Laser Displacement Sensors

Distance Laser Sensors

Confocal Displacement Sensors

Barcode Scanners
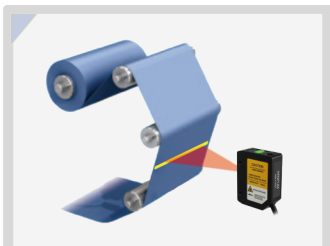
Infrared Temperature Sensors
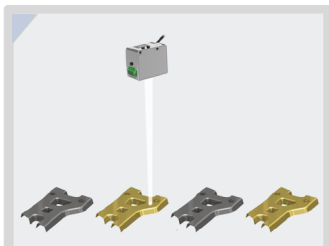
Digital Pressure Sensors

Gate Magnetic Sensors

Ultrasonic Displacement Sensors

Magnetic Scale

Static Eliminators

Color Sensors

LA-W
PC-W
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PC2-L
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Application Scene

Pole roll stop detection
Sensors used: PC2-LS030N

Inspection of product handling/coating verification
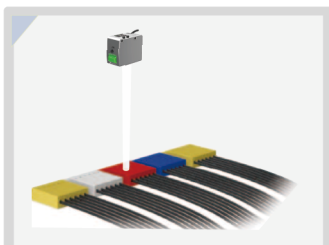Sensors used: LA-W500N

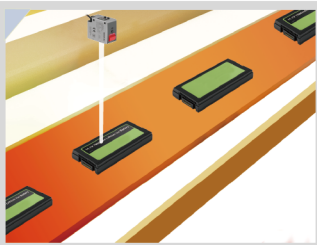**Inspection of color scale position of printed matter**
Sensors used: PC2-LB030N

Inspection of pharmaceutical bottle packaging
Sensors used: PC2-VS010N

Distinguish between two different colors
Sensors used: PC2-CS003N

Color identification of wire harnesses and connectors
Sensors used: LA-W500N

Fiber Optic Sensors

Photoelectric Sensors

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Precision Contact Sensors

Area/Safety Light Curtain

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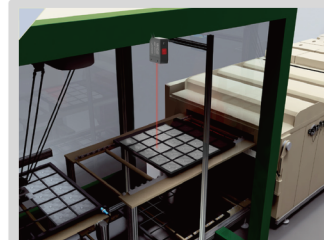PC2-L
PC2-C
PC2-V

Color Sensors

Detect whether the lithium battery is labeled or not
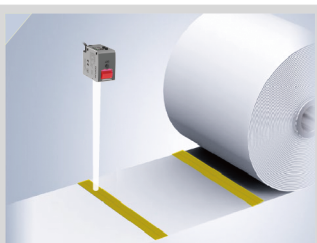Sensors used: **LA-W70N**

Detecting fluorescent anti-counterfeiting stickers
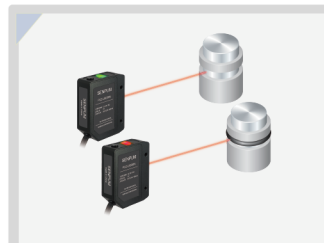on packaging boxes
Sensors used: **PC2-VS010N**

Detection of wafer size change
Sensors used: **LA-W500N**

Detecting the positioning of solar cell material carriers
Sensors used: **PC2-LB030N**

Inspection splicing tape
Sensors used: **LA-W70N**

Detecting the presence or absence of rubber rings
Sensors used: **PC2-LB030N**

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Inductive Proximity
Sensors

Precision Contact
Sensors

Area/Safety Light
Curtain

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Sensors

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Sensors

Barcode Scanners

Infrared Temperature
Sensors

Digital Pressure
Sensors

Gate Magnetic Sensors

Ultrasonic
Displacement Sensors

Magnetic Scale

Static Eliminators