

2011 2nd

Product Catalog

ROHM
SEMICONDUCTOR

Contact Image Sensor Heads

for Financial and KIOSK Terminals

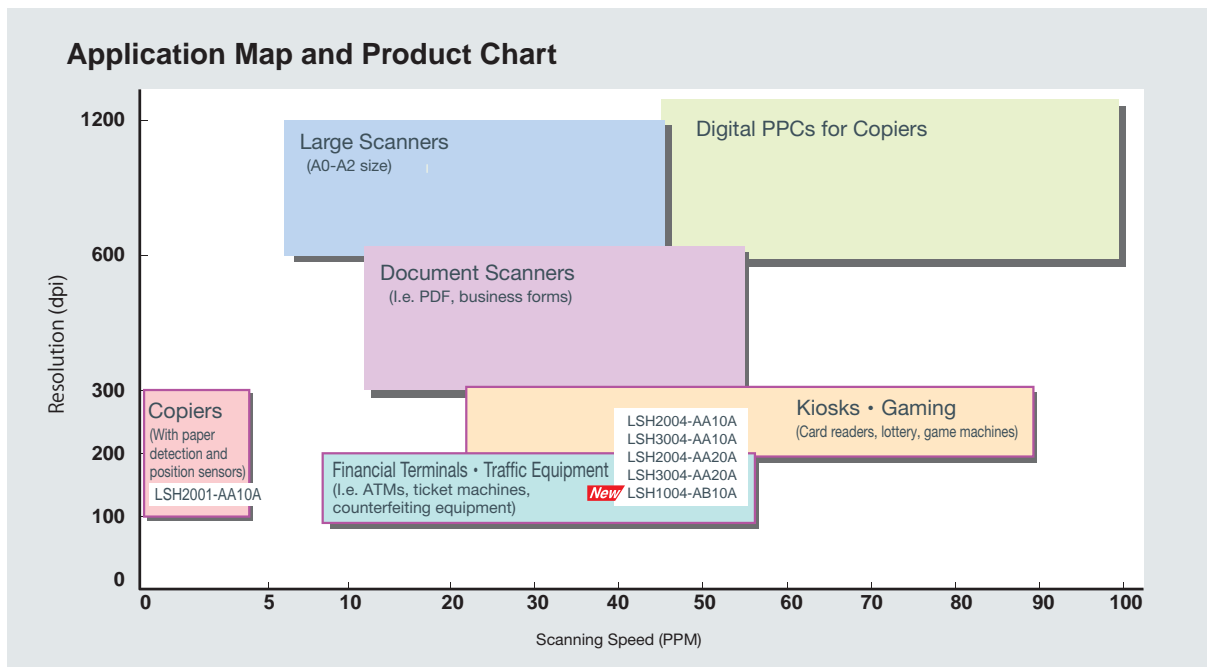


Contact Image Sensor Heads

for Financial and KIOSK Terminals

ROHM's contact image sensor heads lineup is available in both ceramic and glass epoxy substrates. The series is optimized for reading A6-sized media or smaller and utilizes a high reliability ceramic substrate. Additional features include fast read speed (1000mm/s) and bi-directional reading capability, enabling greater design flexibility. Multiple sizes are available (1 inch, 2 inch, 4 inch), making them ideal for different light sources and resolutions.

Select between center and side connection configuration based on design requirements.



- Position Detection
- Portable Reading



1 inch

☆Under development

- ID Card Reading
- Ticketing



2 inch

- Ticketing
- Lottery



4 inch

Effective Scan Width

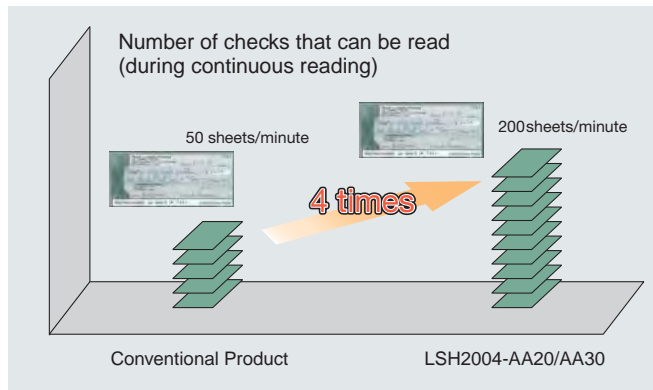
We can develop custom Contact Image Sensor Heads that meet virtually any requirements. Please inquire at your nearest ROHM sales office.

High-speed Reading Capability

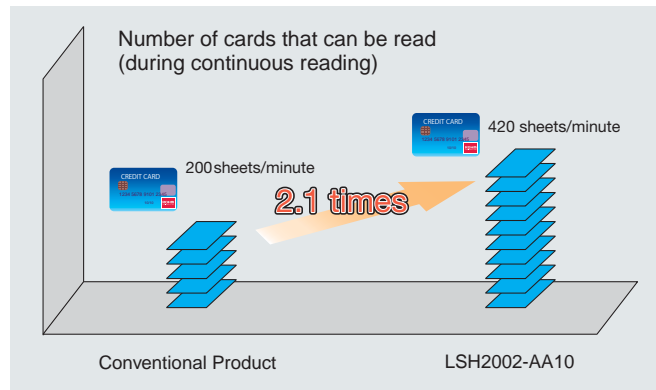
An optical sensor, developed using advanced technology, combined with a unique prism structure, are utilized for ultra-fast reading capability.

■ Dramatically increased read frequency

Check Reader CIS (4-inch Type)



Card Reader CIS (2-inch Type)

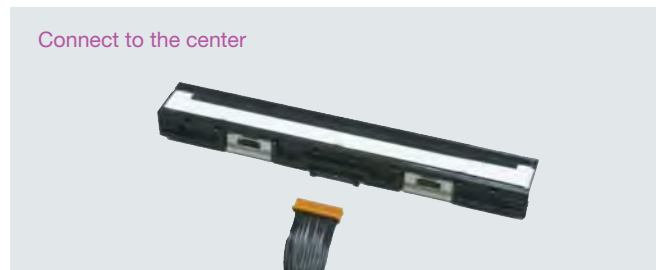


Rapid reading capability makes this an ideal solution for financial terminals such as those in banks where fast processing is needed.

- Improves the security of card-based authentication systems.
- Rapid card reading functionality decreases wait time.

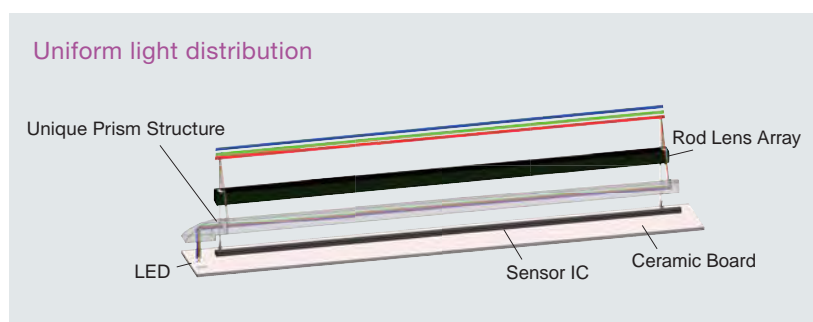
■ Customizable interface

ROHM's proprietary compact (4in) direct-mount ceramic sensors are offered in side and center connection configurations, improving design freedom.



■ Unique structure for fast reading

A sensor IC and LED are mounted on the same substrate, while a unique prism structure minimizes light loss, increasing scanning density, resulting in precise reading.

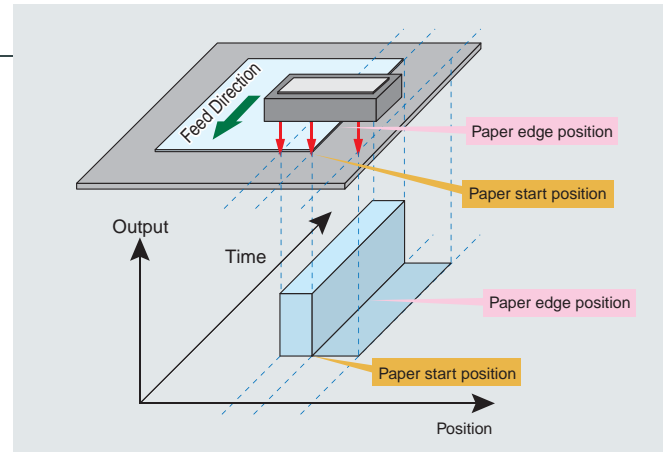


Ideal for a variety of applications

Contact image sensor heads are able to read objects with a greater level of precision than conventional photointerrupters, making them ideal for determining the paper position, surface conditions, and more.

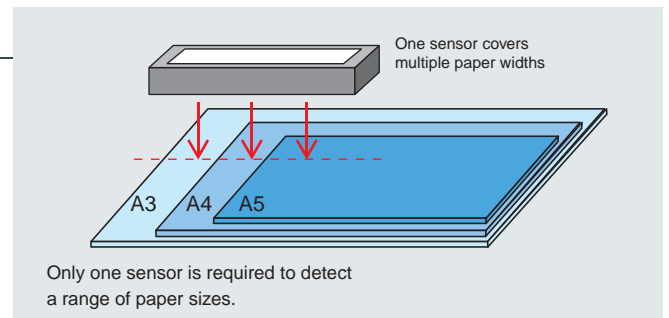
Paper position

Contact image sensor heads are capable of detecting the paper position, including the edge. Both the starting location and paper feed angle can be controlled. In addition, ultra-high accuracy is ensured: 84.7µm (max.) at 300dpi.



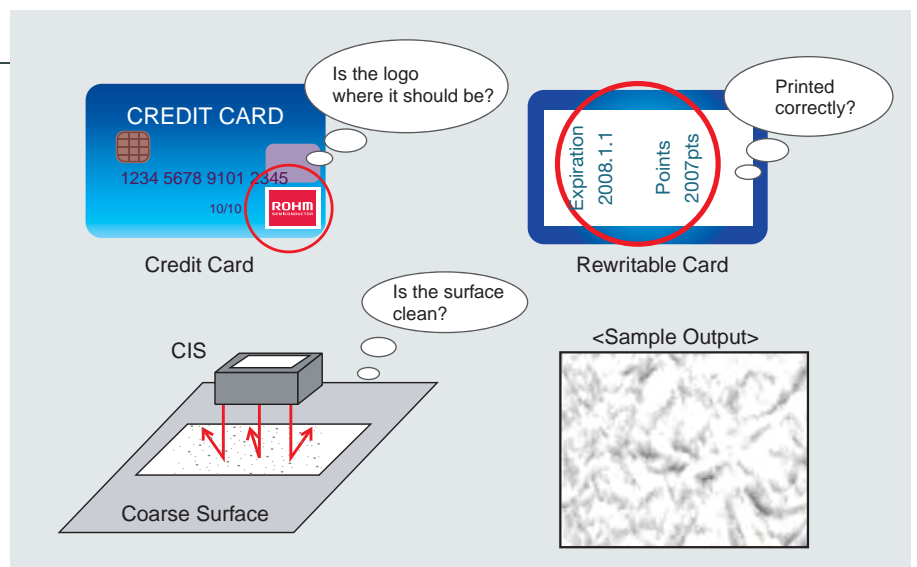
Paper recognition

Determine the size of a sheet of paper with a single contact image sensor heads. Even works on colored paper if a color light source is used. Also compatible with special sizes (provided they are within the reading range).



Surface detection

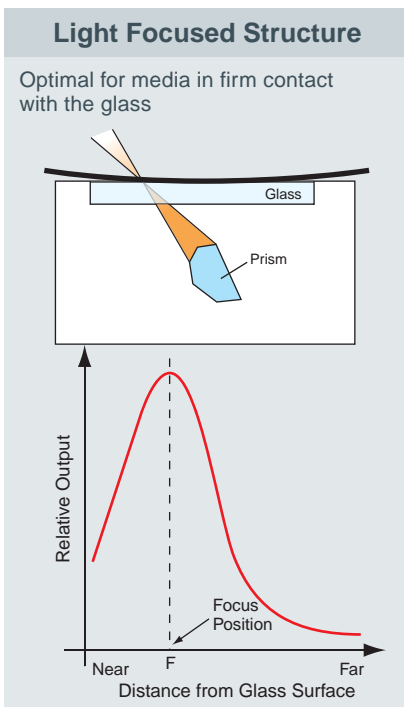
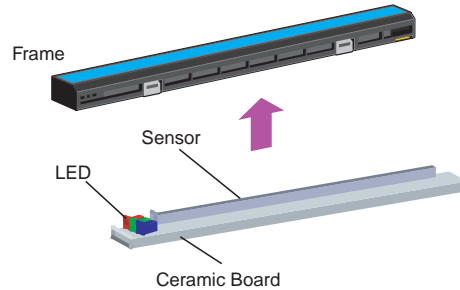
ROHM CIS products expand the range of applications to include reading the surface condition of paper sheets, cards for authenticity, and finished goods for specific information.



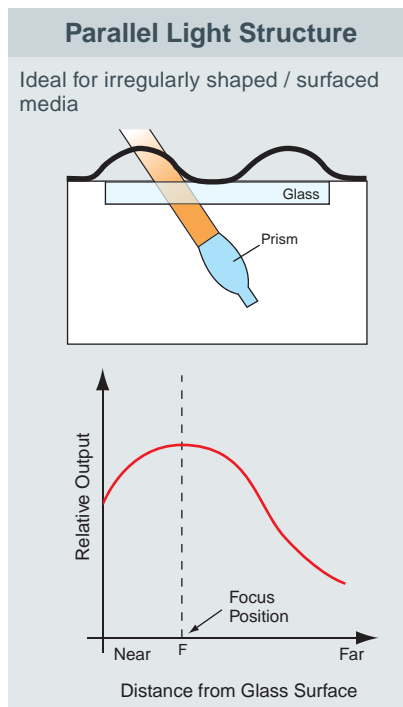
Contact image sensor heads can also be used to determine whether a label is good or bad by verifying the surface condition.

Unique structure utilized for a wide operating temperature range

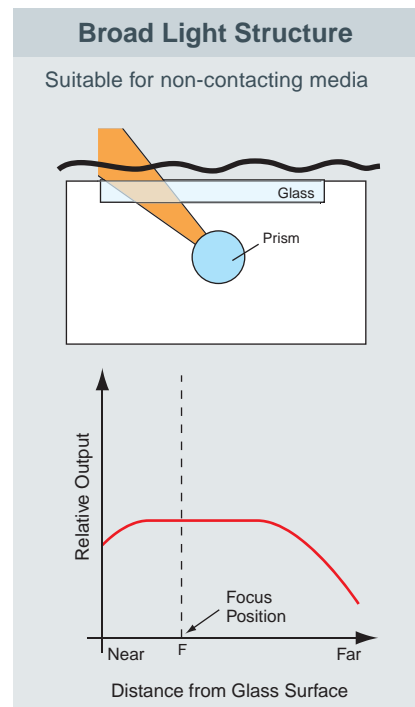
The LED light source and sensor IC are mounted on a ceramic substrate with a small thermal expansion coefficient. In addition, the sensor IC is customized to ensure stable operation under a wide range of temperatures.



Efficiently focuses light from the LED integrated on the substrate. Ideal for media in firm contact with the glass.



Light is reflected by the media at a 90 degree angle from the LED, which is mounted at the edge of the substrate.



The media is exposed to a broad array of light, making it suitable for media not in contact with the glass (i.e. in double-sided scanning applications).



Copiers

Stable operation is ensured even under high-temperature environments (i.e. in high-traffic office equipment or large machinery containing an internal heat source).



ATMs

Outdoor and unattended machines such as ATMs must continue to operate under a wide range of temperature conditions, from extreme hot to extreme cold.

Product Specifications

AA Series <Built-in type>

Part No.	Resolution (dpi)	Effective Scanning Width (mm)	Total Pixels (pixels)	Pixel Clock (MHz)	Scanning Speed (ms/Line)	Dynamic Range Max.(V)	Logic Voltage (V)	*Light Source Input Voltage (V)	Light Source Type	Output Type	RoHS
LSH2001-AA10A	200	16.25	144	8	0.1	1.0	3.3	5	R	1ch	Yes
LSH2004-AA10A	203	104	864	1.25	0.4	0.5	5	24	YG	1ch	Yes
LSH3004-AA10A	300	103	1216	2.5	0.5	0.5	5	24	YG	1ch	Yes
LSH2002-AA10A	200	54	432	4	0.2 × 3	0.5	3.3	7	RGB	1ch	Yes
LSH2004-AA20A	200	104	864	8	0.125 × 3	0.5	3.3	7	RGB	1ch	Yes
LSH2004-AA30A	200	104	864	8	0.125 × 3	0.5	3.3	7	RGB	1ch	Yes
LSH3004-AA20A	300	104	1296	5	0.28 × 3	0.5	3.3	7	RGB	1ch	Yes

* : Current control resistor must be mounted in set.

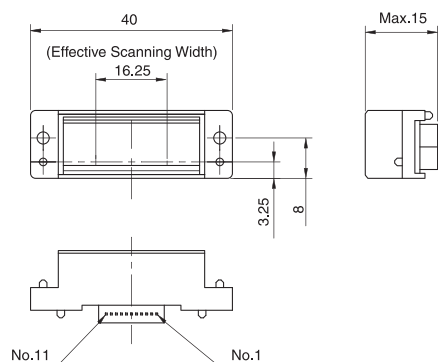
AB Series <Built-in type>

Part No.	Resolution (dpi)	Effective Scanning Width (mm)	Total Pixels (pixels)	Pixel Clock (MHz)	Scanning Speed (ms/Line)	Dynamic Range Max.(V)	Logic Voltage (V)	*Light Source Input Voltage (V)	Light Source Type	Output Type	RoHS
New LSH1004-AB10A	100	100	432	4	0.4 × 2	0.5	3.3	7	IR, R	1ch	Yes

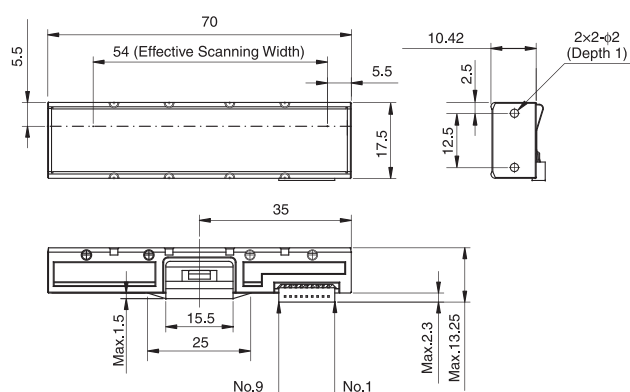
* : Current control resistor must be mounted in set.

Dimensions (Unit : mm)

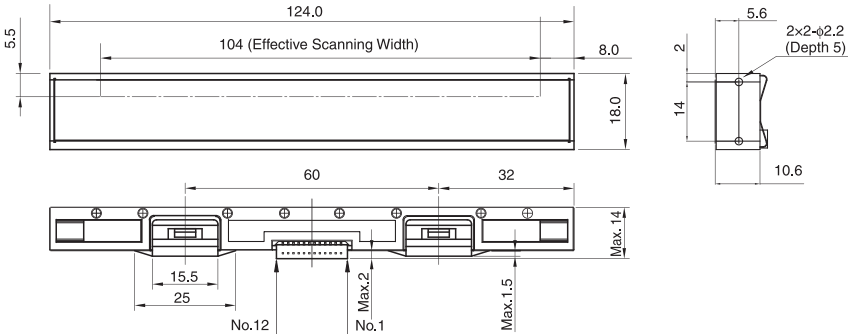
LSH2001-AA10A



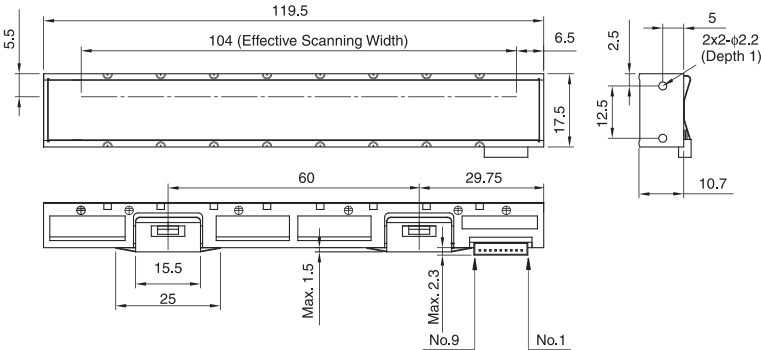
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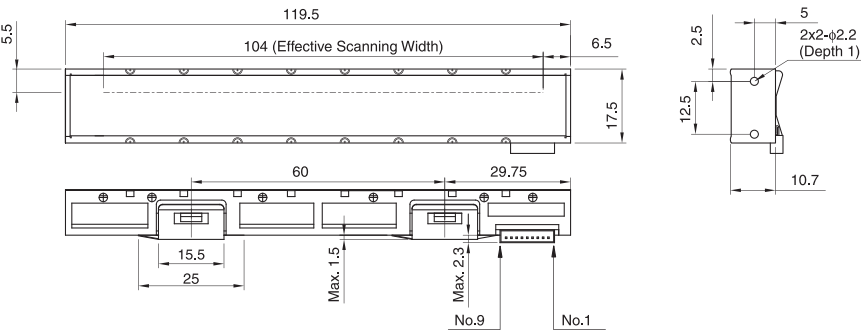
LSH2004-AA30A



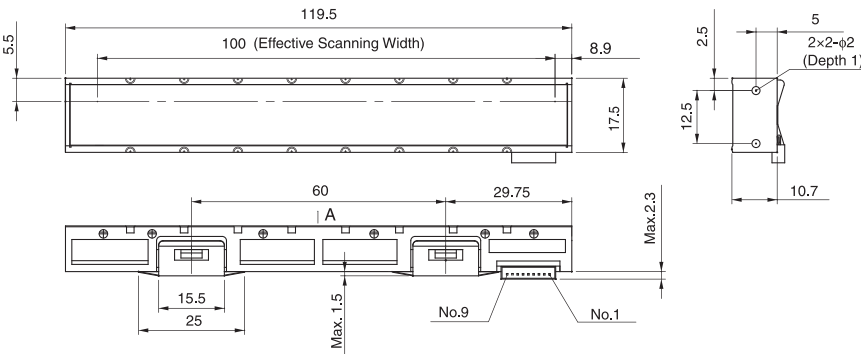
LSH2004-AA10A
LSH3004-AA10A



LSH2004-AA20A
LSH3004-AA20A



LSH1004-AB10A



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Contact us for further information about the products.

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