

# Color image sensor heads for multi-function IA6008-FA22A

“Color contact image sensor” with optical system intended for Flatbed scanning. Optical technology established for sheet-feed scanning has been further advanced for Flatbed scanning.

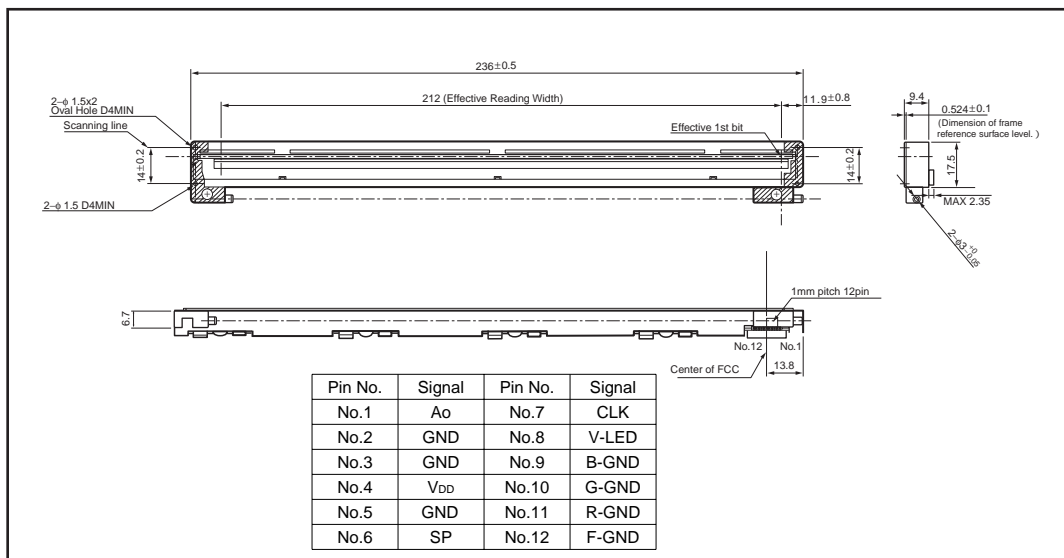
## ●Applications

Image sensor heads device for multiple function facsimiles such as color scanner and multiple function printer.

## ●Features

- 1) Signal amplifier is built in to the image sensor IC in order to increase immunity to external noise.
- 2) Additionally, newly developed analog memory circuit and realizes high speed scanning.
- 3) The LED light source is mounted on the same substrate as the sensor chip which makes it possible to package the device with lighter weight and an extremely small size.
- 4) With the proprietary prism, the output signal is maintained uniformly.
- 5) The ceramic substrate is used for excellent dimensional accuracy and thermal stability.

## ●External dimensions (Unit : mm)



## Contact image sensor heads

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### ●Characteristics

| Parameter                | Symbol             | Typ.        | Unit      |
|--------------------------|--------------------|-------------|-----------|
| Effective scanning width | –                  | 212         | mm        |
| Primary scan dot density | –                  | 600         | dpi       |
| Total dot number         | –                  | 5160        | dots      |
| Power supply voltage     | V <sub>DD</sub>    | 5           | V         |
| Scanning speed           | SLT                | 6.6         | ms / line |
| Clock frequency          | CLK                | 1.25        | MHz *     |
| Maximum dynamic range    | VR <sub>max</sub>  | 0.5         | V         |
| Minimum dynamic range    | VR <sub>mim.</sub> | 0.25        | V         |
| Dark output              | V <sub>od</sub>    | 1.73 ± 0.45 | V         |
| Operating temperature    | –                  | 5 to 45     | °C        |

\*Analog signals are output at the double rate of clock frequency.

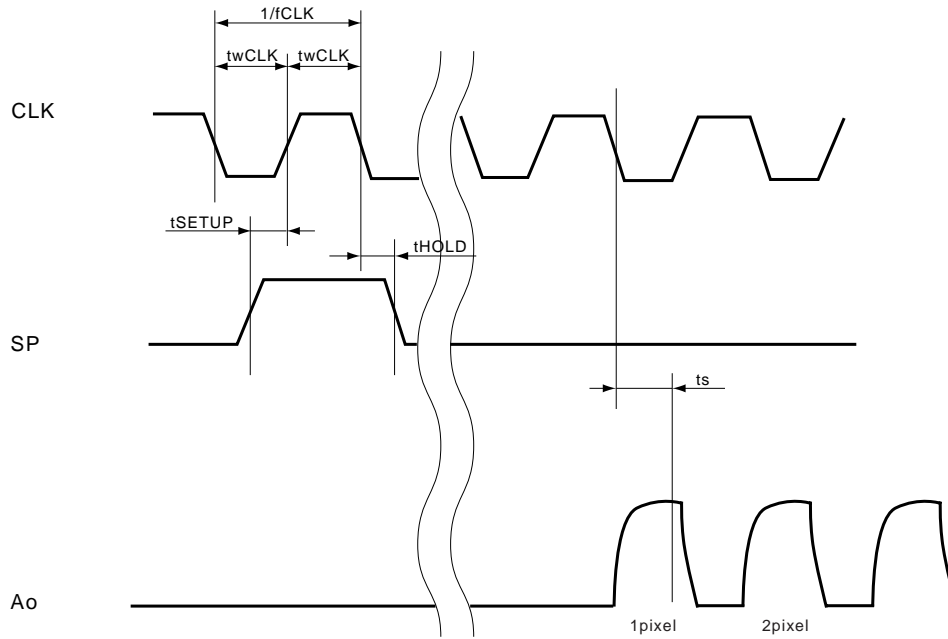
### ●Pin assignments

| No. | Circuit         | I / O | Function         |
|-----|-----------------|-------|------------------|
| 1   | A <sub>o</sub>  | O     | Analog output    |
| 2   | GND             | I     | Ground           |
| 3   | GND             | I     | Ground           |
| 4   | V <sub>DD</sub> | I     | Power supply     |
| 5   | GND             | I     | Ground           |
| 6   | SP              | I     | Start pulse      |
| 7   | CLK             | I     | Clock            |
| 8   | V-LED           | I     | LED power supply |
| 9   | B-GND           | I     | BLUE LED ground  |
| 10  | G-GND           | I     | GREEN LED ground |
| 11  | R-GND           | I     | RED LED ground   |
| 12  | F-GND           | I     | Frame ground     |

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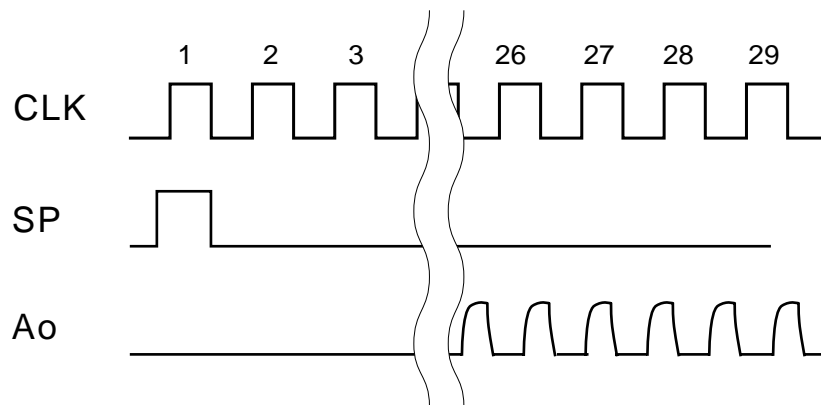
●Timing chart

(a) CLK Timing Chart



(b) Data Output Timing Chart

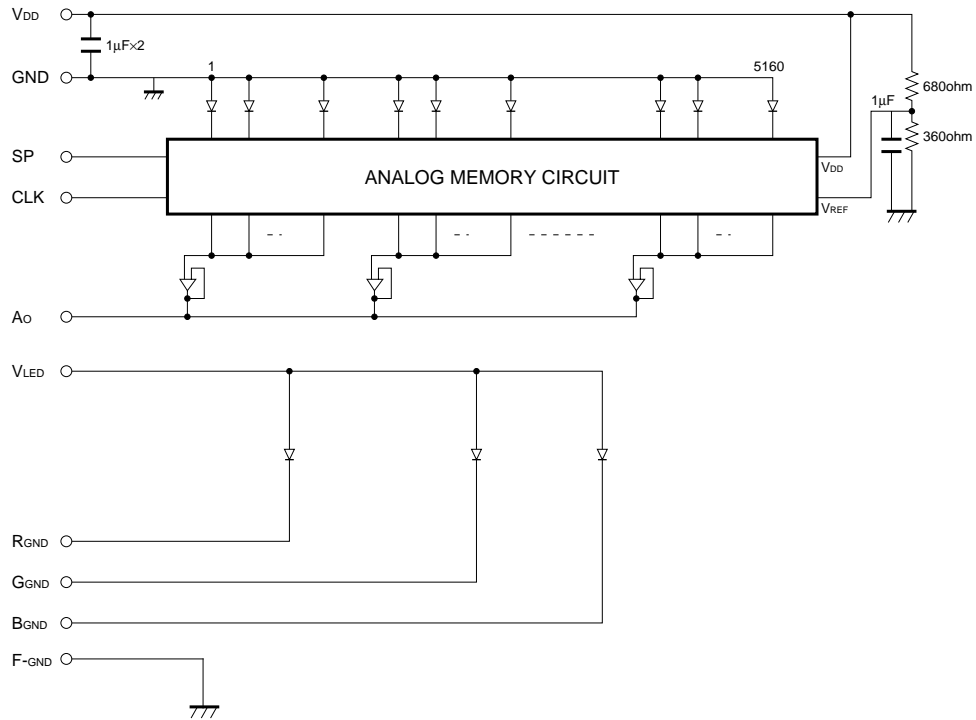
After turning on the SP pulse, the analog output starts from the setting up point of 27 clock pulse.



Note) The CLK section area which is over the effective pixel numbers (Output blank part) cannot be used as the analog Output standard level.

Contact image sensor heads

●Equivalent circuit



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