

# Image sensor heads for narrow-width scanners

## IA3004-ME10A

Equipped with the sensor chips that have built-in analog memory, this compact color image sensor head is suitable for any scanning applications that require rapid scanning of widths of up to A6. It best fits into the photographic applications.

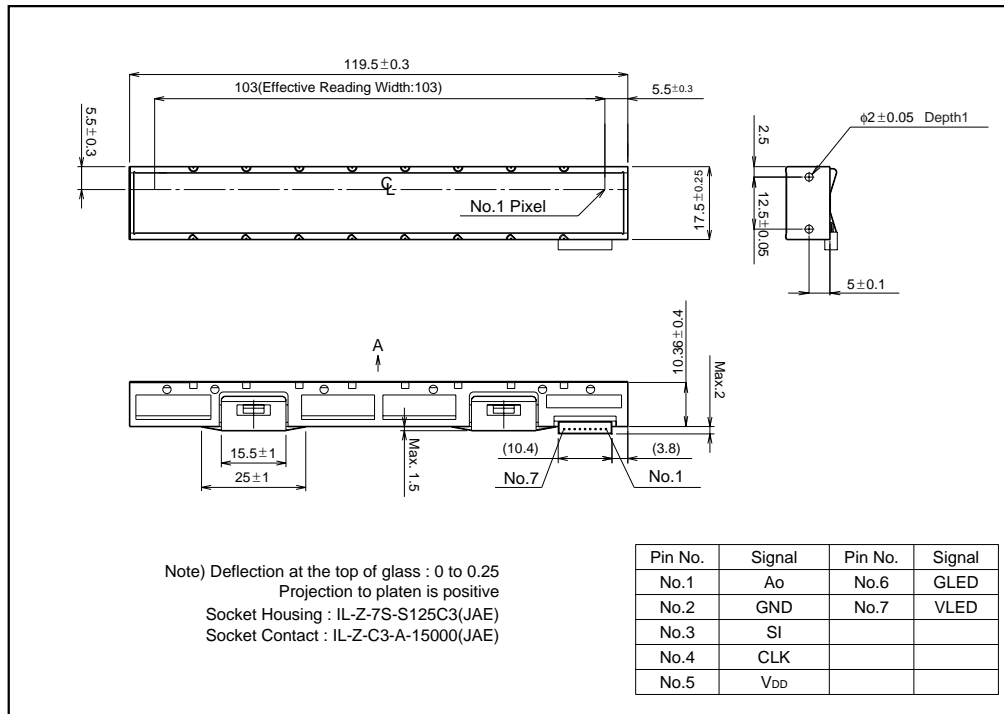
### ●Applications

Check readers, card scanners, and a variety of other image input devices.

### ●Features

- 1) By integrating the signal amplifier on the sensor chip, external noise is shut out. Additionally, newly developed analog memory circuit and realizes high speed scanning.
- 2) 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.
- 3) With the proprietary prism(reflectors), the output signal is maintained uniformly.
- 4) The ceramic substrate is used for excellent dimensional accuracy and thermal stability.  
Variation and maximize the image re-productivity.

### ●External dimensions (Unit : mm)



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### ●Characteristics

| Parameter                | Symbol          | Typ.    | Unit      |
|--------------------------|-----------------|---------|-----------|
| Effective scanning width | –               | 103     | mm        |
| Primary scan dot density | –               | 300     | dpi       |
| Total dot number         | –               | 1216    | dots      |
| Power supply voltage     | V <sub>DD</sub> | 5       | V         |
| Scanning speed           | SLT             | 0.5     | ms / line |
| Clock frequency          | CLK             | 2.5     | MHz       |
| Maximum dynamic range    | VRMax.          | 0.5     | V         |
| Minimum dynamic range    | VRMin.          | 0.25    | V         |
| Dark output              | V <sub>od</sub> | 1.0±0.4 | V         |
| Operating temperature    | –               | 5 to 45 | °C        |

### ●Pin assignments

| No. | Circuit         | I / O | Functions        |
|-----|-----------------|-------|------------------|
| 1   | Ao              | O     | Analog output    |
| 2   | GND             | I     | Ground           |
| 3   | SI              | I     | Serial-in        |
| 4   | CLK             | I     | Clock            |
| 5   | V <sub>DD</sub> | I     | Power supply     |
| 6   | G-LED           | I     | LED ground       |
| 7   | V-LED           | I     | LED power supply |

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●Timing chart

(a) CLK Timing Chart

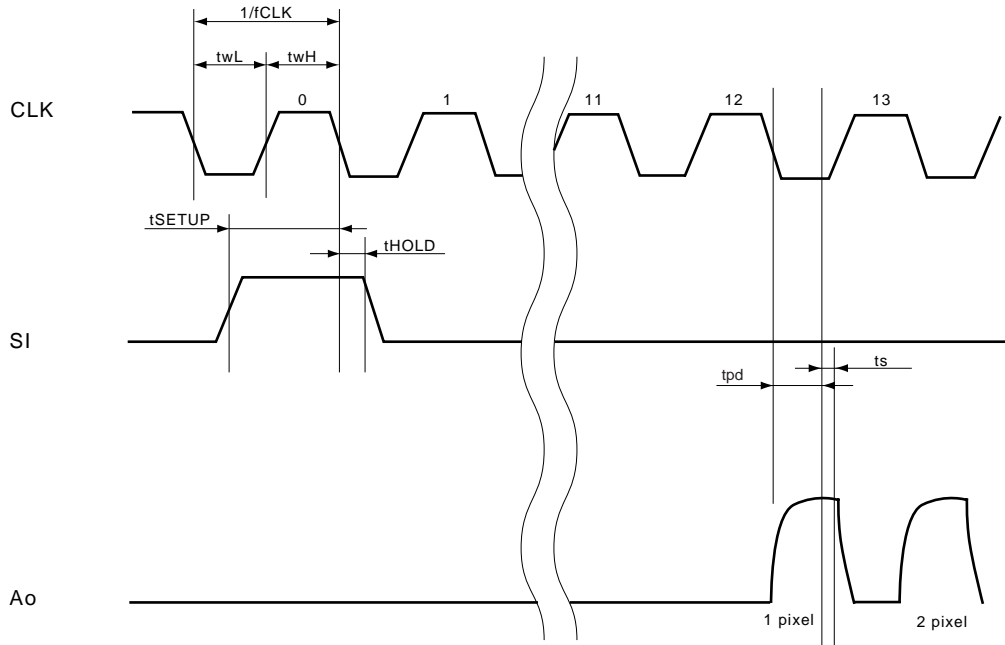
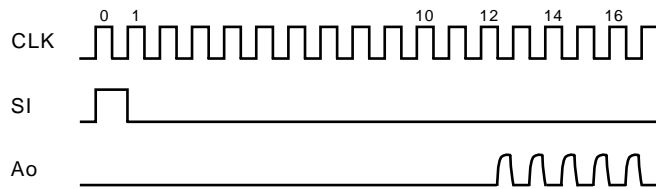


Fig.1

(b) Data Output Timing Chart

After turning on the SI pulse, the analog output shape starts from the setting up point of 12 clock pulse.



Note) Output blank part cannot be used as the analog output standard level.

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●Equivalent circuit

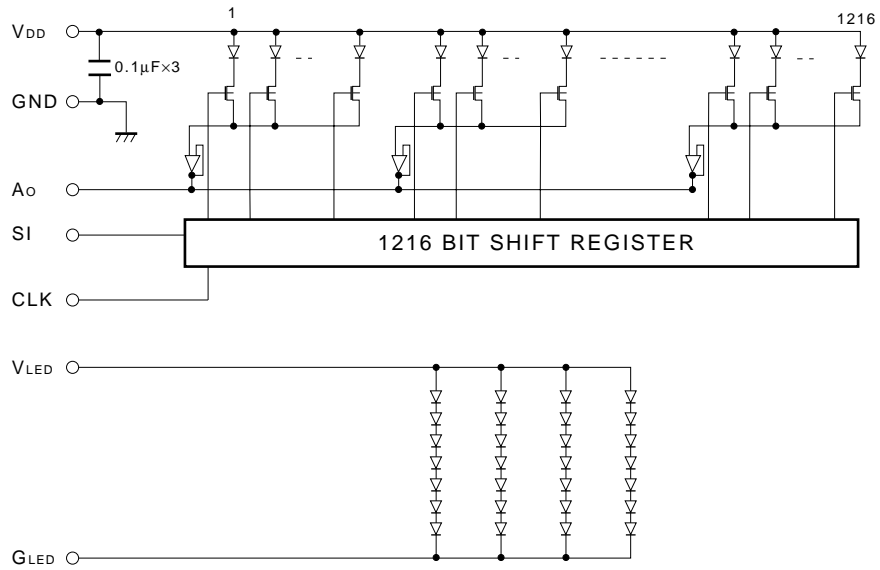


Fig.2

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