

Color image sensor head (300 dpi)

IA3008-CA10A

The IA3008-CA10A is a color image sensor head that uses LED chips of the three colors red, green, and blue. Through the use of ROHM's further improvements in optical technologies and LSI circuit designing, the IA3008-CA10A provides excellent color reproducibility and noise resistance and has taken its place as the industry's highest level compact and lightweight image sensor head.

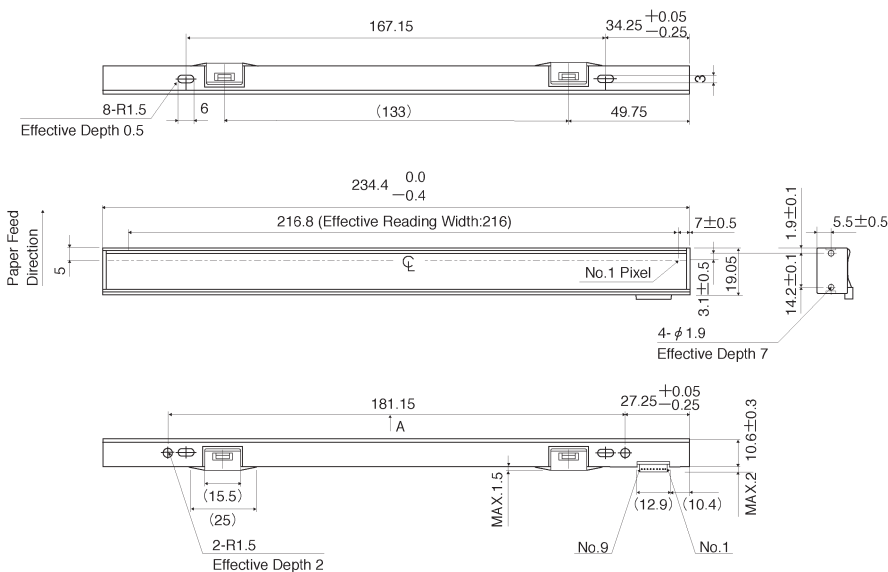
●Applications

Color scanners
Multi-function printers (MFPs)
Image scanning devices

●Features

- 1) Each sensor IC is equipped with a built-in amplifier for greatly increased noise resistance.
- 2) Red, green, and blue LED chips are used for the light source to obtain excellent color reproducibility.
- 3) Uses a single power supply operational amplifier. Operation requires only a single 5 V power supply.
- 4) Uses a ceramic board as the base board for excellent dimensional stability, and excellent stability in optical characteristics.

●External dimensions (Units: mm)



Note:
1. Curvature of glass surface: With the A-direction positive, 0 to 0.22 with respect to the cover glass.
2. The frame material is PC ABS G20.
(Connector parts number)
Socket Housing : IL-Z-9S-S125C3 (JAE)
Socket Contact : IL-Z-C3-A-15000 (JAE)

| Pin No. | Signal | Pin No. | Signal |
|---------|--------|---------|--------|
| No. 1 | Ao | No. 6 | R-GND |
| No. 2 | GND | No. 7 | G-GND |
| No. 3 | SI | No. 8 | B-GND |
| No. 4 | CLK | No. 9 | VLED |
| No. 5 | VDD | | |

●Characteristics

| Parameter | Symbol | Typ. | | Unit |
|--------------------------|-----------------|---------|-----|-----------|
| Effective scanning width | — | 216 | | mm |
| Primary scan dot density | — | 300 | | DPI |
| Total dot number | — | 2560 | | dots |
| Power supply voltage | V _{DD} | 5 | | V |
| Scanning speed | SLT | 9 | 15 | ms / line |
| Clock frequency | CLK | 1.5 | 1 | MHz |
| Maximum dynamic range | VR Max. | 0.8 | 1.5 | V |
| Minimum dynamic range | VR Min. | 0.4 | 0.8 | V |
| Dark output | V _{od} | 1.2±0.6 | | V |
| Operating temperature | — | 5~45 | | °C |

●Pin assignments

| No. | Circuit | I / O | Functions |
|-----|-----------------|-------|------------------|
| 1 | A _O | O | Analog output |
| 2 | GND | I | Ground |
| 3 | SI | I | Serial-in |
| 4 | CLK | I | Clock |
| 5 | V _{DD} | I | Power supply |
| 6 | R-GND | I | LED red ground |
| 7 | G-GND | I | LED green ground |
| 8 | B-GND | I | LED blue ground |
| 9 | VLED | I | LED power supply |

●Timing chart

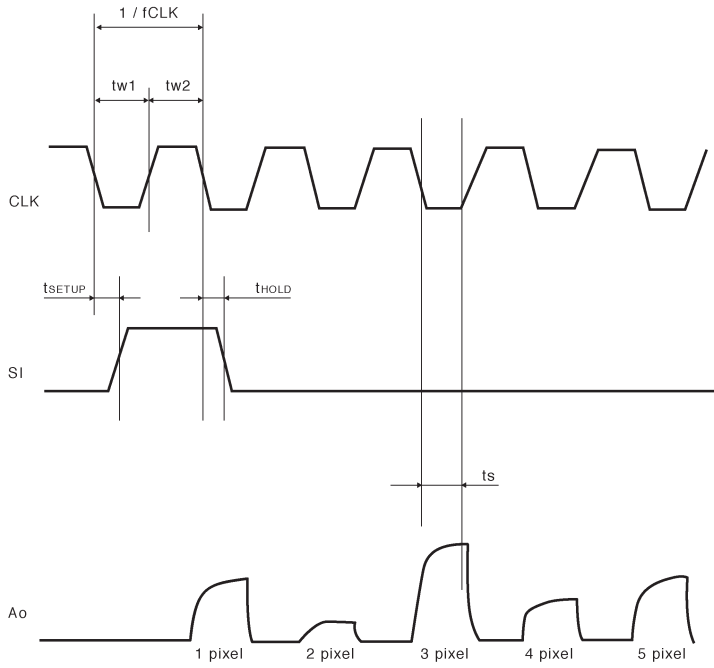


Fig.1

●Equivalent circuit

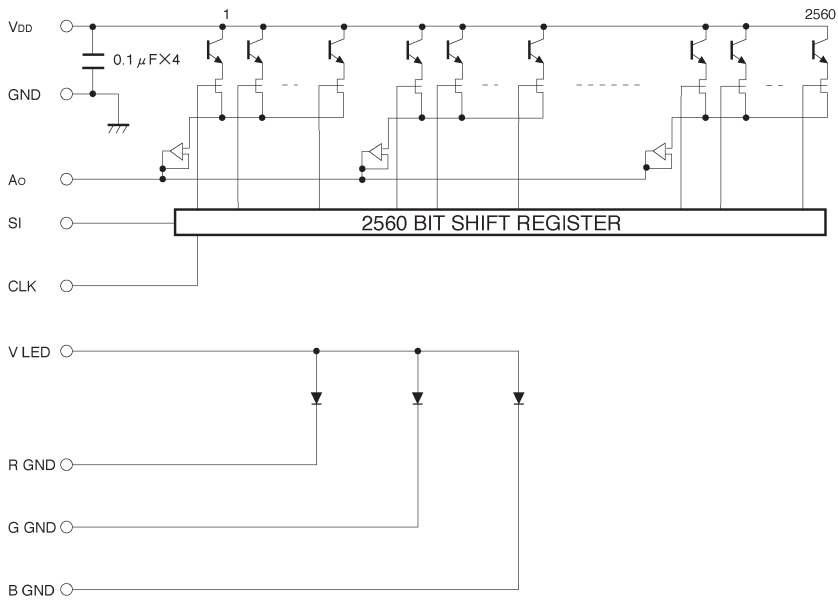


Fig.2