

Color image sensor head (300 dpi)

IG3008-FA10A

The IG3008-FA10A is a 300 dpi color image sensor head that supports flat-bed scanners using cold cathode tubes as the light source. By combining ROHM's LSI circuit technology and photolithographic technology, the color filter has been molded onto the surface of the sensor IC. By using a white light source and simultaneously scanning the three primary colors red, green, and blue, the industry's fastest scanning speed has been achieved.

●Applications

Flat-bed scanners

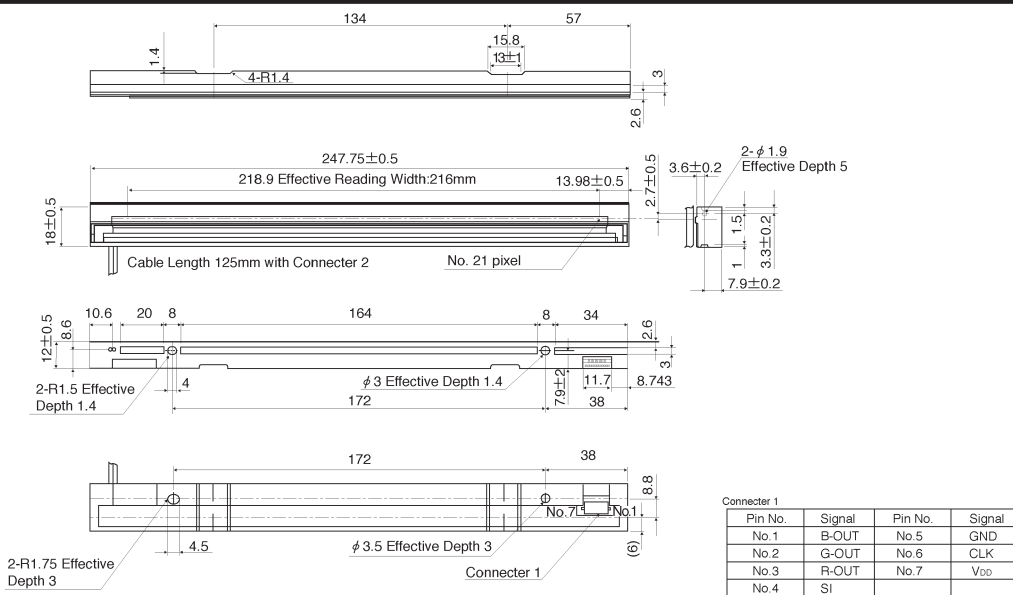
Personal copiers

Image scanning devices

●Features

- 1) Each sensor IC is equipped with a built-in amplifier for greatly increased noise resistance.
- 2) Uses phototransistors equipped with color filters to enable simultaneous scanning of the three primary colors red, green, and blue from a white light source. The result is a scanning speed six times faster than conventional scanning methods, which require constant switching of the light source color.
- 3) The phototransistors equipped with color filters are positioned according to the paper feeding pitch for no color shifting and high quality image scanning.
- 4) Uses a white cold cathode tube as the light source. This results in minimal effects from outside light for high-quality scanning that provides an excellent degree of reproducibility.

●External dimensions (Units: mm)



Note:
Curvature of lens surface: ± 0.15
(Compatible with FPC / FFC connectors) $t = 0.3 \pm 0.05$, 1.25 pitch (with reinforcement plate)
Pin Header: SM02B-BHSS-S-TB (JST)
Socket Housing: BHSR-02VS-1 (JST)

Connector 1

Pin No.	Signal	Pin No.	Signal
No. 1	B-OUT	No. 5	GND
No. 2	G-OUT	No. 6	CLK
No. 3	R-OUT	No. 7	V _{DD}
No. 4	SI		

Connector 2

Pin No.	Signal
No. 1	V _{DD}
No. 2	G _{ND}

●Characteristics

Parameter	Symbol	Typ.	Unit
Effective scanning width	—	216	mm
Primary scan dot density	—	300	DPI
Total dot number	—	2584	dots
Power supply voltage	V _{DD}	5	V
Scanning speed	SLT	2.6	ms / line
Clock frequency	CLK	1	MHz
Maximum dynamic range	VR Max.	2.04	V
Minimum dynamic range	VR Min.	0.68	V
Dark output	V _{od}	0~300	mV
Operating temperature	—	5~45	°C

●Pin assignments

No.	Circuit	I / O	Functions
1	B-OUT	O	Analog output (B)
2	G-OUT	O	Analog output (G)
3	R-OUT	O	Analog output (R)
4	SI	I	Serial-in
5	GND	I	Ground
6	CLK	I	Clock
7	V _{DD}	I	Power supply

●Timing chart

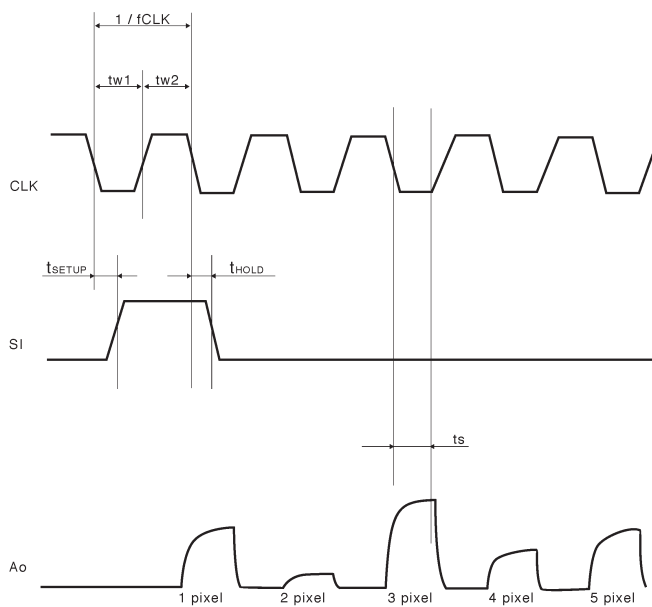


Fig.1

●Equivalent circuit

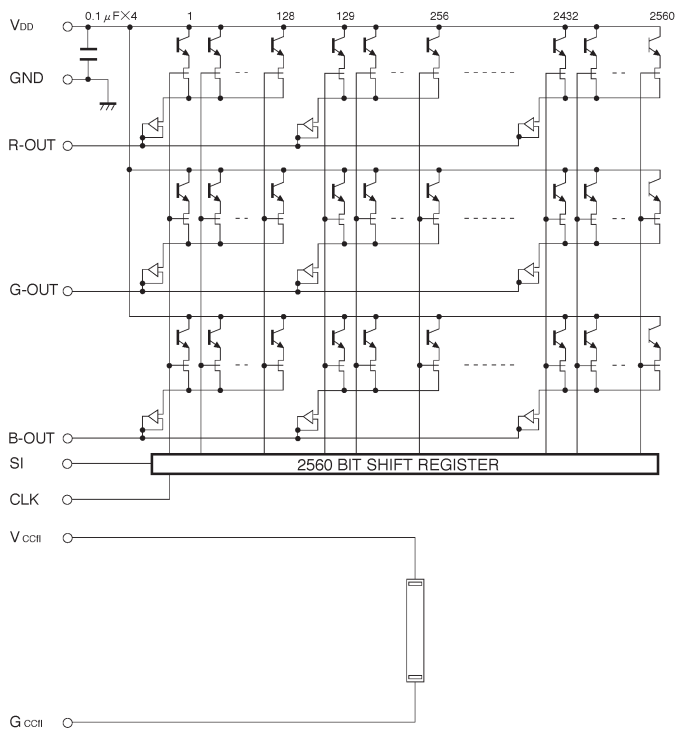


Fig.2