

Color image sensor heads for multi-function IA6008-CA11A

The new compact full color contact image sensor heads are world's smallest in its class and designed to minimize the size and weight of the scanner. The sensor chip used for the CIS is produced with the proprietary technologies of ROHM LSI circuit design and accumulated manufacturing technology of monochrome devices. This product has an excellent color reproduction capability with the high level of noise immunity with the ultra small package. It operates on 3.3 volts power supply.

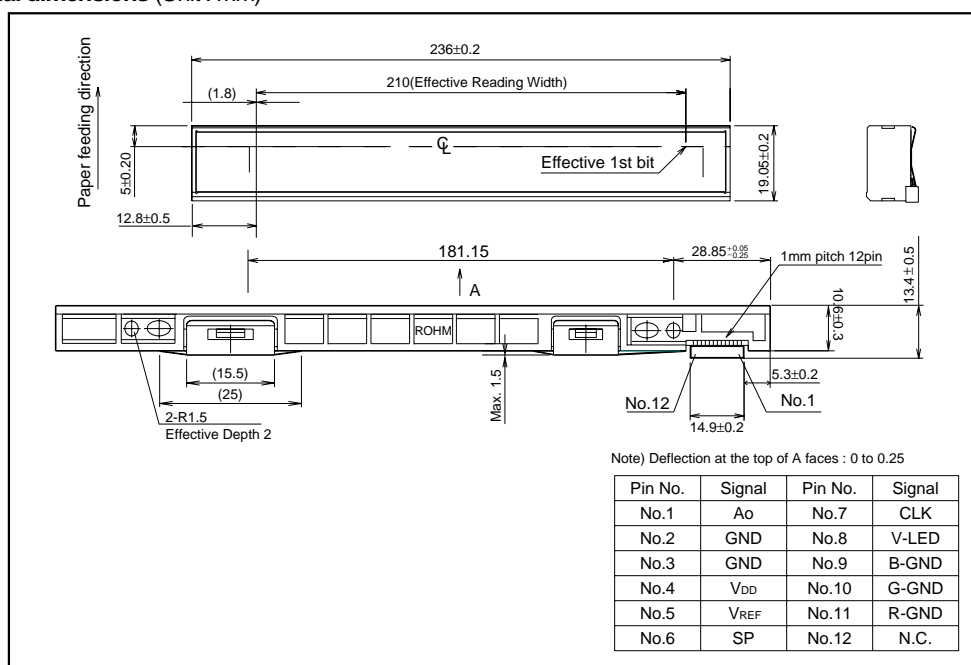
●Applications

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

●Characteristics

Parameter	Symbol	Typ.	Unit
Effective scanning width	—		mm
Primary scan dot density	—	600	dpi
Total dot number	—	5148	dots
Power supply voltage	V _{DD}	3.3	V
Reference voltage	V _{REF}	0.8	V
Scanning speed	SLT	5.1	ms / line
Clock frequency	CLK	3.3	MHz
Maximum dynamic range	VRMax	0.75	V
Minimum dynamic range	VRMim.	0.375	V
Dark output	V _{od}	V _{ref} ± 0.1	V
Operating temperature	—	5 to 45	°C

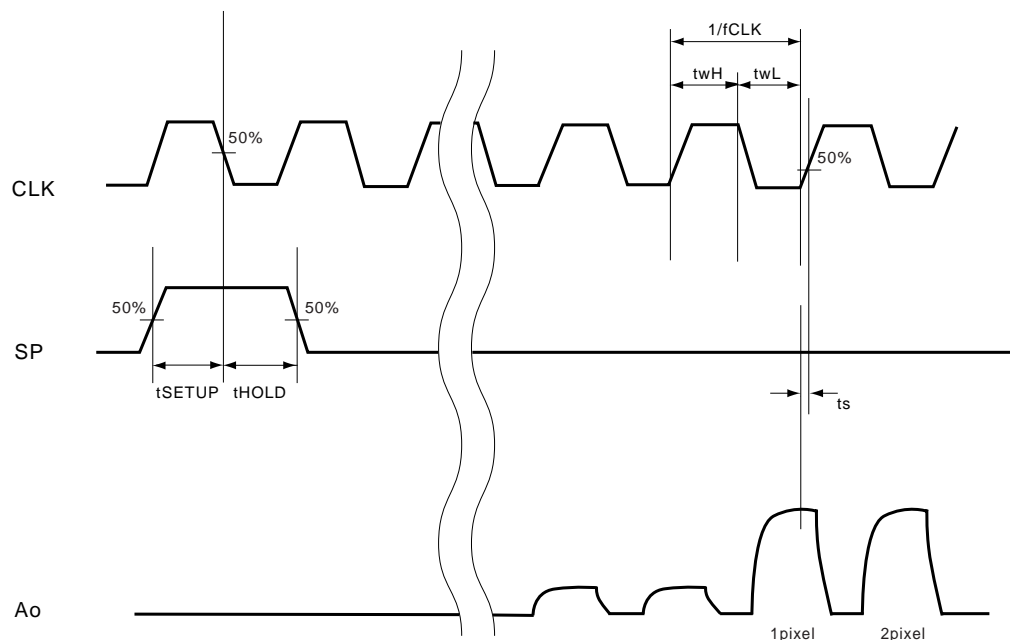
●Pin assignments

No.	Circuit	I / O	Function
1	Ao	O	Analog output
2	GND	I	Ground
3	GND	I	Ground
4	V _{DD}	I	Power supply
5	V _{REF}	I	Reference voltage
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	NC	—	—

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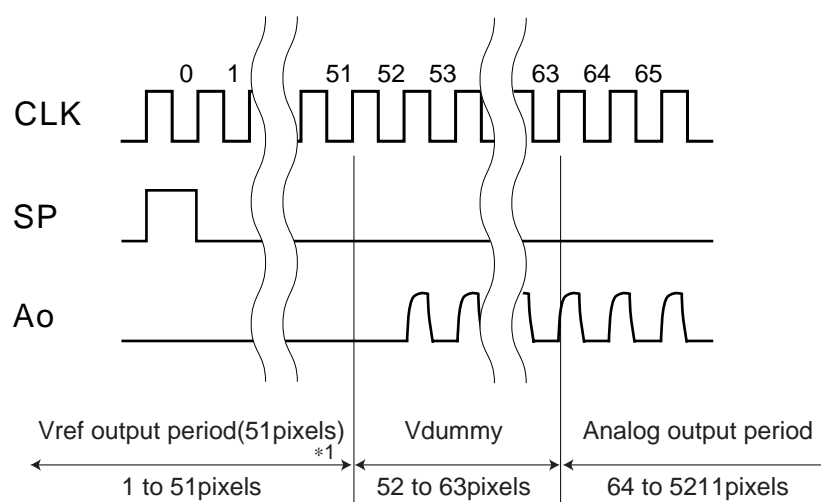
●Timing chart

(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 64 clock pulse.

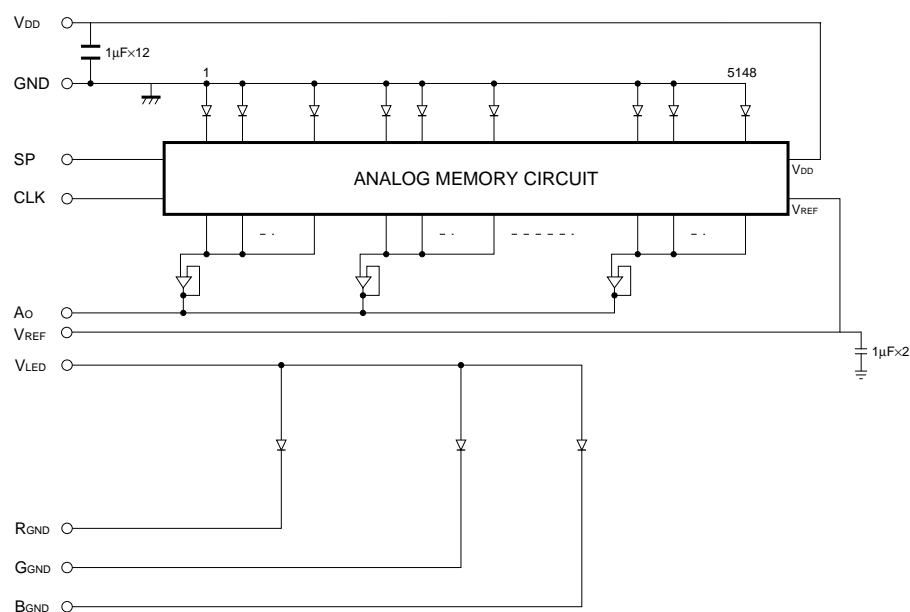


Note)The CLK section area which is over the effective pixel numbers (Output blank part) cannot be used as the analog Output standard level.

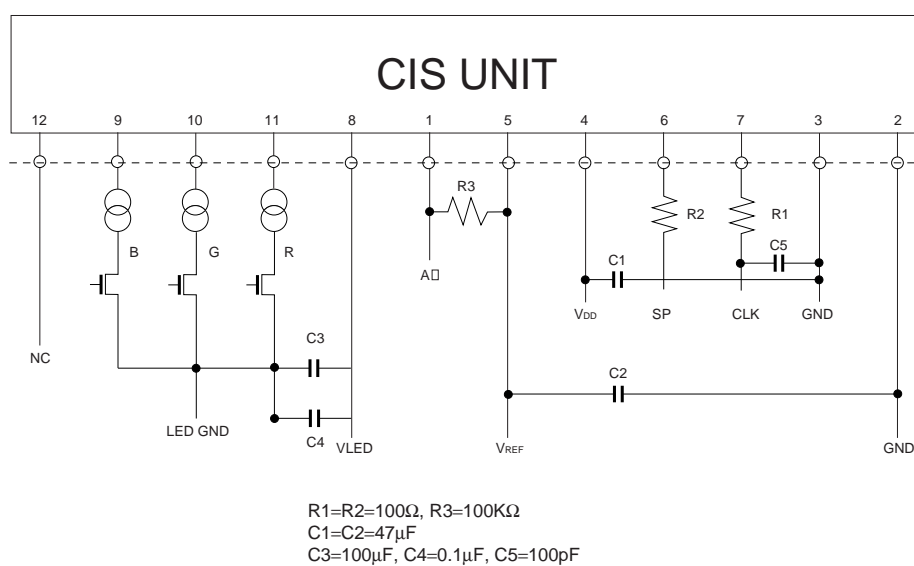
*1 VREF output period is defined by the peripheral circuit in the next page.

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●Circuit diagram



●Peripheral circuit



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