

Color image sensor heads for multi-function IA6008-FB10A

“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. Furthermore, a newly developed sensor with resolution selection function provides more freedom in choosing the adequate optical resolution matching to the application.

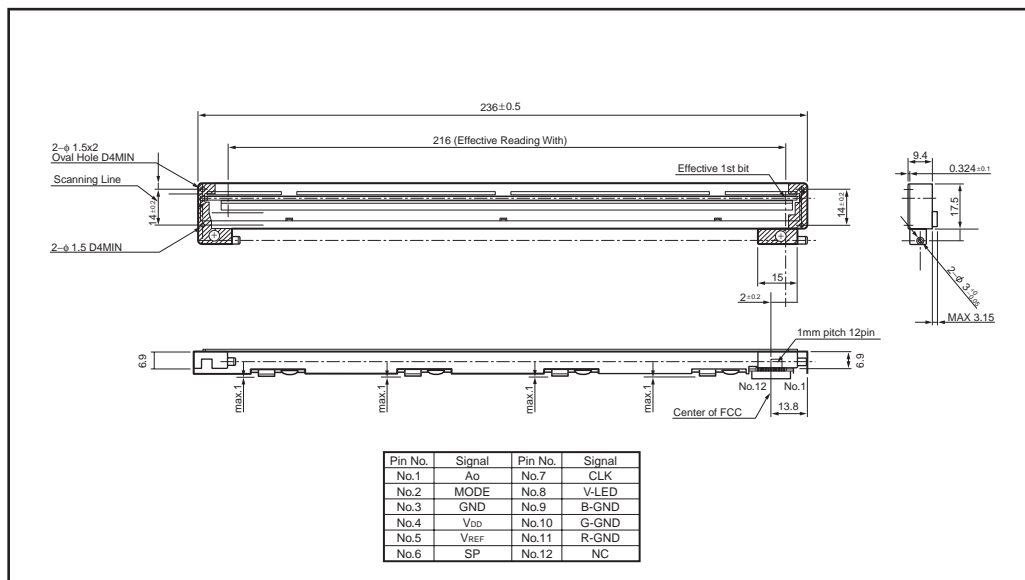
●Applications

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) A low-voltage drive sensor is employed, which runs at 3.3V like ASIC
- 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	–	217	mm
Primary scan dot density	–	600	dpi
Total dot number	–	5184	dots
Power supply voltage	V _{DD}	3.3	V
Reference voltage	V _{REF}	0.8	V
Scanning speed	SLT	4.5	ms / line
Clock frequency	CLK	5	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

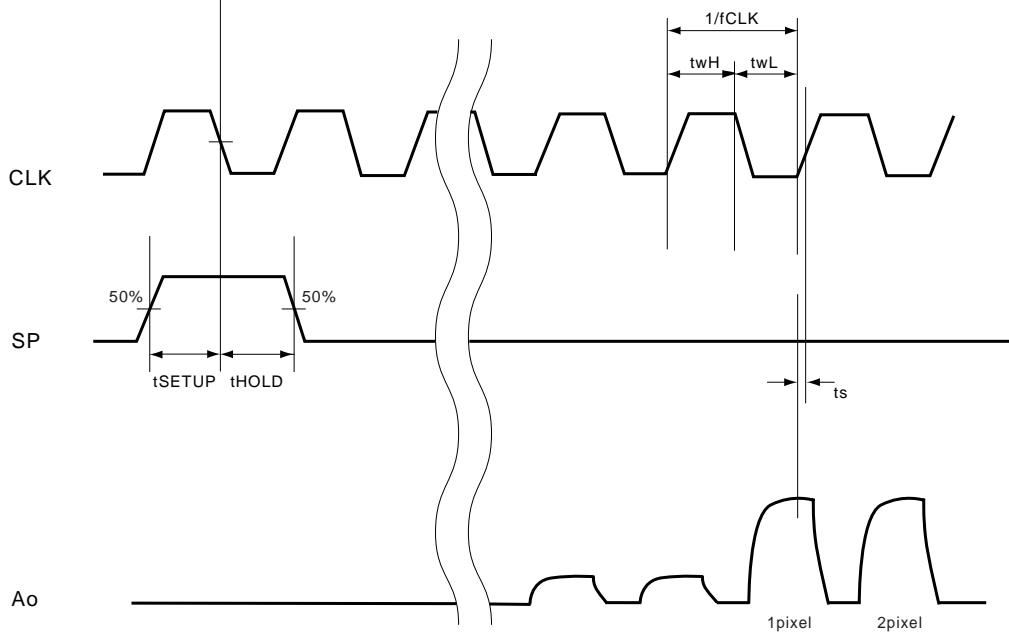
●Pin assignments

No.	Circuit	I / O	Function
1	Ao	O	Analog output
2	MODE	I	Mode select
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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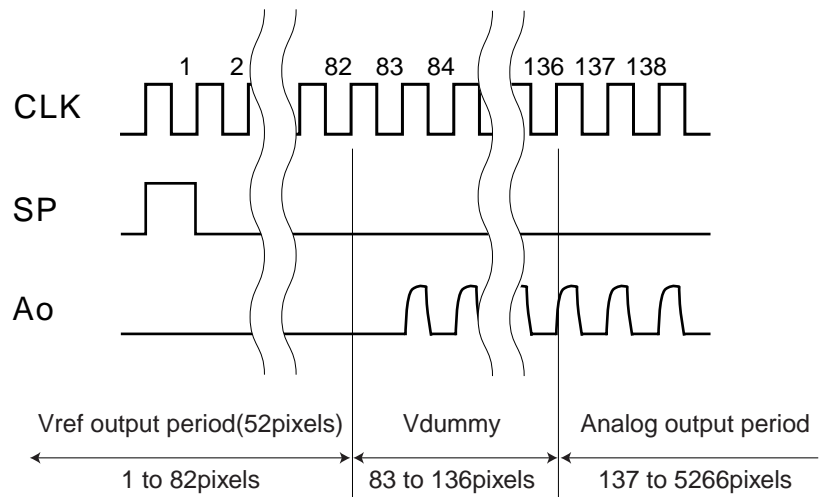
●Timing chart

(a) CLK Timing Chart



(b) Data Output Timing Chart (600dpi mode)

After turning on the SP pulse, the analog output starts from the setting up point of 64 clock pulse.

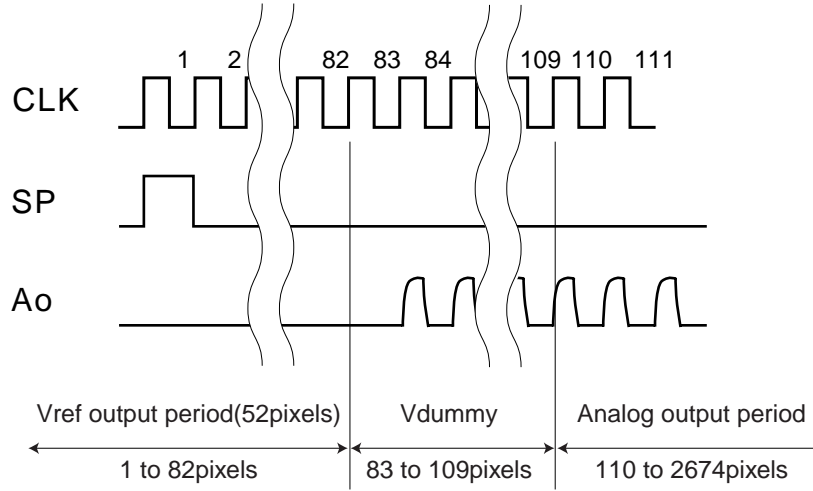


Note)The CLK section area which is over the effective pixel numbers (Output blank part) cannot be used as the analog Output standard level.

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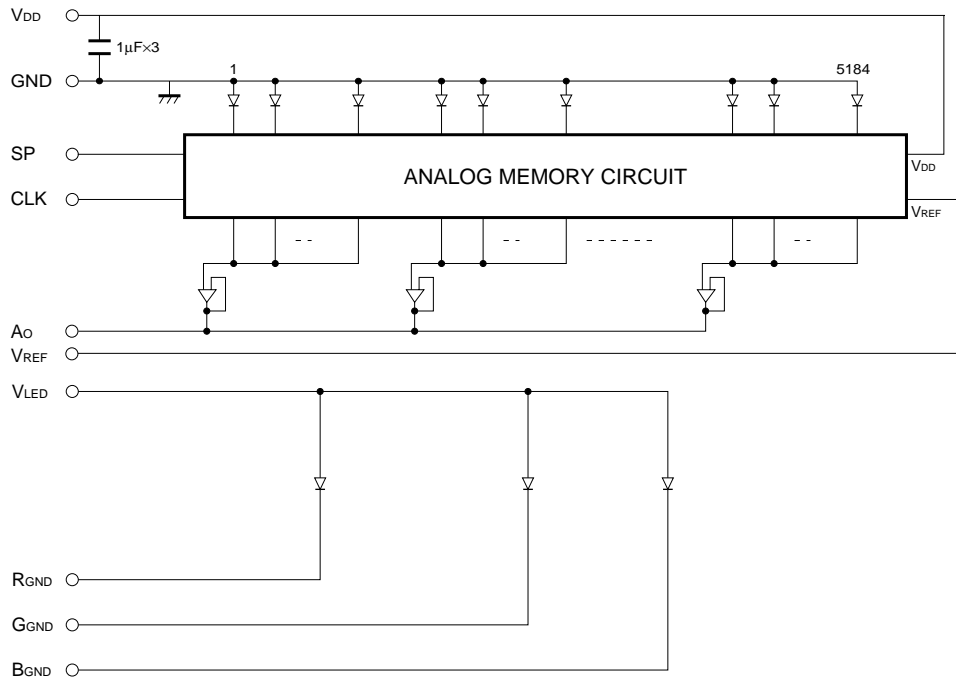
Data Output Timing Chart (300dpi mode)

After turning on the SP pulse, the analog output starts from the setting up point of 64 clock pulse.



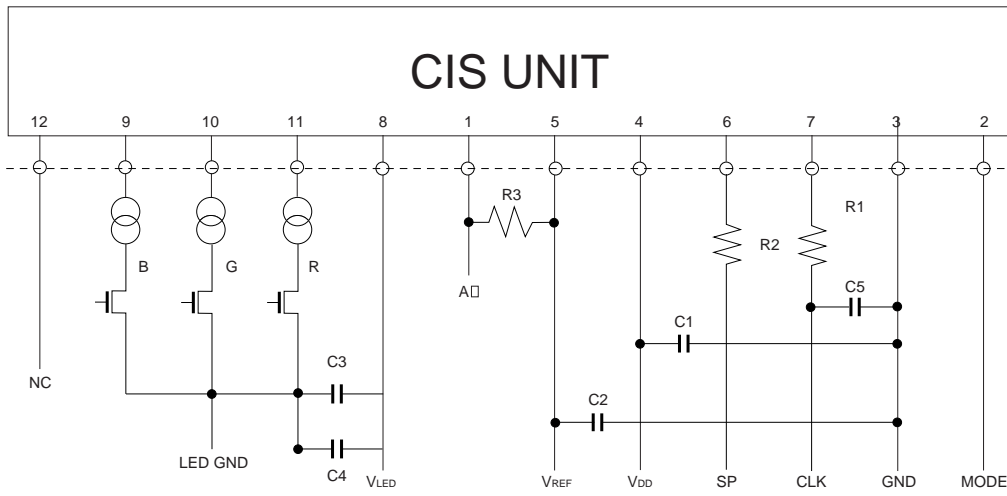
Note)The CLK section area which is over the effective pixel numbers (Output blank part) cannot be used as the analog Output standard level.

●Circuit diagram



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●Peripheral circuit



$R1=R2=100\Omega$, $R3=100K\Omega$
 $C1=C2=47\mu F$
 $C3=100\mu F$, $C4=0.1\mu F$, $C5=100pF$

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