

Color image sensor heads for multi-function

IA1208-FB11A

Flatbed type Color Image Sensor Head, utilizing RGB light source uniquely developed by ROHM.

It utilizes sensor IC with resolution change function, enabling the selection of optical resolution according to the scanning media.

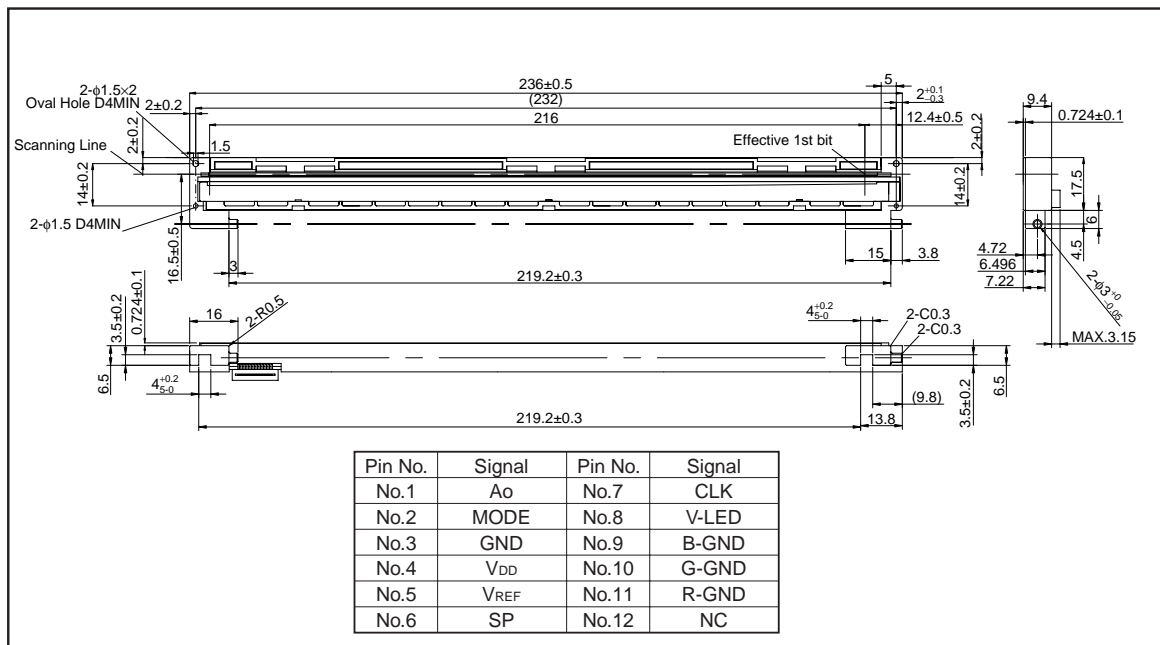
●Applications

Image sensor heads are designed for multi-function equipment such as facsimiles with color scanner or multiple function printers.

●Features

- 1) Signal amplifier is built into the image sensor IC in order to increase immunity to external noise.
- 2) Employing low voltage driving sensor enables 3.3V drive which is identical to the ASIC.
- 3) The LED light source is mounted on the same substrate as the sensor chip which allows packaging of the device with lighter weight and smaller 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	–	216	mm
Primary scan dot density	–	1200	dpi
Total dot number	–	10368	dots
Power supply voltage	V _{DD}	3.3	V
Reference voltage	V _{REF}	0.8	V
Scanning speed	SLT	9.0	ms / line
Clock frequency	CLK	5	MHz
Maximum dynamic range	VR _{Max}	0.75	V
Minimum dynamic range	VR _{Min.}	0.375	V
Dark output	V _{od}	V _{REF} ± 0.1	V
Operating temperature	–	5 to 45	°C

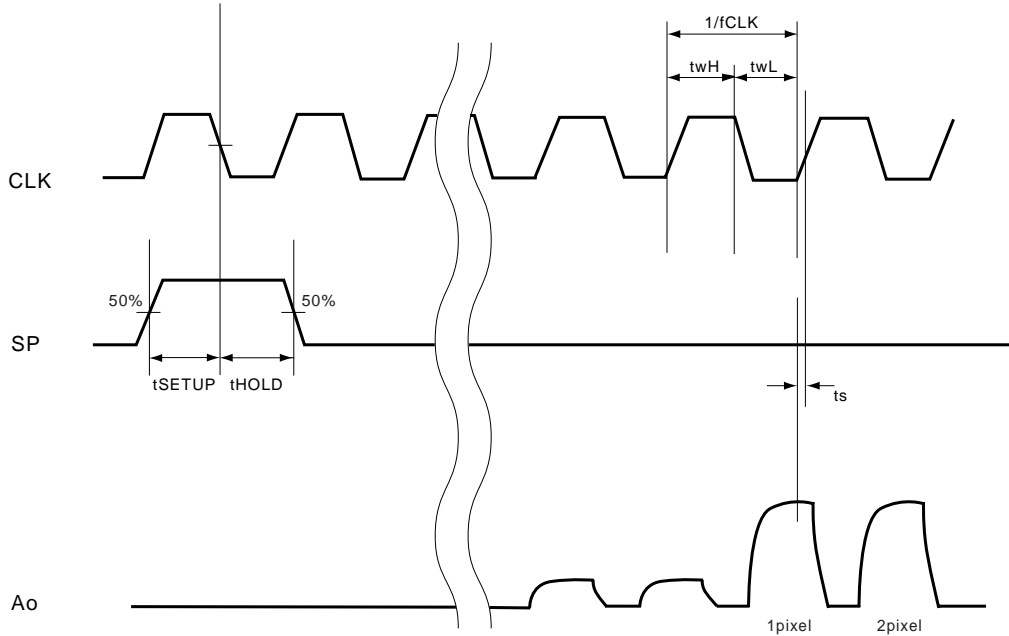
●Pin assignments

No.	Circuit	I / O	Function
1	NC	–	–
2	R-GND	I	RED LED ground
3	G-GND	I	GREEN LED ground
4	B-GND	I	BLUE LED ground
5	V-LED	I	LED power supply
6	SP	I	Start pulse
7	V _{DD}	I	Power supply
8	CLK	I	Clock
9	GND	I	Ground
10	V _{REF}	I	Reference voltage
11	MODE	I	Mode select
12	A _O	O	Analog output

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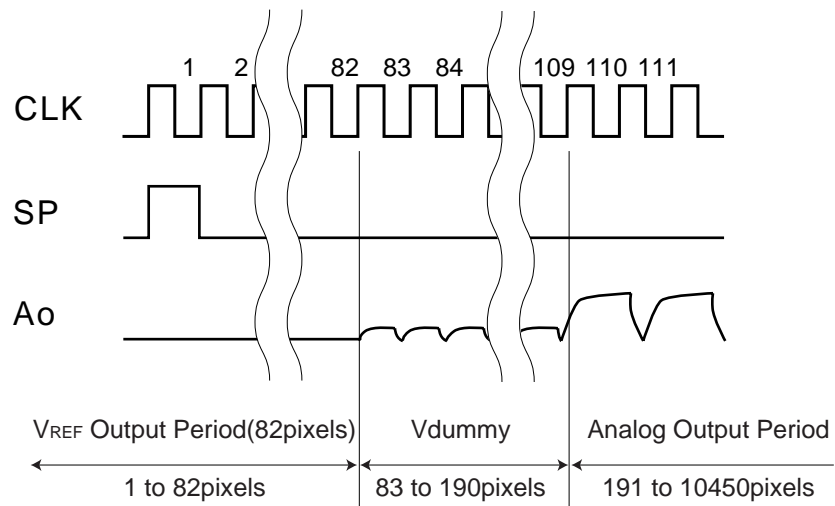
●Timing chart

(a) CLK Timing Chart



(b-1) Data Output Timing Chart (1200dpi mode)

After turning on the SP pulse, the analog output starts from the setting up point of 82 clock pulse.

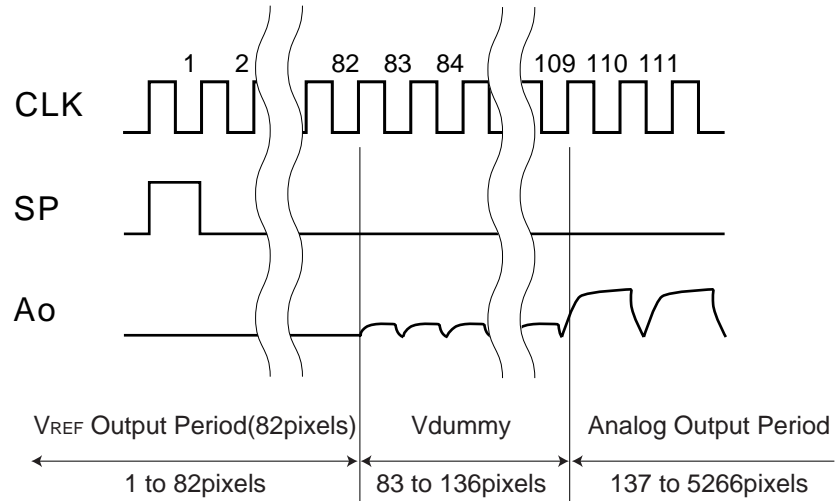


Note) The CLK section area which is over the effective pixel numbers (Output blank part) cannot be used as the analog Output standard level.

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(b-2) Data Output Timing Chart (600dpi mode)

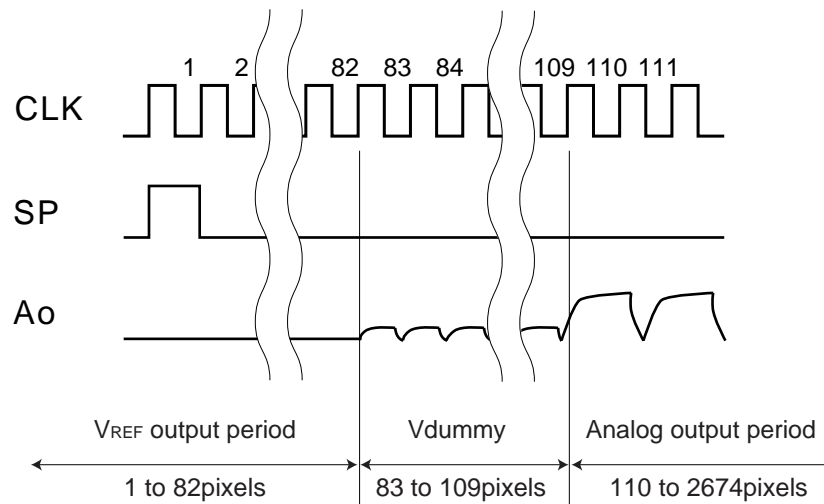
After turning on the SP pulse, the analog output starts from the setting up point of 82 clock pulse.



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

(b-3) Data Output Timing Chart (300dpi mode)

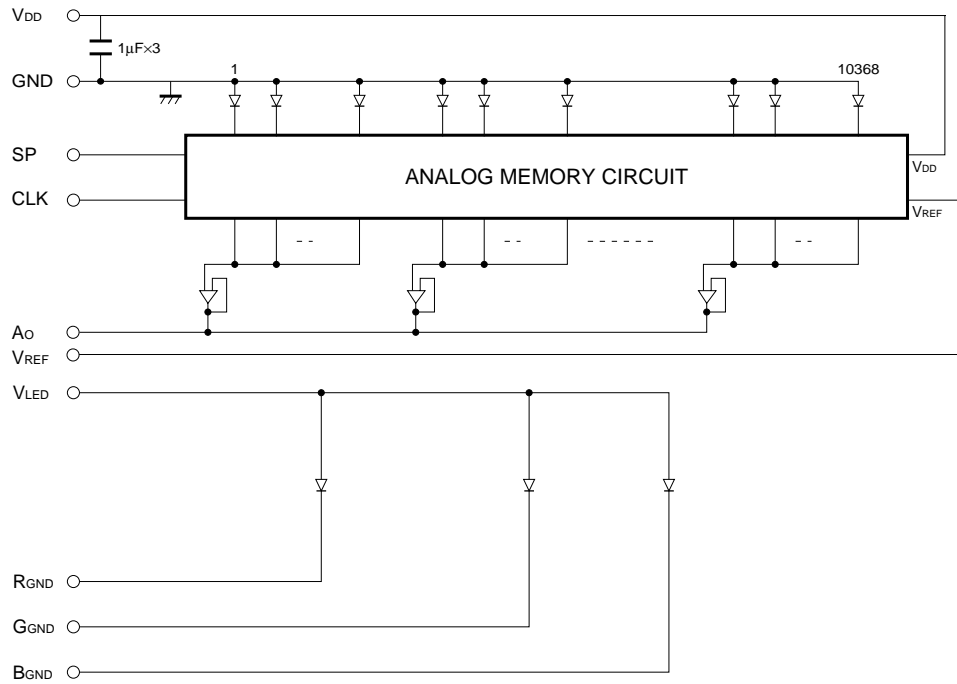
After turning on the SP pulse, the analog output starts from the setting up point of 82 clock pulse.



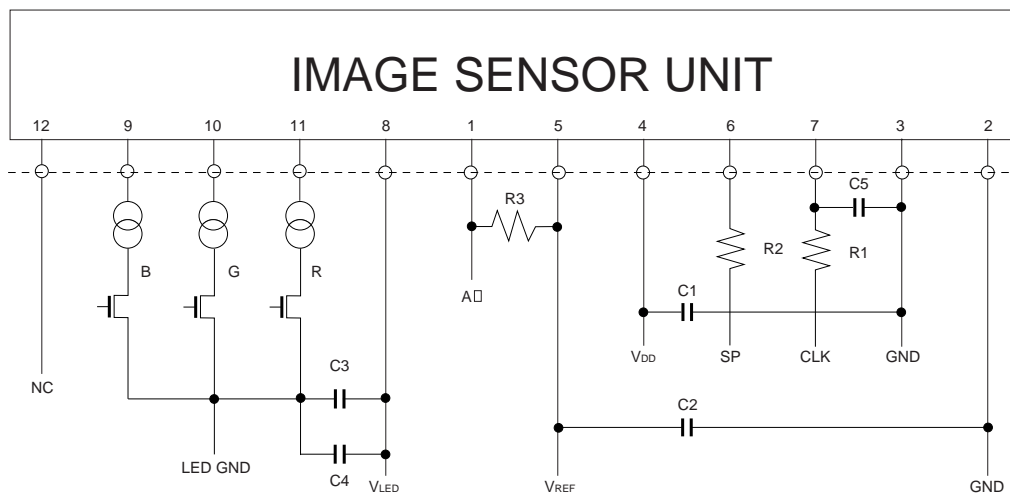
Note) The CLK section area which is over the effective pixel numbers (Output blank part) cannot be used as the analog Output standard level.

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●Circuit diagram



●Peripheral circuit



R1=R2=100Ω, R3=100KΩ
 C1=C2=47μF
 C3=100μF, C4=0.1μF, C5=100pF

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