

Color image sensor heads for High-speed Scanner

IA1208-FE10A

Contact Image Sensor Head with 3 times higher scanning speed due to 3ch outputs.

Newly developed resolution change-over IC is employed which has improved noise resistance.

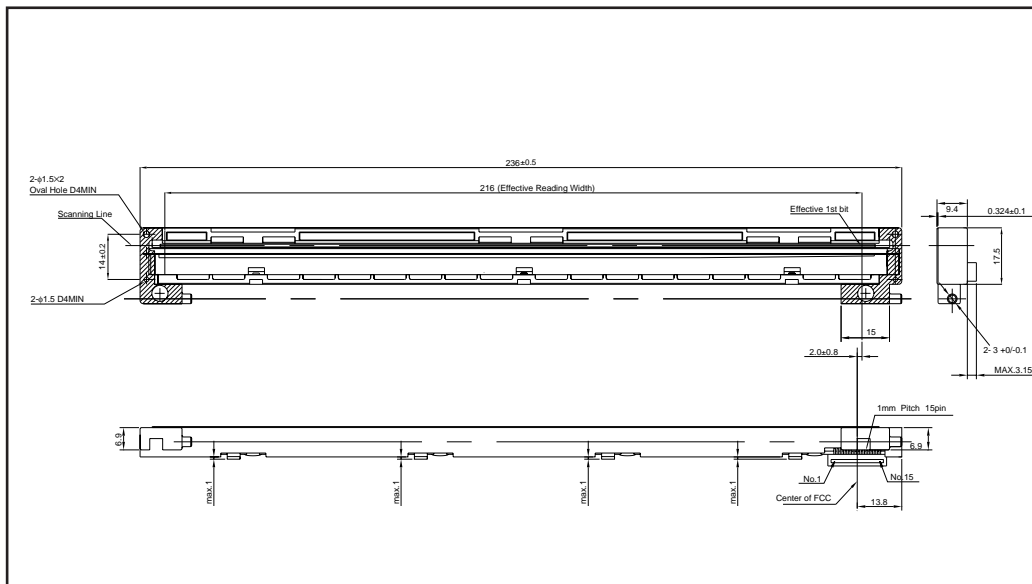
●Applications

High speed reading equipment (i.e. document scanners, plotters, laser multifunction devices).

●Features

- 1) High speed reading capability due to 3 analog output.
- 2) Signal amplifier is built into the image sensor IC in order to increase immunity to external noise.
- 3) ROHM's newly developed sensor IC reduces failures due to ESD (based on the IEC61000-4-2 standard).
- 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)



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●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	3.0	ms / line
Clock frequency	CLK	5	MHz
Maximum dynamic range	VR _{Max}	0.5	V
Minimum dynamic range	VR _{Min.}	0.25	V
Dark output	V _{od}	V _{REF} ± 0.1	V
Operating temperature	–	5 to 45	°C

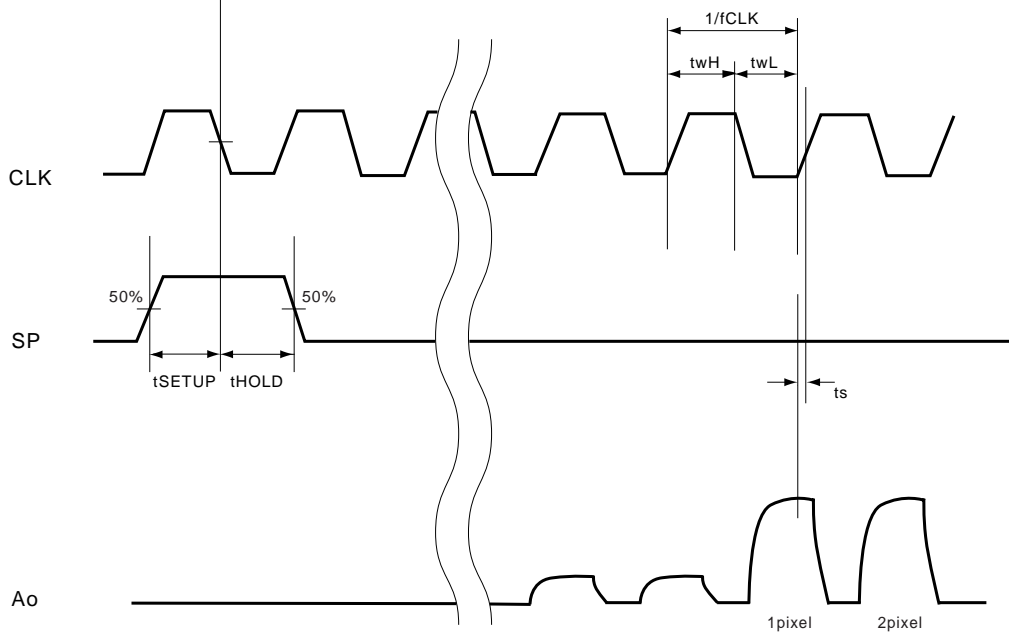
●Pin assignments

No.	Circuit	I / O	Function
1	A _{O3}	O	Analog output
2	GND	I	Ground
3	A _{O2}	O	Analog output
4	GND	I	Ground
5	A _{O1}	O	Analog output
6	MODE	I	Mode select
7	GND	I	Ground
8	V _{DD}	I	Power supply
9	V _{REF}	I	Reference voltage
10	SP	I	Start pulse
11	CLK	I	Clock
12	V-LED	I	LED power supply
13	B-GND	I	BLUE LED ground
14	G-GND	I	GREEN LED ground
15	R-GND	I	RED LED ground

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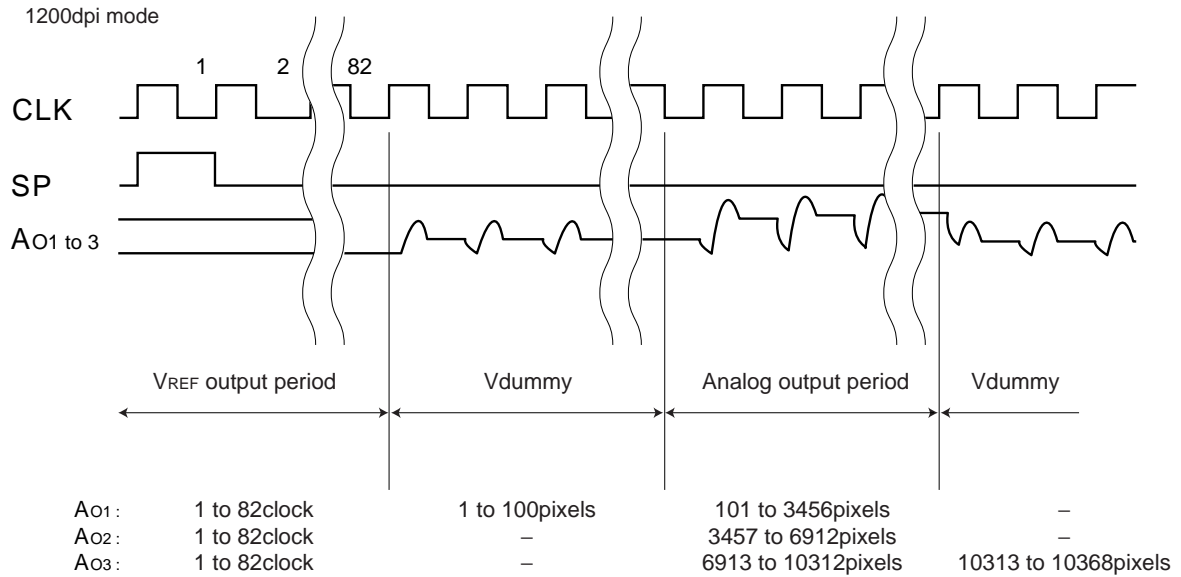
●Timing chart

(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.



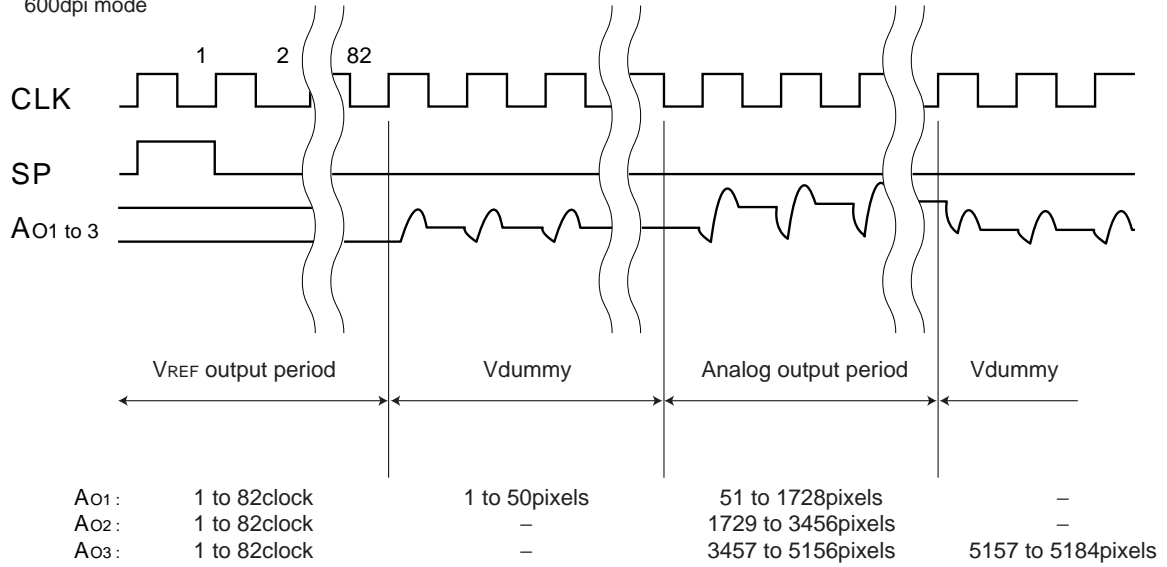
Note)The CLK section area which is over the effective pixel numbers (Output blank part) cannot be used as the analog Output standard level.

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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.

600dpi mode

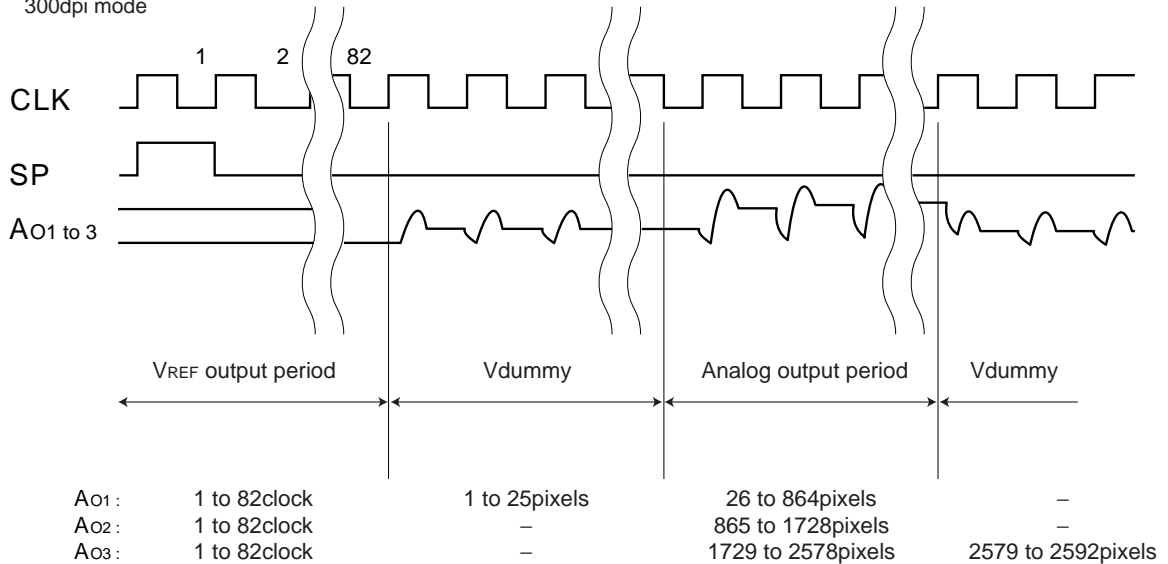


Note)The CLK section area which is over the effective pixel numbers (Output blank part) cannot be used as the analog Output standard level.

(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.

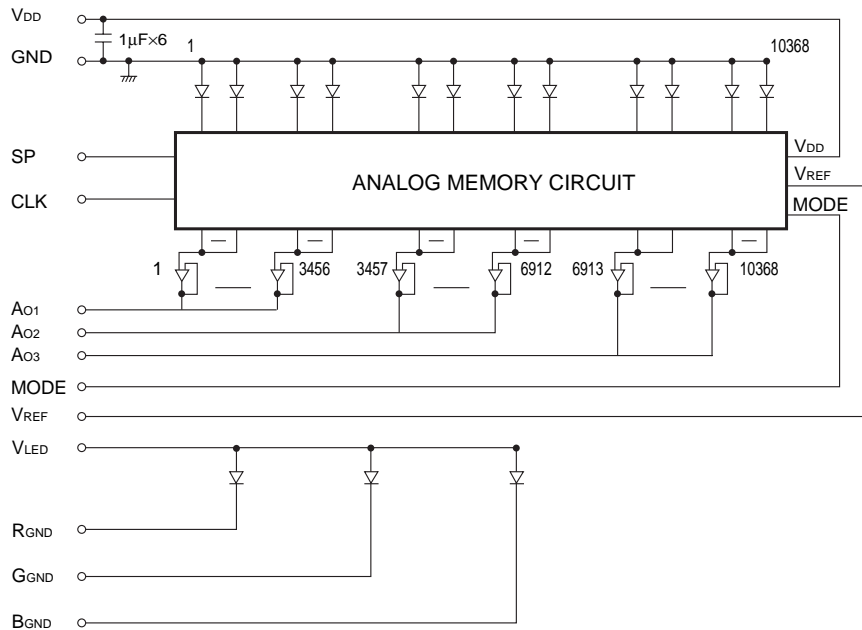
300dpi mode



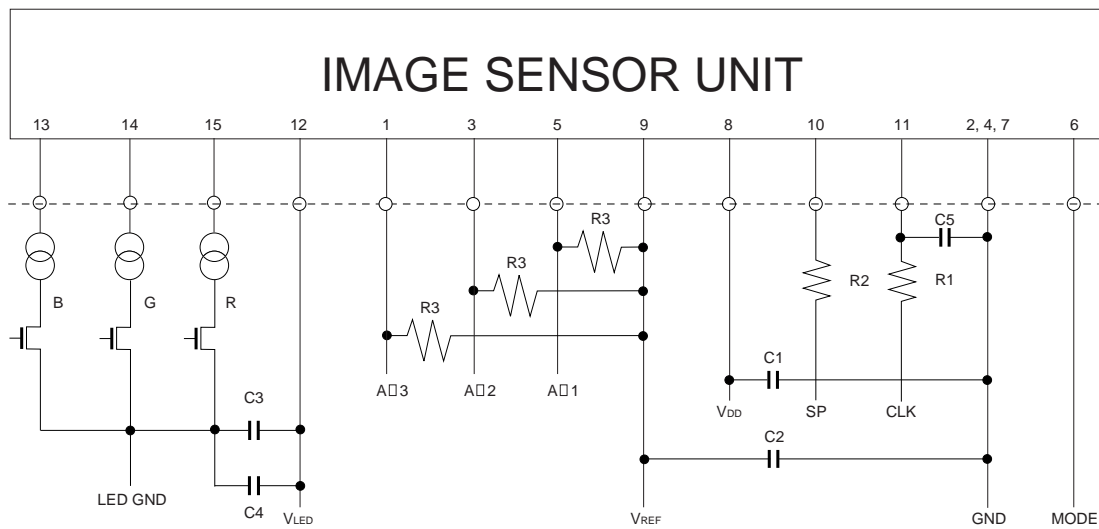
Note)The CLK section area which is over the effective pixel numbers (Output blank part) cannot be used as the analog Output standard level.

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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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