

Image sensor heads for narrow-width scanners

IA2004-CE50A

These image sensor heads feature high-speed scanning (1000mm/s) and are compatible with A6 size media. They are center connector type units with no frame protrusion, simplifying assembly.

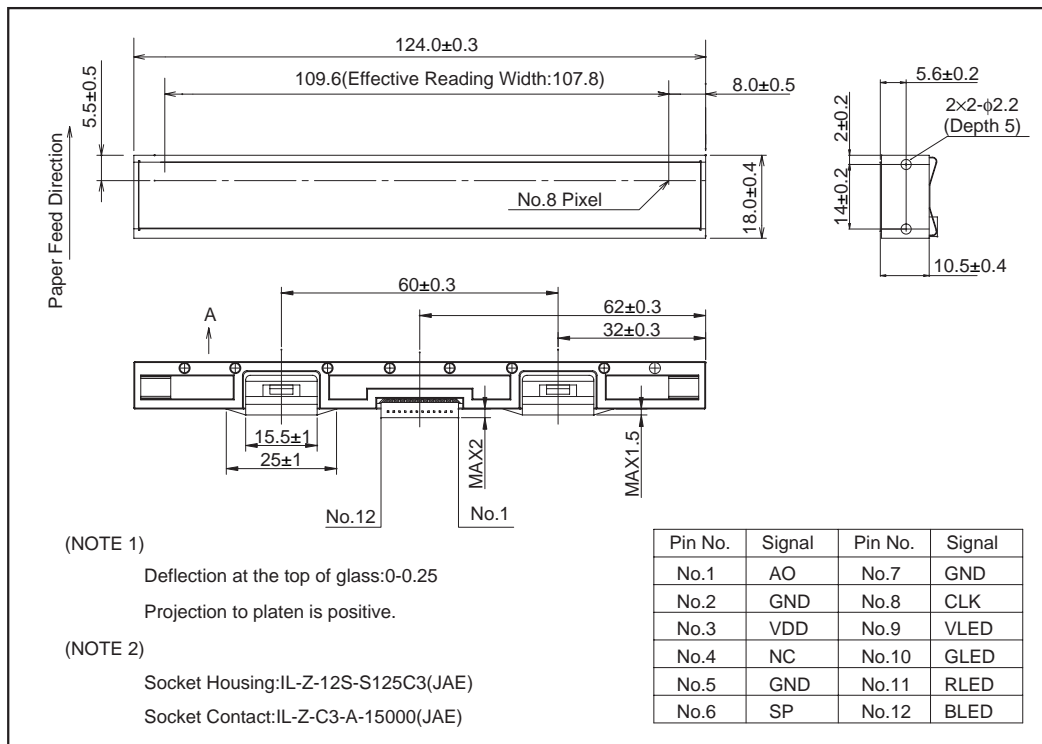
●Applications

Check readers, card scanners, and a variety of other image input devices.

●Features

- 1) Signal amplifier integrated into each sensor IC in order to eliminate external noise ; compatible with 3.3V interface.
- 2) LED light source mounted on the same substrate as the sensor chip itself, resulting in a more compact, lightweight package.
- 3) Utilizes proprietary prism for improved lighting efficiency.
- 4) Ceramic substrate used, ensuring excellent dimensional and thermal stability.

●Dimensions (Unit : mm)



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●Characteristics

Parameter	Symbol	Typ.	Unit
Effective scanning width	–	107.8	mm
Primary scan dot density	–	200	dpi
Total dot number	–	864	dots
Power supply voltage	V _{DD}	5	V
Scanning speed	SLT	0.125x3	ms / line *
Clock frequency	CLK	8	MHz
Maximum dynamic range	VRMax.	0.5	V
Minimum dynamic range	VRMin.	0.25	V
Dark output	V _{od}	1.2±0.2	V
Operating temperature	–	5 to 45	°C

* Analog signals are produced output at double rate of clock frequency.

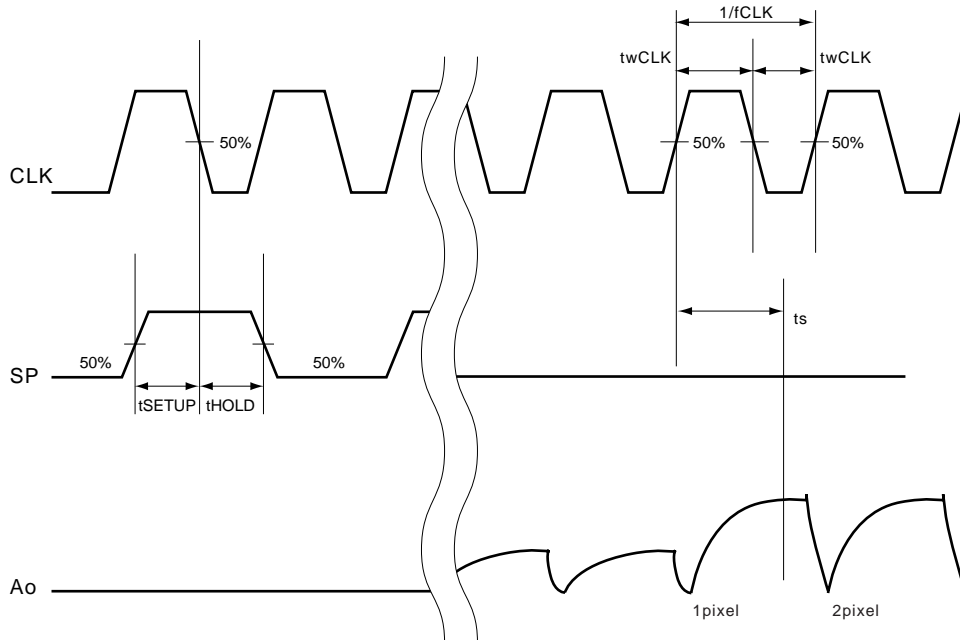
●Pin assignments

No.	Circuit	I / O	Functions
1	Ao	O	Analog Output
2	GND	I	Ground
3	V _{DD}	I	Power Supply
4	NC	–	Non connect
5	GND	I	Ground
6	SP	I	Start pulse
7	GND	I	Ground
8	CLK	I	Clock
9	VLED	I	LED power supply
10	GLED	I	LED ground
11	RLED	I	LED ground
12	BLED	I	LED ground

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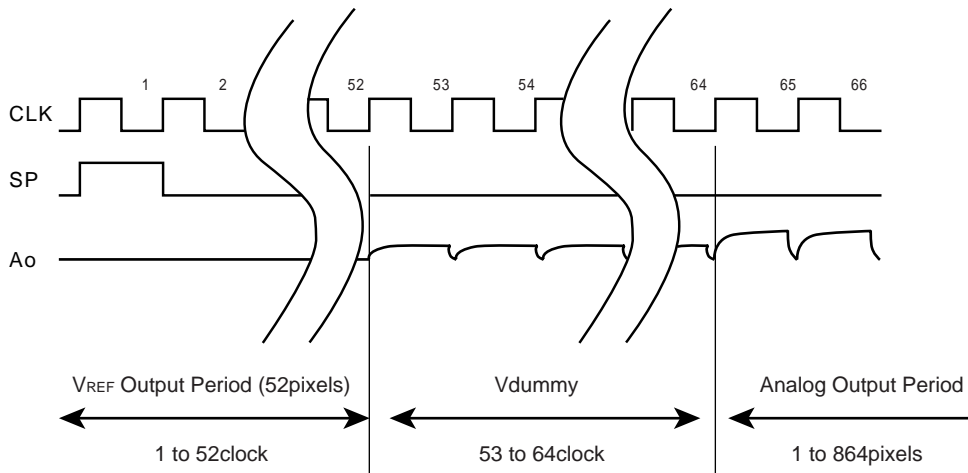
●Timing chart

(a) CLK Timing Chart



(b) Data Output Timing Chart

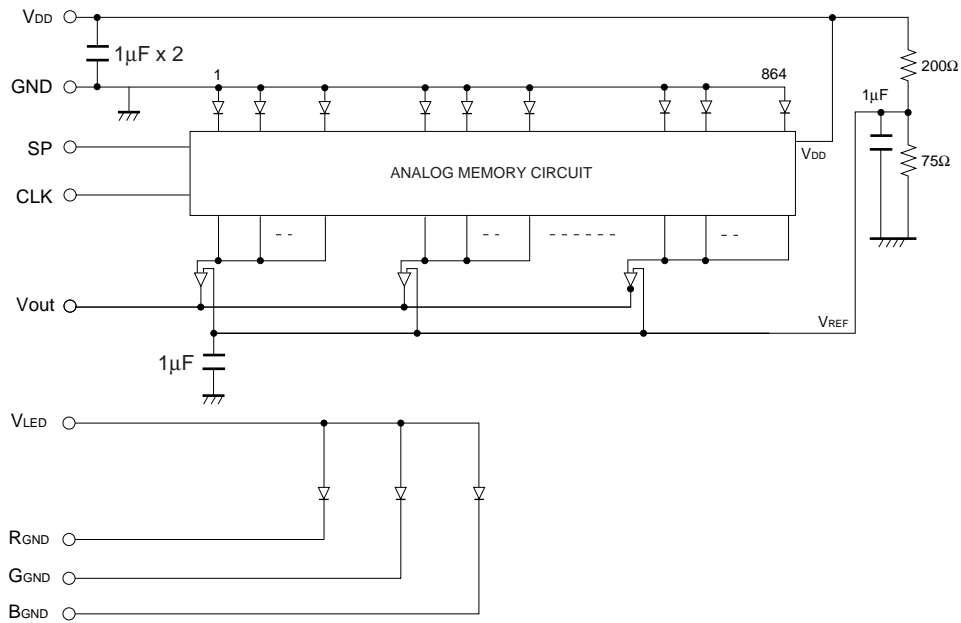
After turning on the SP pulse, the analog output shape starts from the setting up point of 65 clock pulse.



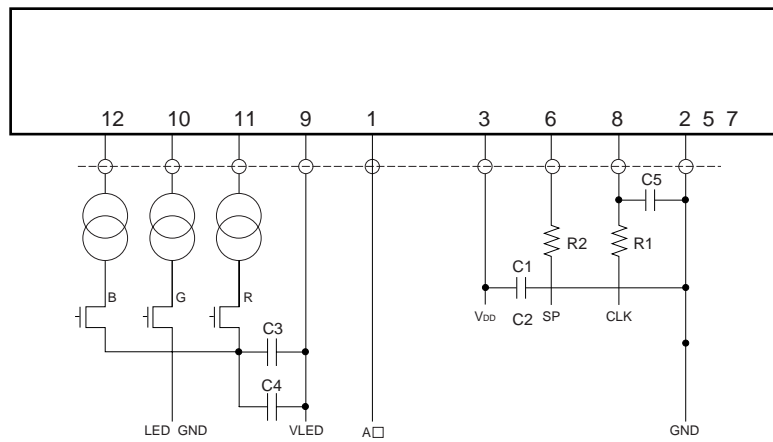
Note) Output blank part cannot be used as the analog output standard level.

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●Equivalent circuit



●Peripheral circuit



* R1=R2=100Ω
 C1=47µF
 C3=100µF, C4=0.1µF, C5=100pF

* Please adjust the value of resistance to fit your interface circuit.

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