Image sensor heads for narrow-width scanners

IA2004-CE40A

The IA□□04-ME/CE series sensors, compatible with A6 size media, feature a dual-arch structure, allowing straight pass reading (both-directions). In addition, they are compact, measuring only 119.5mm in length.

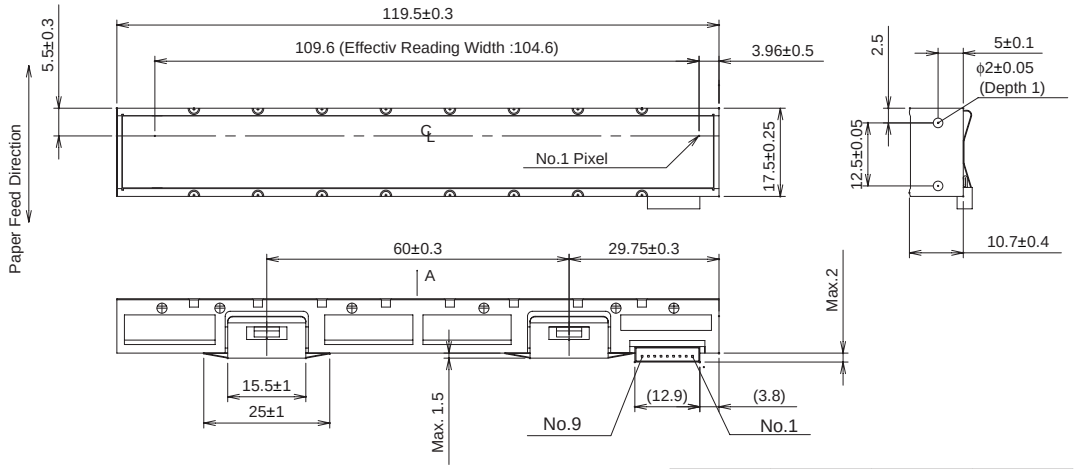
●Applications

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) Proprietary prism maintains a uniform output signal.
4) Ceramic substrate used, ensuring excellent dimensional and thermal stability.

●Dimensions (Unit : mm)



(NOTE 1)

Deflection at the top of glass:0-0.25

Projection to platen is positive.

(NOTE 2)

Socket Housing:IL-Z-9S-S125C3(JAE)

Socket Contact:IL-Z-C3-A-15000(JAE)

Pin No.	Signal	Pin No.	Signal
No.1	CLK	No.7	GLED
No.2	SP	No.8	BLED
No.3	VDD	No.9	VLED
No.4	GND		
No.5	AO		
No.6	RLED		

●**Characteristics**

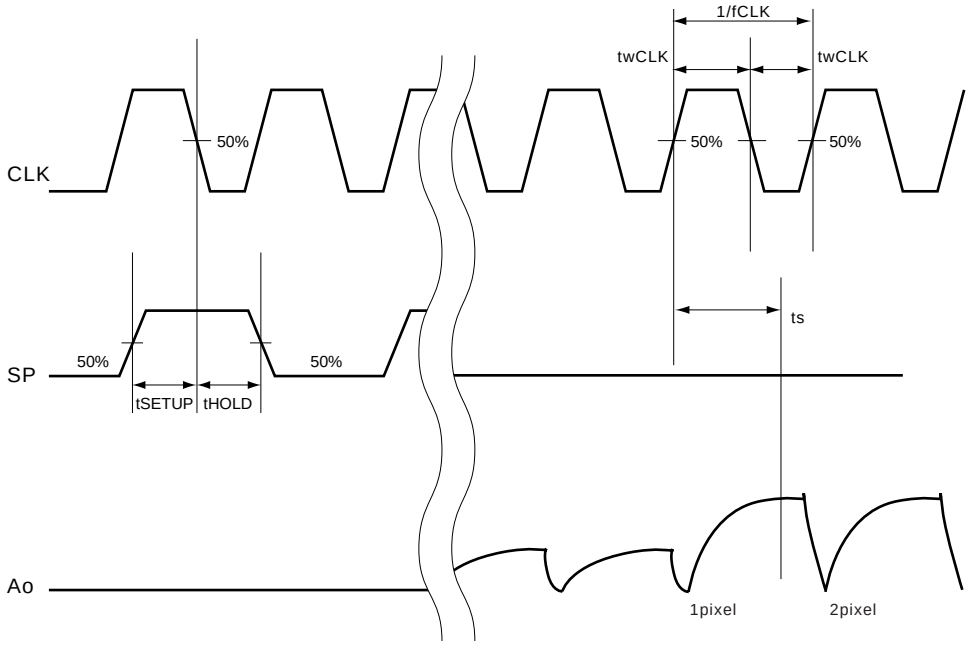
Parameter	Symbol	Typ.	Unit
Effective scanning width	–	104.6	mm
Primary scan dot density	–	200	dpi
Total dot number	–	864	dots
Power supply voltage	V_{DD}	5	V
Scanning speed	SLT	0.125×3	ms / line
Clock frequency	CLK	8	MHz
Maximum dynamic range	VRMax.	0.5	V
Minimum dynamic range	VRMin.	0.25	V
Dark output	Vod	1.2±0.4	V
Operating temperature	–	5 to 45	°C

●**Pin assignments**

No.	Circuit	I / O	Functions
1	CLK	I	Clock
2	SP	I	Start Pulse
3	V_{DD}	I	Power Supply
4	GND	I	Ground
5	Ao	O	Analog Output
6	RLED	I	LED ground
7	GLED	I	LED ground
8	BLED	I	LED ground
9	VLED	I	LED power supply

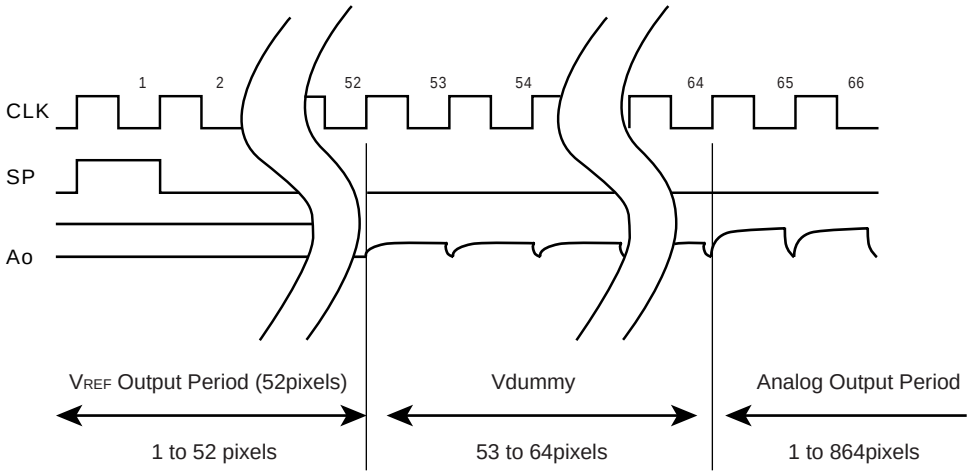
●Timing chart

(a) CLK Timing Chart



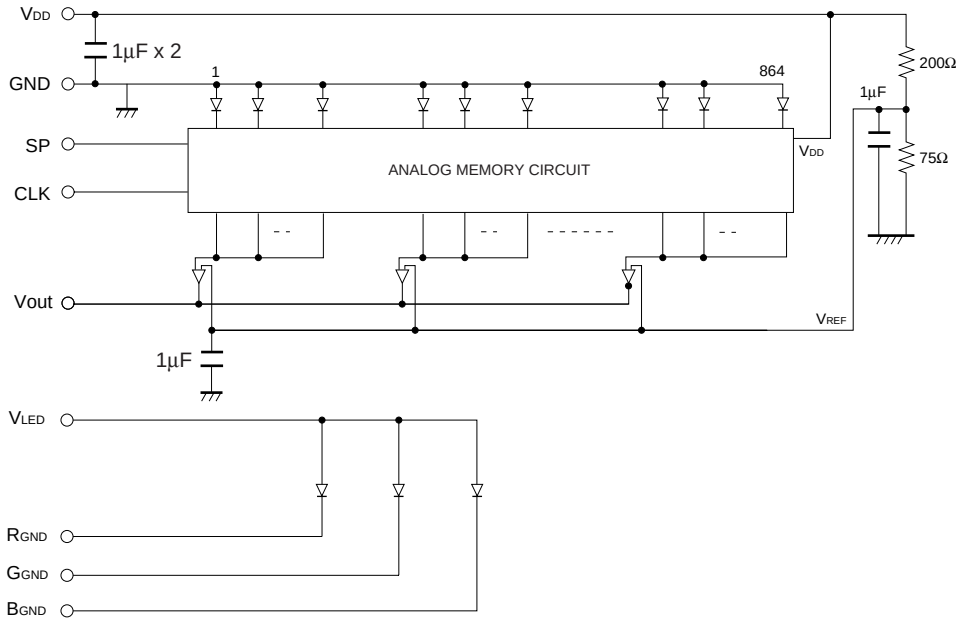
(b) Data Output Timing Chart

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

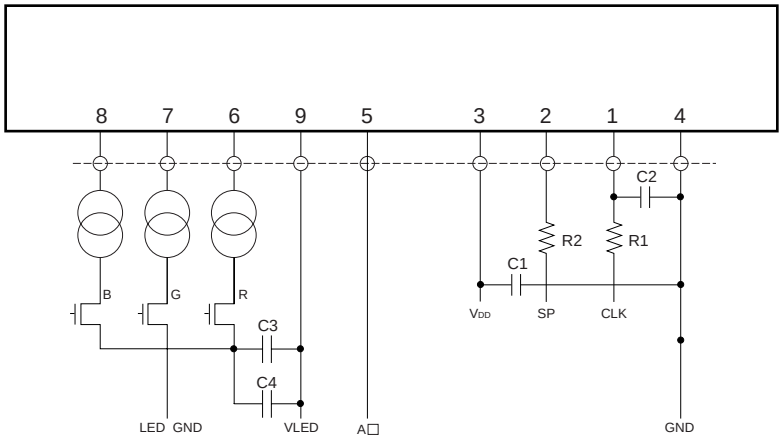


Note) Output blank part cannot be used as the analog output standard level.

●**Equivalent circuit**



●**Peripheral circuit**



∗ R1=R2=100Ω
C1=47µF, C2=100pF
C3=100µF, C4=0.1µF

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

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