Contact Image Sensor Heads for narrow-width scanners

LSH2004-AA10A

Equipped with the sensor chips that have built-in analog memory, this compact color Contact Image Sensor Heads is suitable for any scanning applications that require rapid scanning of widths of up to A6. It best fits into the photo graphic applications.

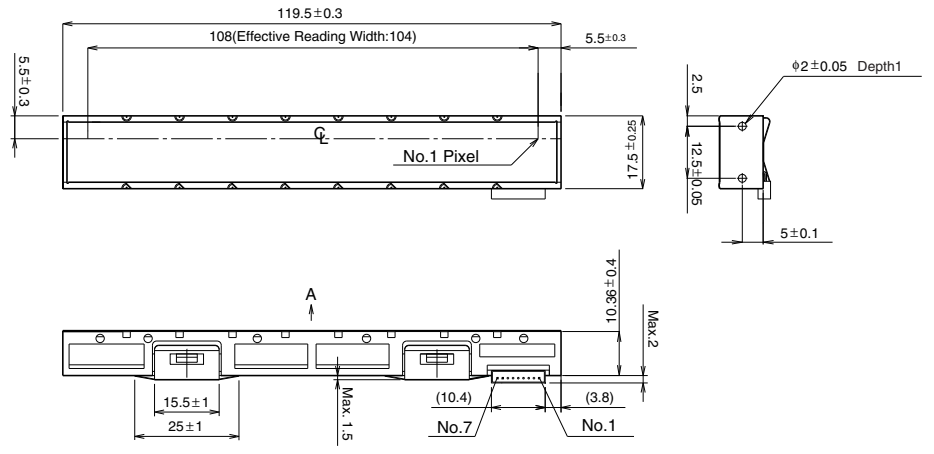
● Applications

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

●Features

1) By integrating the signal amplifier on the sensor chip, external noise is shut out. Additionally, newly developed analog memory circuit and realizes high speed scanning.
2) 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.
3) With the proprietary prism(reflectors), the output signal is maintained uniformly.
4) The ceramic substrate is used for excellent dimensional accuracy and thermal stability. Variation and maximize the image re-productivity.

●Dimensions (Unit : mm)



Note) Deflection at the top of glass : 0 to 0.25
Projection to platen is positive
Socket Housing : IL-Z-7S-S125C3(JAE)
Socket Contact : IL-Z-C3-A-15000(JAE)

Pin No.	Signal	Pin No.	Signal
No.1	Ao	No.6	GLED
No.2	GND	No.7	VLED
No.3	SI		
No.4	CLK		
No.5	V_{DD}		

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●Characteristics

Parameter	Symbol	Typ.	Unit
Effective scanning width	–	104	mm
Primary scan dot density	–	203	dpi
Total dot number	–	864	dots
Power supply voltage	V_{DD}	5	V
Scanning speed	SLT	0.4	ms / line *
Clock frequency	CLK	1.25	MHz
Maximum dynamic range	VRMax.	0.75	V
Minimum dynamic range	VRMin.	0.375	V
Dark output	Vod	1.7±0.2	V
Operating temperature	–	5 to 45	°C

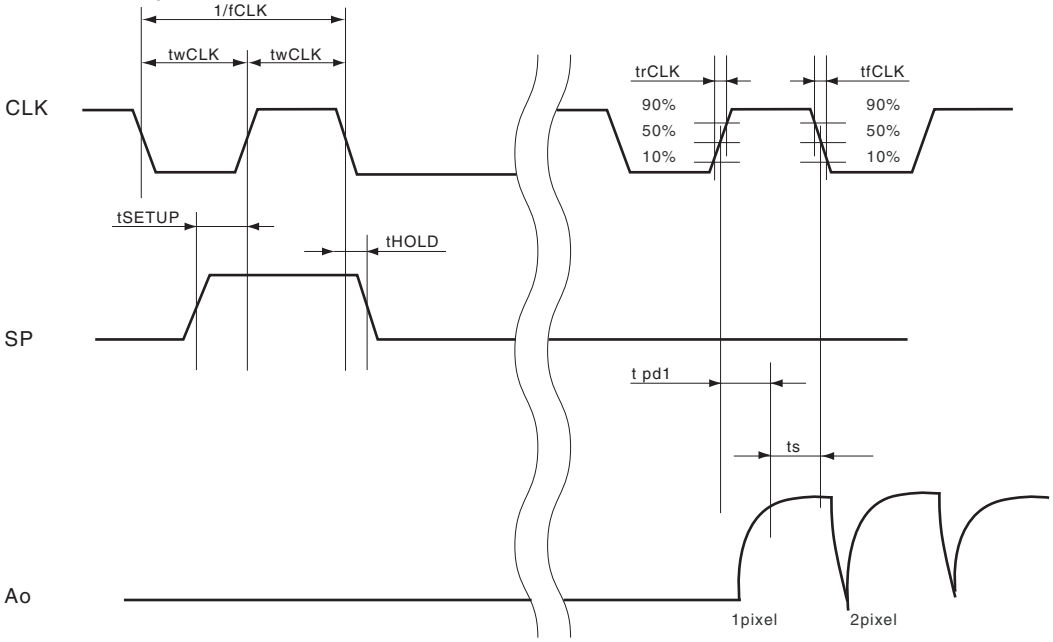
Analogue signals are produced output at double rate of clock frequency.

●Pin assignments

No.	Circuit	I / O	Functions
1	Ao	O	Analog output
2	GND	I	Ground
3	SI	I	Serial-in
4	CLK	I	Clock
5	V_{DD}	I	Power supply
6	G-LED	I	LED ground
7	V-LED	I	LED power supply

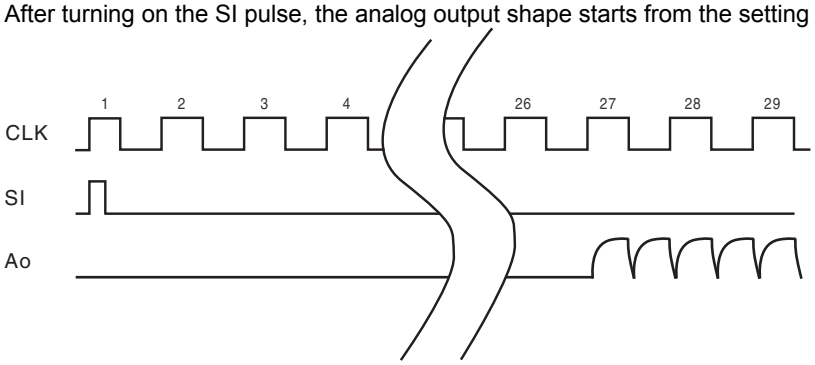
●Timing chart

(a) CLK Timing Chart



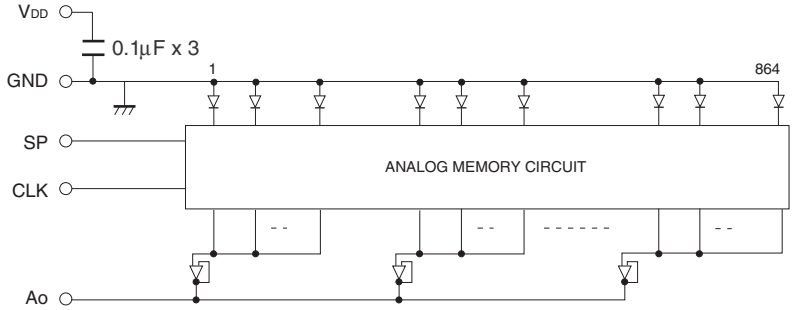
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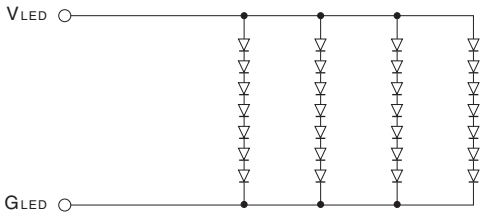
(b) Data Output Timing Chart
After turning on the SI pulse, the analog output shape starts from the setting up point of 27 clock pulse.

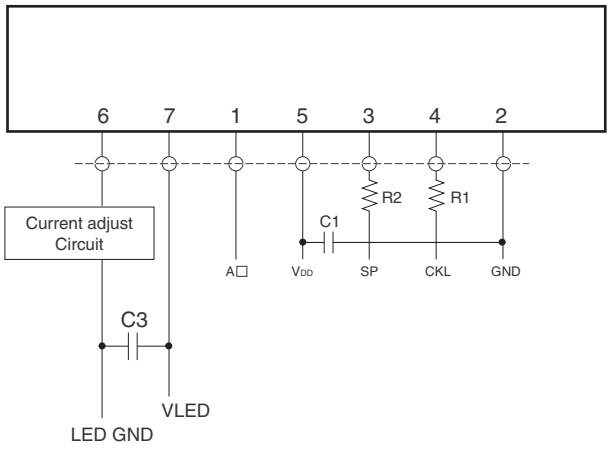


Note) Output blank part cannot be used as the analog output standard level.

●Inner circuit







∗R1, R2=500 C1=47µF
C3=100µF

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

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