Add-on Structure Contact Image Sensor Heads

LSH3004-CA50A

The Basic CIS by which the add-on can shorten the development period of a product sharply while being able to satisfy broad demand. A taper glass and tempered glass can respond as an option.
As a measure against a paper jam, the custom-made correspondence of the special cantact plate can be carried out.

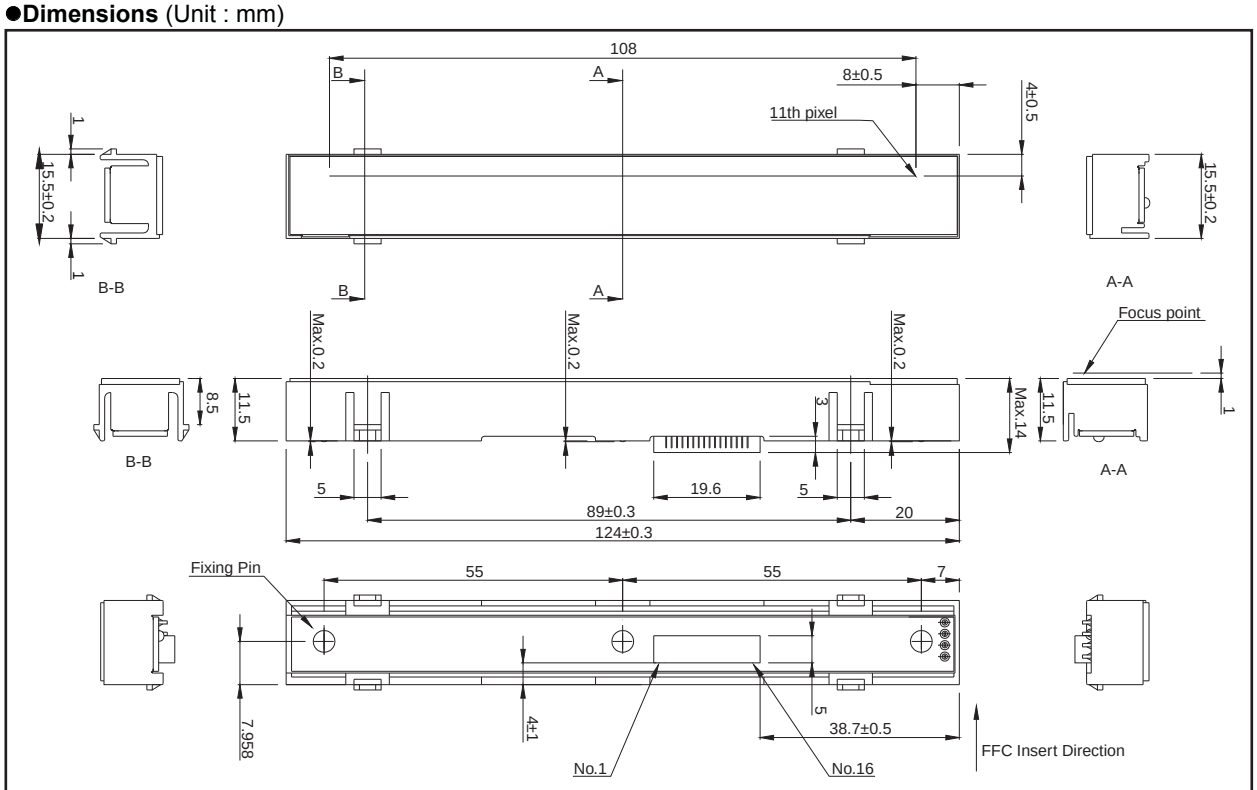
●Applications

Document Scanners,Bill sorters.Wide Format Scanners,and Lottery.

●Features

1) High speed reading capability due to 3 analog output.
2) Signal amplifier integrated into each sensor IC in order to eliminate external noise ; compatible with 3.3V interface.
3) LED light source mounted on the same substrate as the sensor chip itself, resulting in a more compact, lightweight package.
4) Proprietary prism maintains a uniform output signal.

●Dimensions (Unit : mm)



(NOTE 1)

Deflection at the top of glass : 0 to 0.25mm

Projection to platen is positive.

(NOTE 2)

Socket housing: 04 6232 116 103 800 (Kyocera Elco)

(NOTE 3)

General torelance : ±0.2

Pin No.	Signal	Pin No.	Signal
No.1	Ao1	No.9	VREF
No.2	GND	No.10	SP
No.3	Ao2	No.11	CLK
No.4	GND	No.12	VLED
No.5	Ao3	No.13	B-GND
No.6	GND	No.14	G-GND
No.7	MODE	No.15	R-GND
No.8	VDD	No.16	NC

●Characteristics

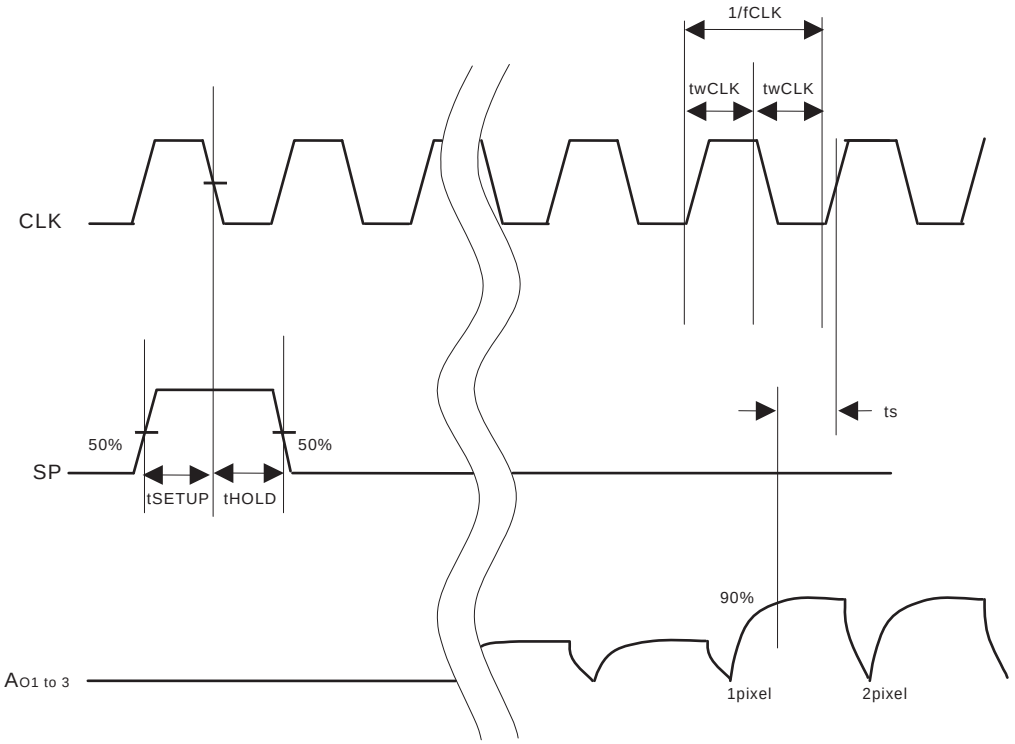
Parameter	Symbol	Typ.	Unit
Effective scanning width	–	105	mm
Primary scan dot density	–	300	dpi
Total dot number	–	1296	dots
Power supply voltage	V_{DD}	3.3	V
Reference voltage	V_{REF}	0.8	V
Scanning speed	SLT	0.07 x 3	ms / line
Clock frequency	CLK	8	MHz
Maximum dynamic range	VRMax	0.5	V
Minimum dynamic range	VRMin.	0.25	V
Dark output	Vod	V_{REF}±0.1	V
Operating temperature	–	5 to 45	°C

●Pin assignments

No.	Circuit	I / O	Function
1	A_{O1}	O	Analog output
2	GND	I	Ground
3	A_{O2}	O	Analog output
4	GND	I	Ground
5	A_{O3}	O	Analog output
6	GND	I	Ground
7	MODE	I	Mode
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	B-LED ground
14	G-GND	I	G-LED ground
15	R-GND	I	R-LED ground
16	NC	–	–

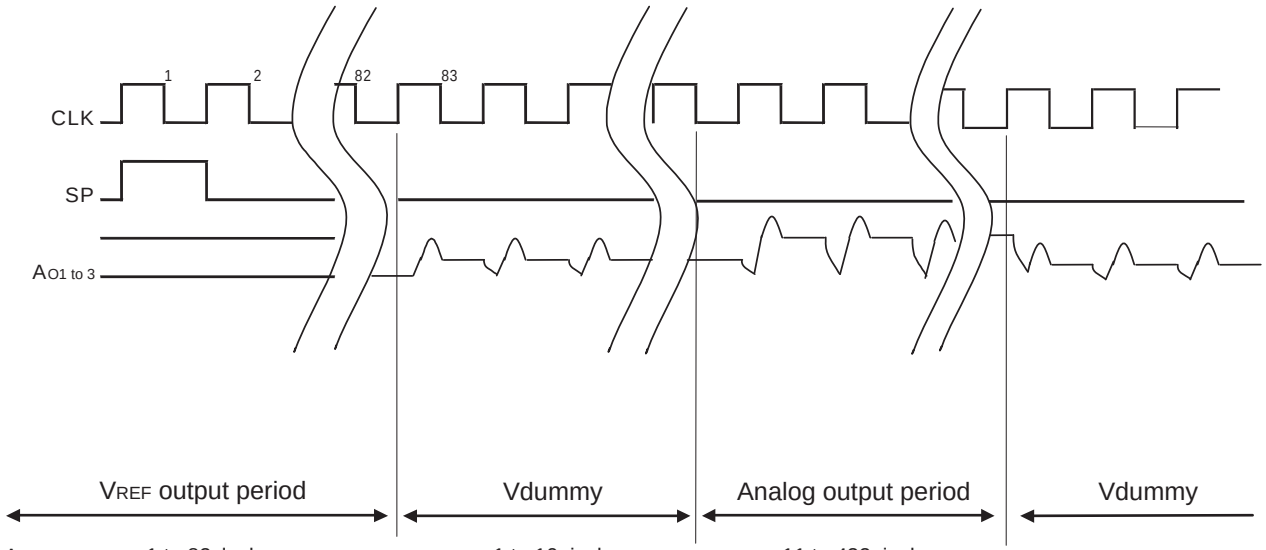
●Timing chart

(a) CLK Timing Chart



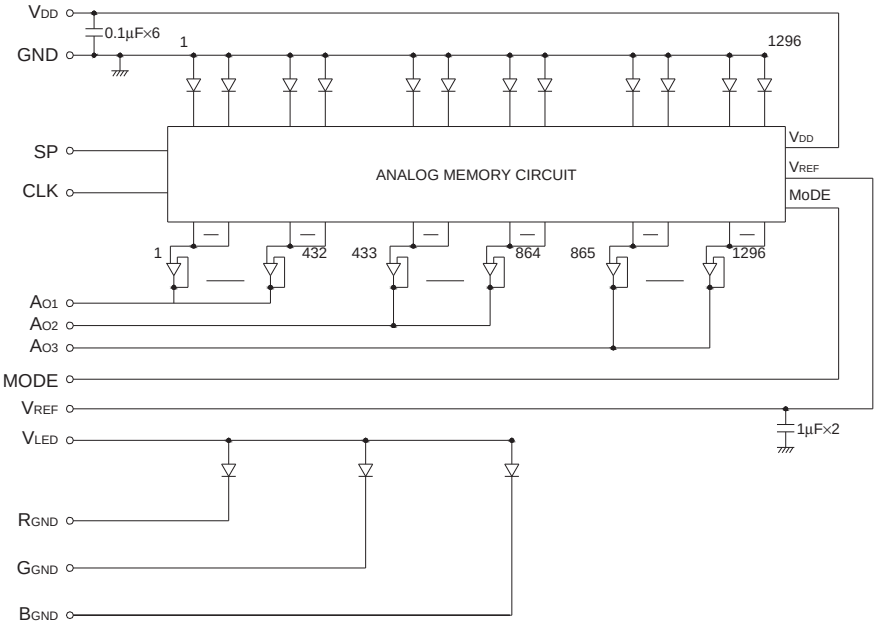
(b) Data Output Timing Chart (300dpi mode)

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

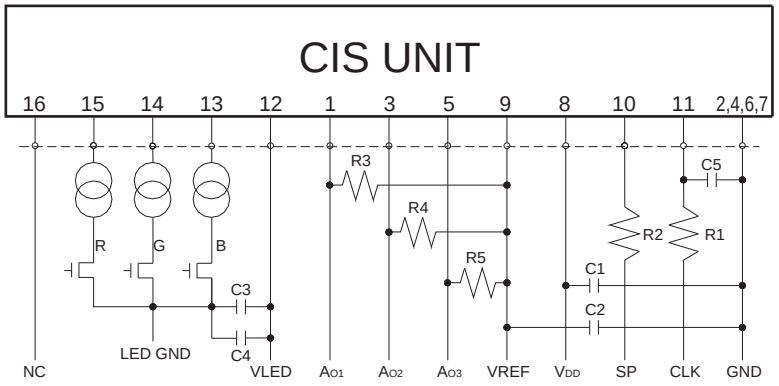


A_{O1}:	1 to 82clock	1 to 10pixels	11 to 432pixels	–
A_{O2}:	1 to 82clock	–	433 to 864pixels	–
A_{O3}:	1 to 82clock	–	865 to 1282pixels	1283 to 1296pixels

●Circuit diagram



●Peripheral circuit



∗ R1=R2=10 to 100Ω, R3 to R5=100KΩ,
C1=C2=47µF
C3=100µF, C4=0.1µF, C5=100pF

Note : The above constant values are examples, and please adjust the parameters by evaluating waveforms with the device which is used

Notes

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