Image sensor heads for narrow-width scanners

IA3004-CE20A

Compatible with A6 size media, feature a dual-arch structure, allowing straight-pass reading (both-directions). In addition, it is compact, measuring only 119.5mm in length.

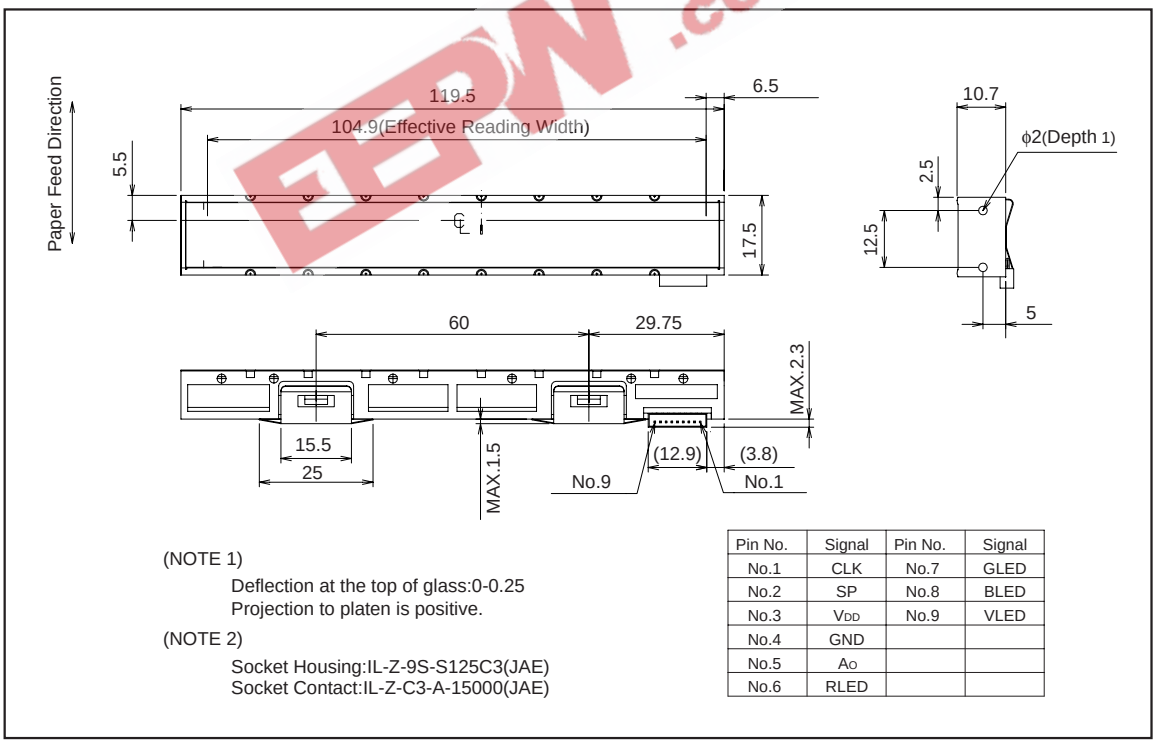
●Applications

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.
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	V_{DD}	No.9	VLED
No.4	GND		
No.5	A_O		
No.6	RLED		

●Characteristics

Parameter	Symbol	Typ.	Unit
Effective scanning width	–	104.9	mm
Primary scan dot density	–	300	dpi
Total dot number	–	1296	dots
Power supply voltage	V_{DD}	3.3	V
Scanning speed	SLT	0.28×3	ms / line *
Clock frequency	CLK	5	MHz
Maximum dynamic range	VRMax.	0.5	V
Minimum dynamic range	VRMin.	0.25	V
Dark output	Vod	1.0±0.2	V
Operating temperature	–	5 to 45	°C

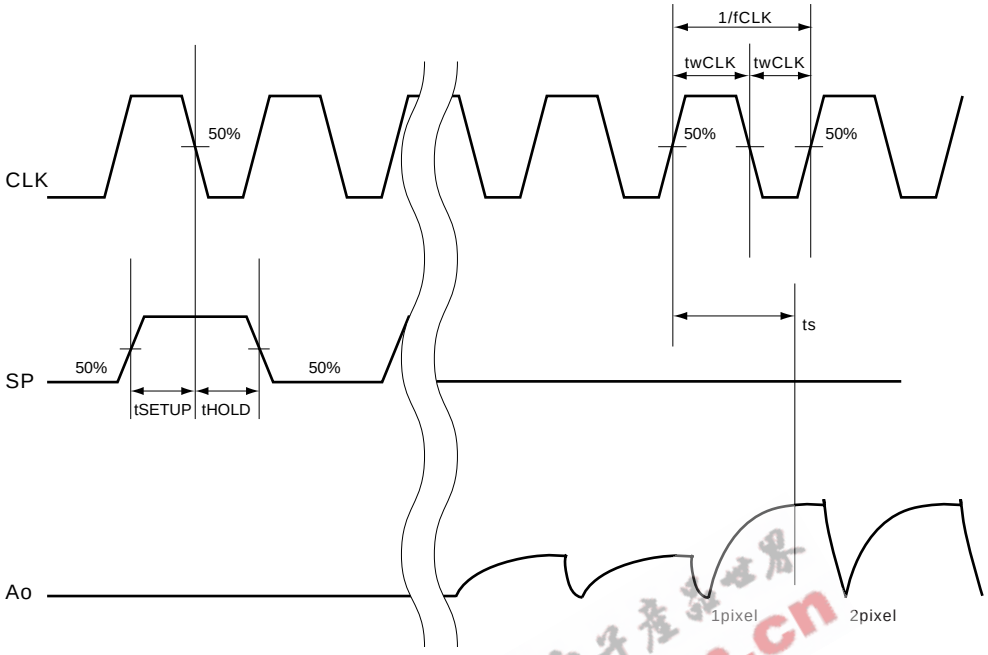
* Analogue signals are produced output at double rate of clock frequency.

●Pin assignments

No.	Circuit	I / O	Functions
1	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

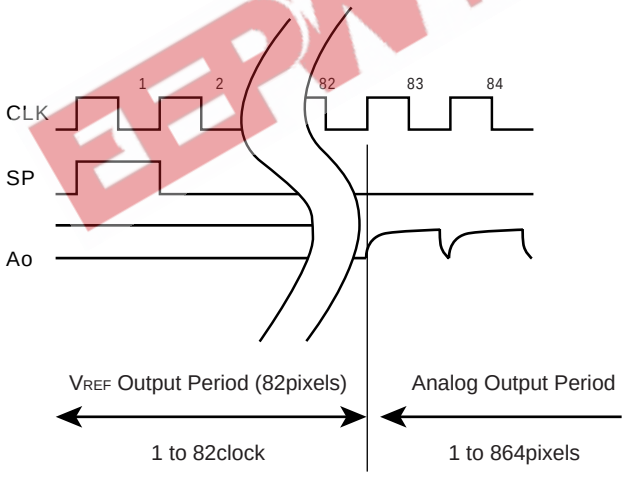
●**Timing chart**

(a) CLK Timing Chart



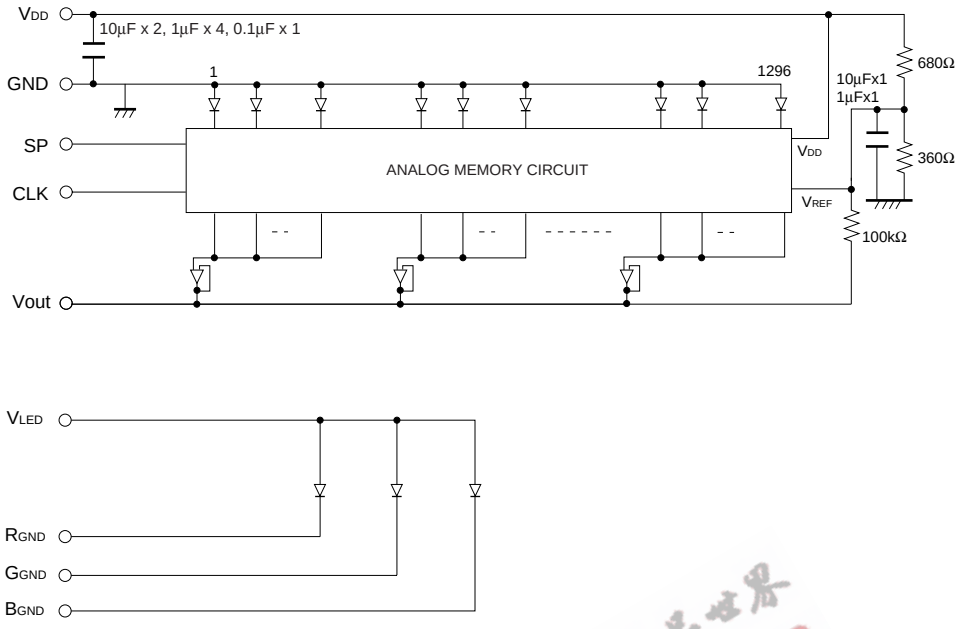
(b) Data Output Timing Chart

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

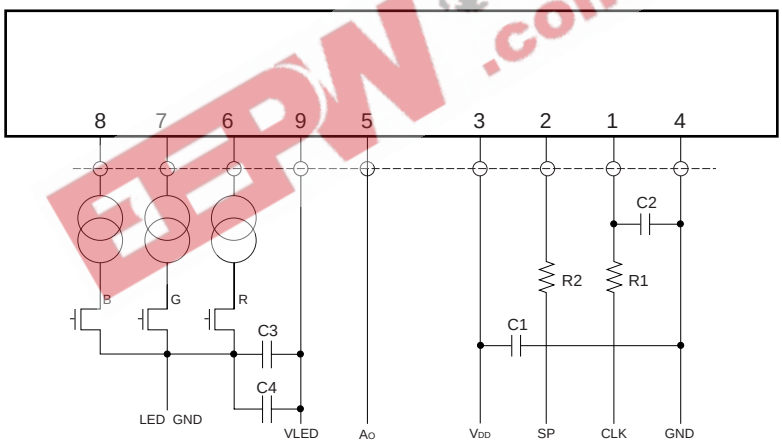


Note) Output blank part cannot be used as the analog output standard level.

●**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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