

Monochrome image sensor head (8pixel / mm)

IA2008-MB20A

The IA2008-MB20A is a state-of-the-art compact, lightweight A4-size monochrome image sensor head that resulted from the combination of ROHM's LSI circuit technology and thermal printhead mounting technology.

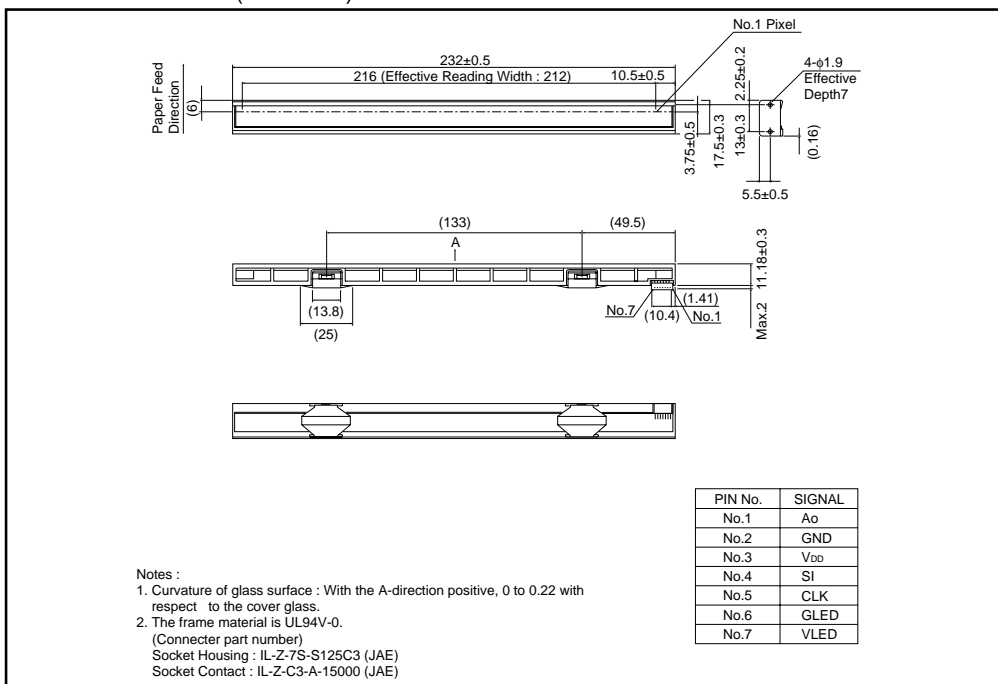
●Applications

Facsimiles
Image scanning devices

●Features

- 1) The amplifiers, resistors, capacitors, and other discrete components that were normally externally attached, are built into the sensor IC.
- 2) Compact body and lightweight achieved by the placement of the LED light source and sensor IC on the same board.
- 3) Uses a special ROHM developed prism that provides superior light gathering characteristics and uniform light dispersion.
- 4) Uses a ceramic board as the base board for minimal temperature fluctuations and uniform thermal dispersion.
- 5) This is excellent in the point of γ (gamma) characteristics, and it realizes clear gradation. (Exceptionally clear print quality is given by all bits compensation in the both case of dark output and white output.)

●External dimensions (Units : mm)



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●Characteristics

Parameter	Symbol	Typ.	Unit
Effective scanning width	–	212	mm
Primary scan dot density	–	8	pixel / mm
Total dot number	–	1728	dots
Power supply voltage	V _{DD}	5	V
Scanning speed	SLT	5	ms / line
Clock frequency	CLK	500	kHz
Maximum dynamic range	VR _{max}	1.6	V
Dark output	V _{odmax}	550	mV
Operating temperature	–	5~45	°C

●Pin assignments

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

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●Timing chart

(a) CLK Timing Chart

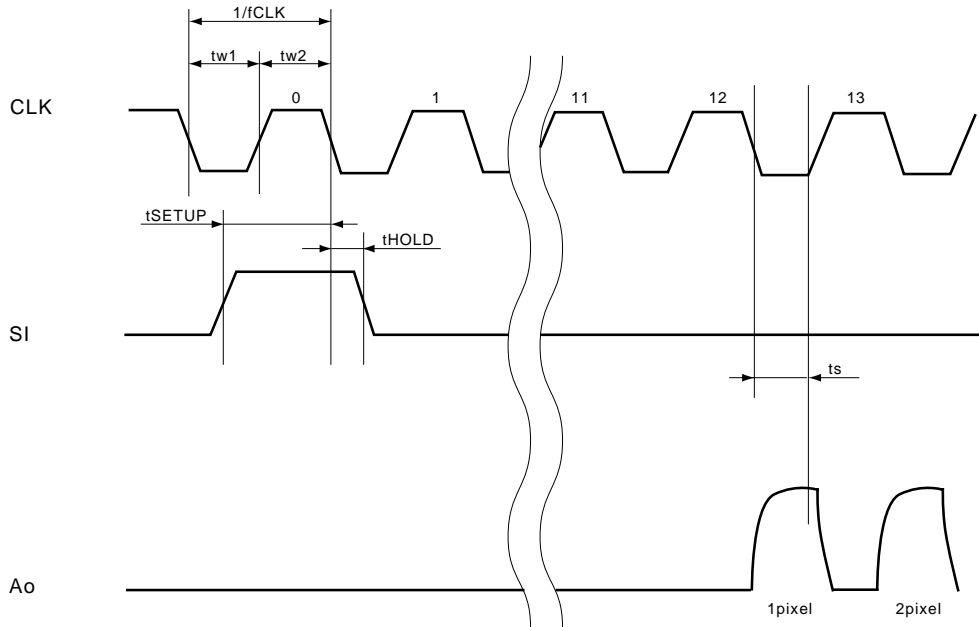
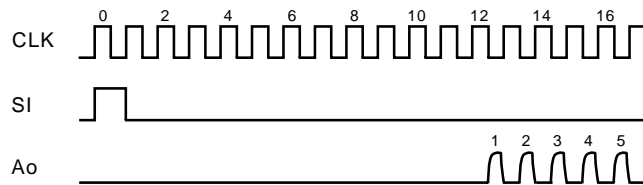


Fig.1

(b) Data Output Timing Chart

After turning on the SI pulse, the analog output shape starts from the setting up point of 12CLK pulse.



Note) The CLK section area which is over the effective pixel numbers (Output blank part) cannot be used as the analog Output standard level.

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●Equivalent circuit

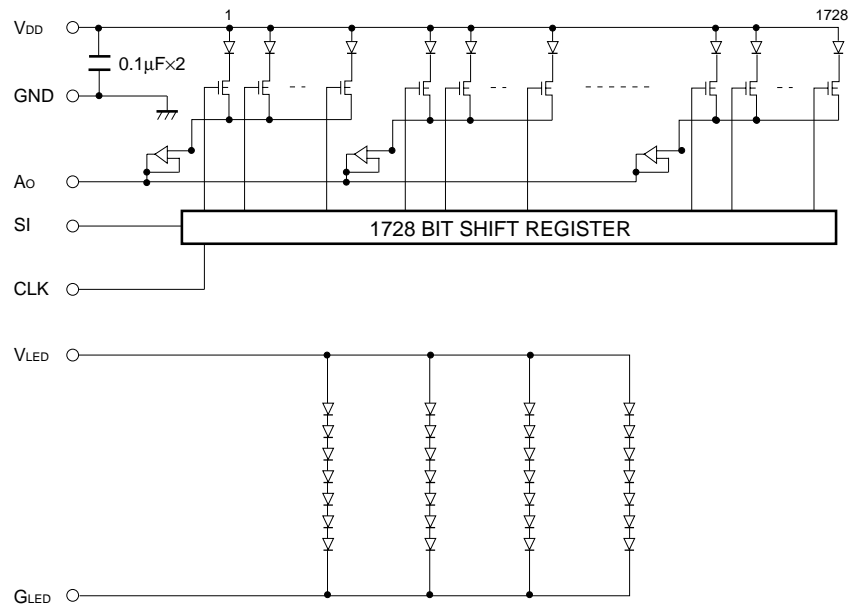


Fig.2