

EXTERNAL ISSUE

JUN 10, 1998

D. C. C.

PRODUCT
SPECIFICATION敦南科技股份有限公司
DYNA IMAGE Co.INTERNAL DATA
STRICTLY PRIVATE

PURPOSE :

TO DEFINE THE 200DPI CONTACT IMAGE SENSOR (CIS) ELECTRICAL CHARACTERISTICS, MAXIMUM RATING, AND OPERATIONAL CONDITIONS

SCOPE :

ALL DYNA IMAGE'S DL109-24A, 200DPI A-3 SIZE CONTACT IMAGE SENSOR SPECIFICATIONS

1. PRODUCT DESCRIPTION

. OUTLINE	322mm X 18mm X 18mm
. READABLE WIDTH	304mm (A-3 SIZE)
. NUMBER OF SENSOR ELEMENTS	2432
. RESOLUTION	8 dots/mm
. SCANNING SPEED	2.5 usec/line
. LIGHT SOURCE	YELLOW/GREEN LED ARRAY, WAVELENGTH 570 nm
. DATA OUTPUT	1 Analogue

2. ELECTRICAL CHARACTERISTICS AT 25 DEG. C

ITEM	SYMBOL	NOTE	MIN	TYP	MAX	UNIT
POWER SUPPLY	VDD	REF. TO GND	4.75	5.00	5.25	V
	VSS		-11.4	-12.0	-12.8	V
	VLED		22.8	24.0	25.2	V
INPUT CLK VOLTAGE	V _{IH}	SI & CLK	3.2			V
	V _{IL}				0.8	V
INPUT CLK CURRENT	I _{IH}	SI & CLK			20	uA
	I _{IL}				-0.2	uA
MAX. CLK FREQ.	F _{max}			1.0	1.25	MHz

主圖 : 200DPI, A3 CONTACT IMAGE
TITLE : SENSOR (CIS)第 1 頁
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3. ABSOLUTE MAXIMUM RATING

ITEM	SYMBOL	MAXIMUM RATING	UNIT
POWER SUPPLY	VDD	6	V
		70	mA
	VSS	-13	V
		18	mA
	VLED	28	V
	250	mA	
INPUT SIGNAL	VH	VDD + 0.5	V
	VL	-0.5	V
STORAGE TEMPERATURE	TSTG	-25 TO 70	DEG. C
STORAGE HUMIDITY	HSYG	10 TO 85	RHX
OPERATING TEMPERATURE	TOP	5 TO 50	DEG. C
OPERATING HUMIDITY	HOP	10 TO 85	RHX

主圖 : 200DPI, A3 CONTACT IMAGE
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4. RECOMMENDED OPERATING CONDITIONS AT TA=25 DEG. C

ITEM	SYMBOL	SPEC.	UNIT	NOTE
POWER SUPPLY	VDD	+5.0	V	
	VSS	-12.0	V	O.P AMP
	VLED	+24.0	V	LED VOLTAGE
BRIGHT OUTPUT	Vp	1.0 +/- 0.2	V	OD=0.05-0.09
BRIGHT OUTPUT UNIFORMITY	Up	+/- 30	%	OD=0.05-0.09
MAX DARK O/P	Vd	-200 TO 200	mV	LED OFF
DARK OUTPUT UNIFORMITY	Ud	MAX 200	mV	
MTF		MIN 30	%	3.85 lp/mm
GAMMA VALUE	γ	0.85 TO 1.1		LINEARITY

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5. PIN FUNCTIONAL DESCRIPTION

PIN#	SIGNATURE	NAME	DESCRIPTION
1	SIG	SIGNAL OUTPUT	VIDEO OUTPUT SIGNAL FROM AMPLIFIER
2	GND	GROUND	0 V DC ; REFERENCE POINT
3	VDD(+5V)	SUPPLY VOLTAGE	+5 V DC POSITIVE SUPPLY VOLT. REF. TO GND.
4.	VSS(-12V)	SUPPLY VOLTAGE	-12 V DC NEGATIVE SUPPLY VOLT. REF. TO GND
5.	GND	GROUND	0 V DC ; REFERENCE POINT
6.	SI	START PULSE	ADJUST INTEGRATION TIME
7.	GND	GROUND	0 V DC ; REFERENCE POINT
8.	CLK	CLOCK	CIS MAIN CLOCK
9.	GLED	GND FOR LED	GROUND FOR LED ARRAY
10.	VLED	VDD FOR LED	SUPPLY VOLTAGE (+24V) FOR LED ARRAY

6. DEFINITION

6.1. BRIGHT OUTPUT LEVEL IS DEFINED AS FOLLOWS:

$$V_p = \frac{V_{pmax} + V_{pmin}}{2}$$

6.2. UNIFORMITY IS DEFINED AS FOLLOWS:

$$U_p = \frac{V_{pmax} - V_p}{V_p} \times 100 (\%) \quad \text{OR} \quad U_p = \frac{V_{pmin} - V_p}{V_p} \times 100 (\%)$$

V_{pmax} : MAXIMUM OUTPUT OF WHITE DOCUMENT (O.D. = 0.05 - 0.09)
 V_{pmin} : MINIMUM OUTPUT OF WHITE DOCUMENT (O.D. = 0.05 - 0.09)

文件 : ZD00PI_A3 CONTACT IMAGE
 FILE : SENSOR (CIS)

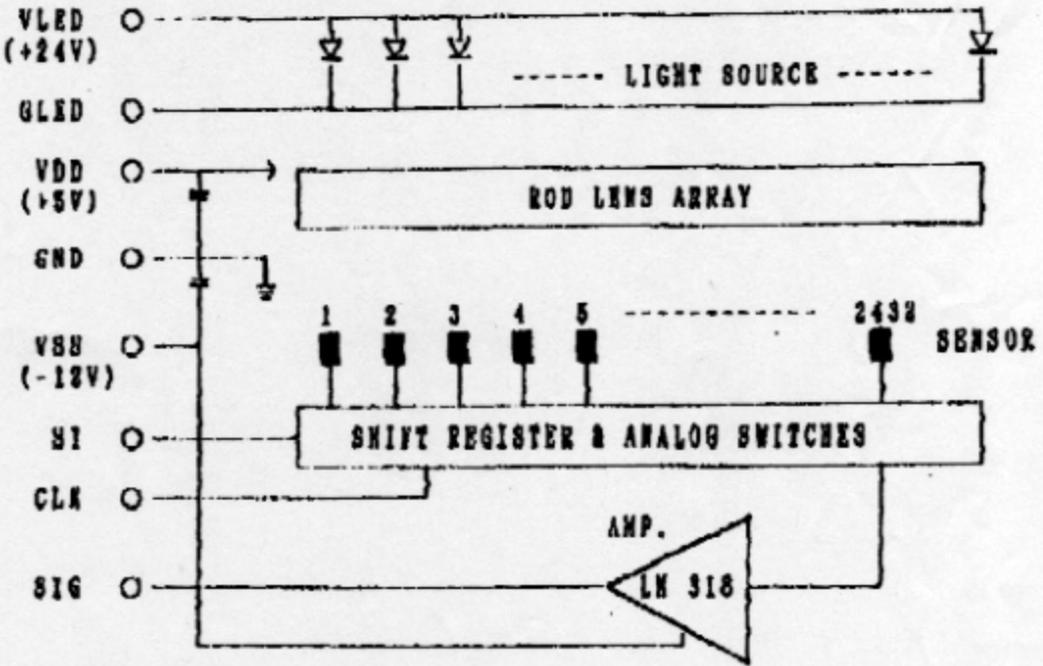
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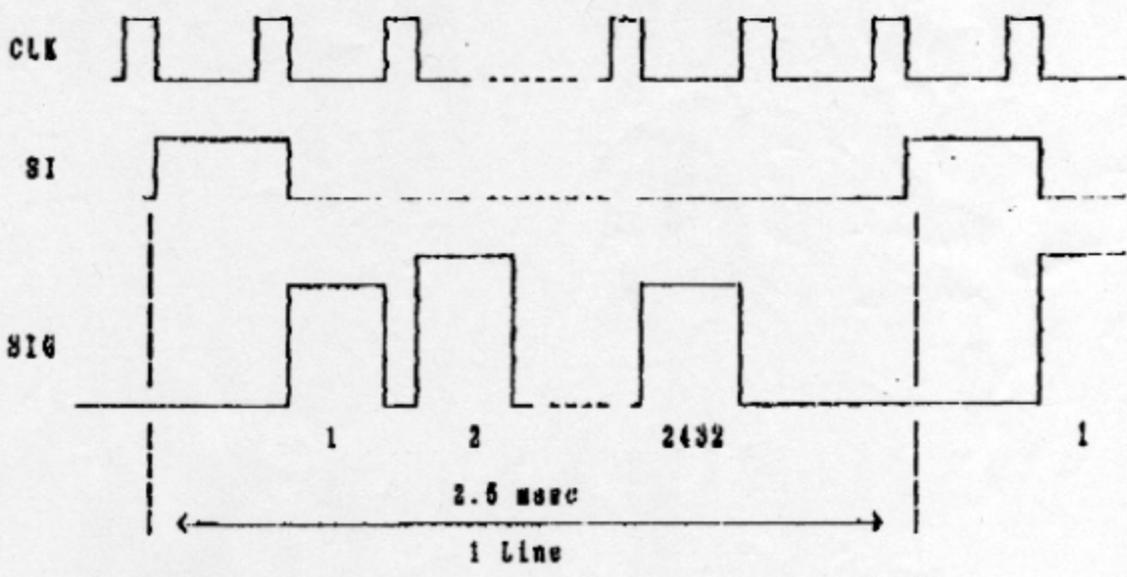
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7. BLOCK DIAGRAM

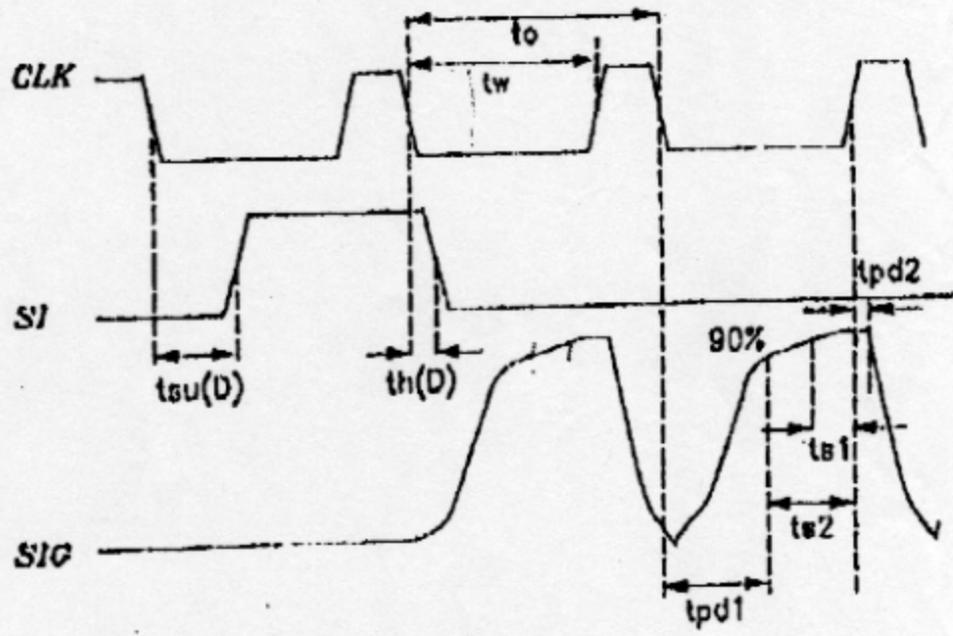


8. TIMING CHART (OUR TEST CONDITION) 1.0 MHz (H=DUTY CYCLE 25%)



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ITEM	SYMBOL	MIN	TYP	MAX	UNIT
CLOCK FREQ.	$f_{max}=1/t_o$		1.0	1.25	MHz
CLOCK DUTY	t_w/t_o		75		%
SETUP TIME	$t_{su}(D)$	0		t_w	ns
HOLD TIME	$t_h(D)$			t_w	ns
SIG DELAY TIME	t_{pd1}	0		650	ns
	t_{pd2}	0		150	ns
SIG STABLE TIME	t_{s1}	25			ns
	t_{f2}			125	ns

主圖 : 200DPI, AS CONTACT IMAGE
 副圖 : SENSOR (CIB)

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