



深圳市华源显控技术股份有限公司

Shenzhen Huayuan Display Control Technique Co., Ltd.

深圳市芯云显控技术有限公司

Shenzhen Chiloud Display Control Co., Ltd

GH240128-5102

STN DOTS LCD MODULE

SPECIFICATION

Standard code	Department	Rev No.
LC16179A-1(ROHS)		A/0
Checked by	Written by	Date
		2016-12-13

- 1. GENERAL SPECIFICATIONS**
- 2. EXTERNAL DIMENSIONS**
- 3. ELECTRICAL CHARACTERISTICS**
- 4. ABSOLUTE MAXIMUM RATINGS**
- 5. OPTICAL CHARACTERISTICS**
- 6. INTERFACE DESCRIPTION**
- 7. BLOCK DIAGRAM**
- 8. RELIABILITY TEST**

Parameter	Symbol	Min	Type	Max	Unit	
Supply voltage for logic	$V_{DD}-V_{SS}$	4.75	5.0	5.25	V	
Supply Voltage for LCD Driving	$V_{O}-V_{DD}$	Ta=0 °C	-	18		-
		Ta=25 °C	17.1	17.5		17.9
		Ta=50 °C	-	17		-
Supply Voltage for LCD Driving	V_{IH}	0.8 V_{DD}	-	$V_{DD} +0.3$		
	V_{IL}	0	-	0.2 V_{DD}		
Supply Voltage for LED	V_{LED}	-	5.0	5.2	mA	
Supply Current for LED	I_{DD}	5.0	10.0	15.0		
Supply current for LCD Driving	I_{EE}	-	-	4.2		
Supply Current for LED	I_{LED}	-	15.0	20.0		

4、 ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Min	Max	Unit	Remark
Supply voltage for logic	$V_{DD}-V_{SS}$	-0.3	+7.0	V	
Supply Voltage for LCD Driving	$V_{ADJ}-V_{SS}$	-	20.0		
Operating temperature	T_{OP}	-40	+70	°C	
Storage temperature	T_{ST}	-40	+80		

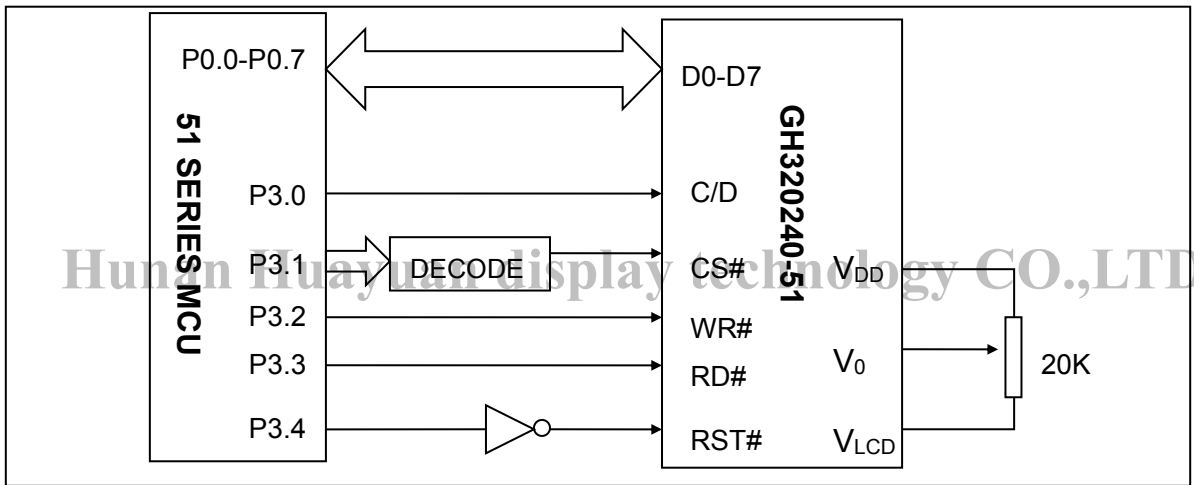
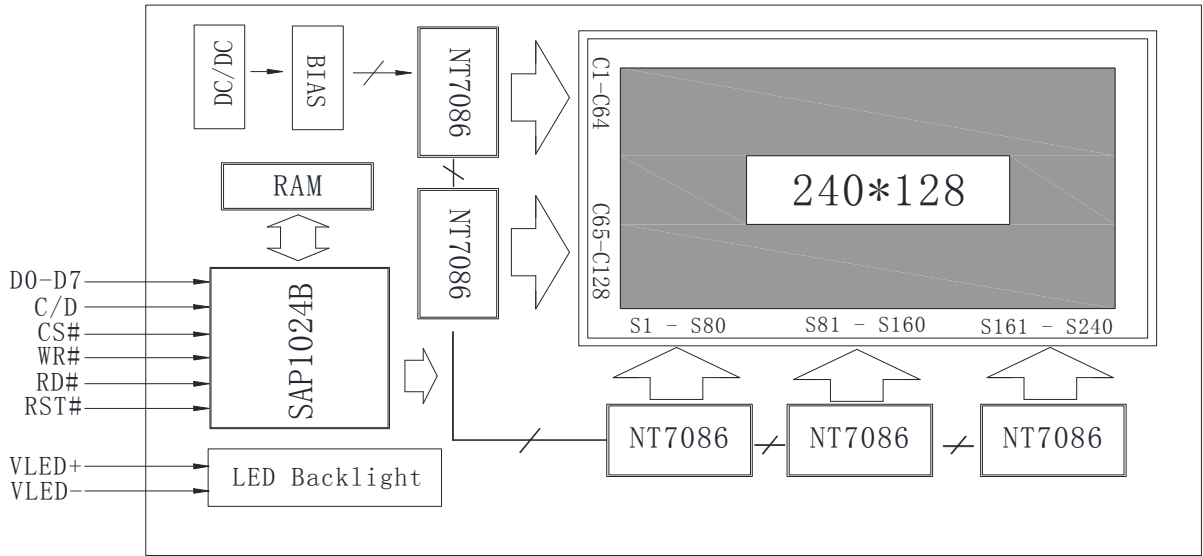
5、 OPTICAL CHARACTERISTICS

Item	Symbol	Condition	Typ	Unit	Remark
Viewing angle	$\varnothing f$	$C_{R} \geq 2$	40	Radian	$\varnothing f$
	$\varnothing b$		30		$\varnothing b$
	$\varnothing l$		30		$\varnothing l$
	$\varnothing r$		30		$\varnothing r$
Response time	T_R	$T_A = 25\text{ }^\circ\text{C}$	120	ms	
	T_F		130		
Frame Frequency	F_{RM}		64	Hz	
Contrast ratio	C_R		6.0	-	

6、 INTERFACE DESCRIPTION

PIN	DESC	Function
1	GND	Frame ground
2	VSS	Power ground
3	VDD	Power supply for Logic circuit and LCD (+5V)
4	V0	Contrast adjust
5	WR#	Write Control
6	RD#	Read Control
7	CS#	Chip Select Active L。
8	C/D	Command/Data Select or Register Select。 1: Command Write。 0: Data Write。
9	NC	NC
10	RST#	Reset signal。 RST#=L
11-18	D0-D7	Data Bus。
19	FS	Font Selection。 H: 6X8 L: 8X8
20	VLCD	LCD drive voltage by the internal display。
21	VLED+	LED+。(+5V)
22	VLED-	LED-。

7、 BLOCK DIAGRAM



8、 RELIABILITY TEST

NO	Test Project	Test Condition	Remark
1	High temperature	60℃±2℃ 24H	After testing, the appearance and electrical performance deficiencies should not happen.
2	Low temperature	-20℃±2℃ 24H	
3	High temperature and humidity test	40℃±5℃×90%RH/24H	
4	Hot and cool shock test	-10℃±2→25℃→70℃±2 (30min) (5min) (30min) 10 cycles	
5	Vibration test	10Hz-50Hz-10Hz Amplitude 1.5mm X、Y、Z each 3H	

Remark:

1. Above test number is 2 piece.
 2. Do moistureproof test, should use the pure water (10M Ω resistor ").
 3. individual products caused by electrostatic discharge failure damage, if the products will be reset after the restore to the normal state as a good use.
- When the panel protective film LCM, Tear down the labels slowly (more than a second recommendation).
- 4 Please use the automatic switching menu (or scroll) test mode, test mode of operation.
 - 5 Suggestions Use the menu to adjust the contrast model.