LCD / LCM SPECIFICATION



WINSTAR Display Co.,Ltd.

華凌光電股份有限公司

SPECIFICATION

MODULE NO.: WO320240H

General Specification

Item	Dimension	Unit
Number of dots	320 x 240 dots	—
Module dimension	94.20 x 80.60 x 6.05(MAX)	mm
View area	80.2 x 61.00	mm
Active area	76.79 x 57.59	mm
Dot size	0.23 x0.23	mm
Dot pitch	0.24x 0.24	mm
Duty	1/240 duty;1/12 bias	
Backlight Type	LED	
IC	IST3088	
Interface	6800/8080/4-Line	

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Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	T_{OP}	-20	—	+70	℃
Storage Temperature	T_{ST}	-30	—	+80	℃
Supply voltage range	V_{CC}	-0.3	—	+8.0	V
	V_0/VOUT	-0.3	—	+40	V
	V1/V2/V3/V4	-0.3	—	V_0	V

Electrical Characteristics

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage For Logic	V_{CC}-V_{SS}	—	2.8	3.0	3.3	V
Supply Voltage For LCM	V_{OP}	Ta=-20℃	—	—	—	V
		Ta=25℃	21.5	22.0	22.5	V
		Ta=+70℃	—	—	—	V
Input High Volt.	V_{IH}	—	0.8V_{CC}	—	V_{CC}	V
Input Low Volt.	V_{IL}	—	GND	—	0.2 V_{CC}	V
Output High Volt.	V_{OH}	—	0.8 V_{CC}	—	V_{CC}	V
Output Low Volt.	V_{OL}	—	GND	—	0.2 V_{CC}	V
Supply Current	I_{DD}	V_{CC}=3.0V	—	15	25	mA

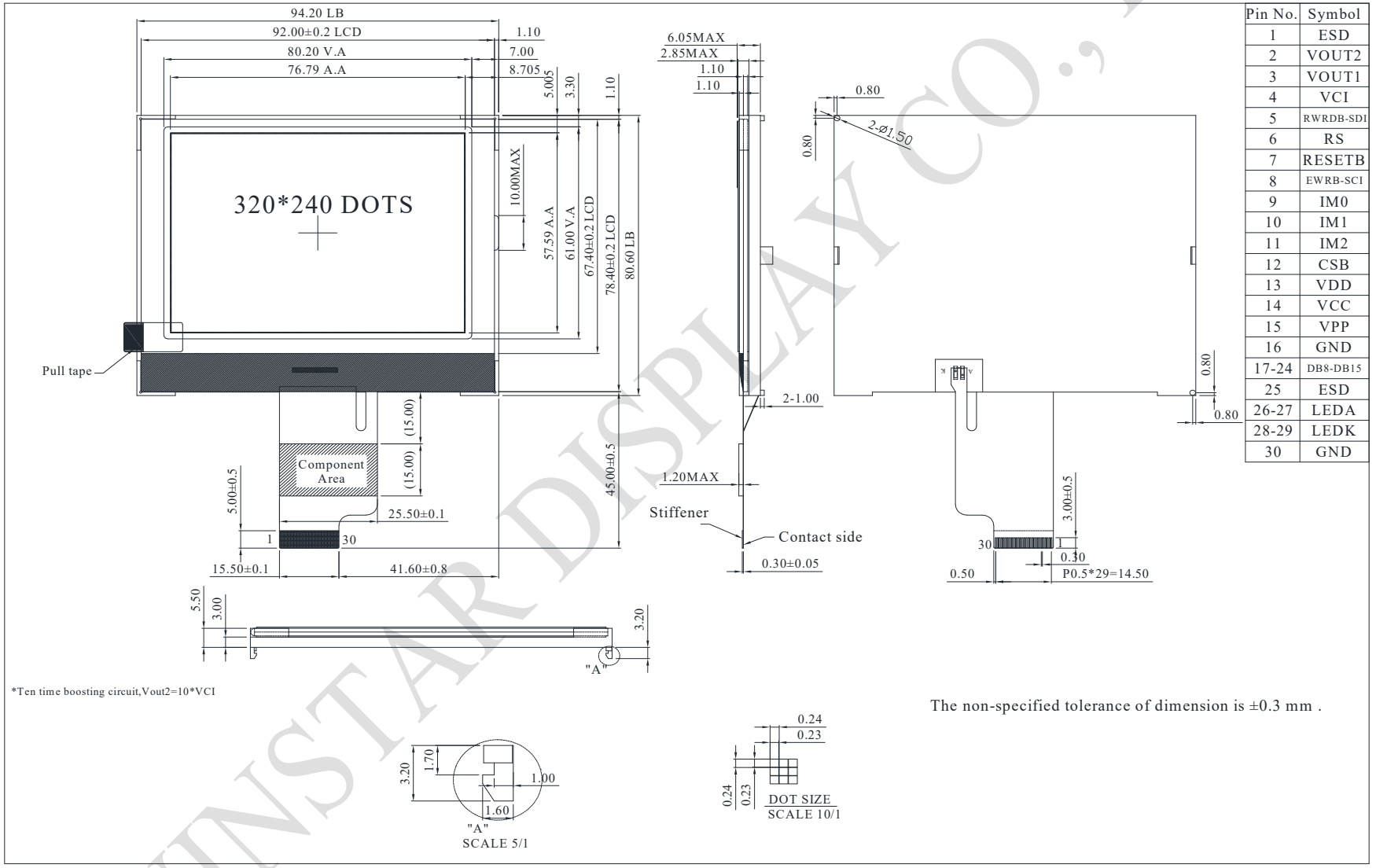
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Interface Pin Function

<table>
<tr><th>Pin</th><th>Symbol</th><th>Function Description</th></tr>
<tr><td>1</td><td>ESD</td><td>ESD</td></tr>
<tr><td>2</td><td>VOUT2</td><td>VOUT2 is the internal booster output, step-up voltage based on the difference voltage of VCI & GND.</td></tr>
<tr><td>3</td><td>VOUT1</td><td>VOUT1 is the internal booster output, step-up voltage based on the difference voltage of VCI & GND.</td></tr>
<tr><td>4</td><td>VCI</td><td>Power source</td></tr>
<tr><td>5</td><td>RWRDB-SDI</td><td>4-line serial interface</td></tr>
<tr><td>6</td><td>RS</td><td>Internal resistor select pin</td></tr>
<tr><td>7</td><td>RESETB</td><td>Reset pin</td></tr>
<tr><td>8</td><td>EWRB-SCI</td><td>4-line serial interface</td></tr>
<tr><td>9</td><td>IM0</td><td rowspan="4"><table><tr><th>IM2</th><th>IM1</th><th>IM0</th><th>MPU interface mode</th></tr><tr><td>GND</td><td>GND</td><td>VCC</td><td>68-system 8-bit bus interface</td></tr><tr><td>GND</td><td>VCC</td><td>VCC</td><td>80-system 8-bit bus interface</td></tr><tr><td>VCC</td><td>GND</td><td>GND</td><td>4-line serial interface</td></tr></table></td></tr>
<tr><td>10</td><td>IM1</td></tr>
<tr><td>11</td><td>IM2</td></tr>
<tr><td>12</td><td>CSB</td><td>Chip select</td></tr>
<tr><td>13</td><td>VDD</td><td>Power source</td></tr>
<tr><td>14</td><td>VCC</td><td>Power supply</td></tr>
<tr><td>15</td><td>VPP</td><td>External power VPP is the power pin of embedded OTP (One-Time-Programming)</td></tr>
<tr><td>16</td><td>GND</td><td>Ground</td></tr>
<tr><td>17-24</td><td>DB8-DB15</td><td>8 bit bi-directional data bus.</td></tr>
<tr><td>25</td><td>ESD</td><td>ESD</td></tr>
<tr><td>26-27</td><td>LEDA</td><td>Backlight A</td></tr>
<tr><td>28-29</td><td>LEDK</td><td>Backlight K</td></tr>
<tr><td>30</td><td>GND</td><td>Ground</td></tr>
</table>

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Contour Drawing



Pin No.	Symbol
1	ESD
2	VOUT2
3	VOUT1
4	VCI
5	RWRDB-SDI
6	RS
7	RESETB
8	EWRB-SCI
9	IM0
10	IM1
11	IM2
12	CSB
13	VDD
14	VCC
15	VPP
16	GND
17-24	DB8-DB15
25	ESD
26-27	LEDA
28-29	LEDK
30	GND

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