LCD / LCM SPECIFICATION



WINSTAR Display Co.,Ltd.

華凌光電股份有限公司

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SPECIFICATION

MODULE NO.: WO256128-XXXA#FC

General Specification

Item	Dimension	Unit
Number of dots	256 x 128	—
Module dimension	80.0 x 54.0 x 9.5	mm
View area	70.7 x 38.8	mm
Active area	66.54 x 33.26	mm
Dot size	0.24 x0.24	mm
Dot pitch	0.26 x 0.26	mm
LCD type	FSTN Negative (Double film) Transmissive (In LCD production, It will occur slightly color difference. We can only guarantee the same color in the same batch.)	
Drive Method	1/128 DUTY,1/12 BIAS	
View direction	6 o'clock	
Backlight Type	LED, White	
IC	ST75256	

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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	℃
MPU Interface Input Voltage	V_{IN}	-0.3	—	V_{DD}+0.3	V
Digital Power Supply Voltage	V_{DD}-Vss	-0.3	—	4.0	V
LCD Power supply voltage	V0- XV0	-0.3	—	19.0	V

Electrical Characteristics

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage For Logic	V_{DD}-V_{SS}	—	3.0	3.3	3.6	V
Supply Voltage For LCM	V_{OP}	Ta=-20℃	—	—	—	V
		Ta=25℃	14.2	14.5	14.8	V
		Ta=70℃	—	—	—	V
Input High Volt.	V_{IH}	—	0.7 V_{DD}	—	V_{DD}	V
Input Low Volt.	V_{IL}	—	V_{SS}	—	0.3 V_{DD}	V
Output High Volt.	V_{OH}	—	0.8 V_{DD}	—	V_{DD}	V
Output Low Volt.	V_{OL}	—	V_{SS}	—	0.2 V_{DD}	V
Supply Current	I_{DD}	V_{DD}=3.3V	—	1.5	—	mA

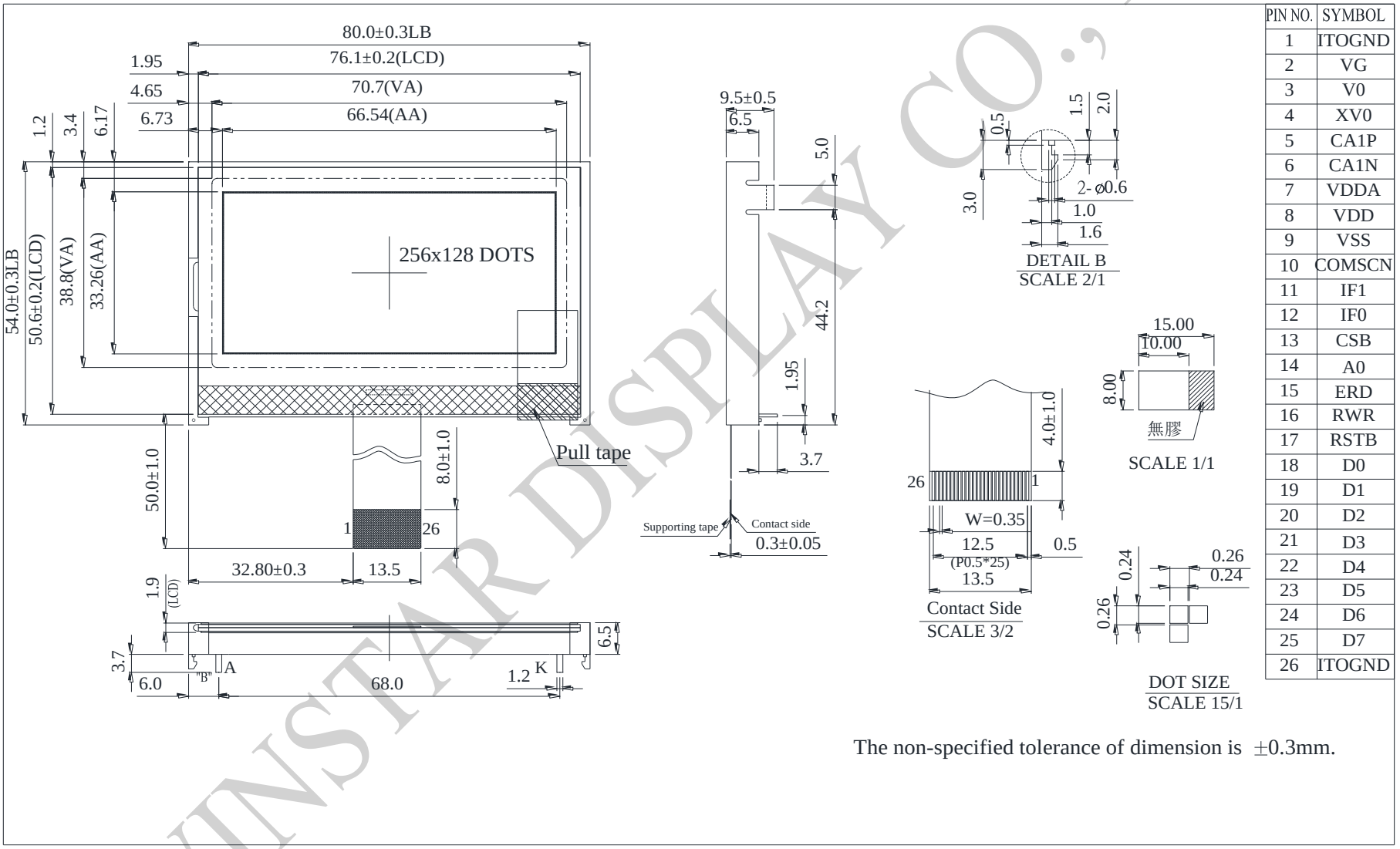
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Interface Pin Function

<table>
<tr><th>Pin No.</th><th>Symbol</th><th>Description</th></tr>
<tr><td>1</td><td>ITOGND</td><td>ESD PIN</td></tr>
<tr><td>2</td><td>VG</td><td>Power of SEG-drivers</td></tr>
<tr><td>3</td><td>V0</td><td>Positive operating voltage of COM-drivers</td></tr>
<tr><td>4</td><td>XV0</td><td>Negative operating voltage of COM-drivers</td></tr>
<tr><td>5</td><td>CA1P</td><td>DC/DC Voltage converte pin</td></tr>
<tr><td>6</td><td>CA1N</td><td>DC/DC Voltage converte pin</td></tr>
<tr><td>7</td><td>VDDA</td><td>+3.3V</td></tr>
<tr><td>8</td><td>VDD</td><td>+3.3V</td></tr>
<tr><td>9</td><td>VSS</td><td>ground</td></tr>
<tr><td>10</td><td>COMSCN</td><td>Set scan directing of COM</td></tr>
<tr><td>11</td><td>IF1</td><td rowspan="2">These pins select interface operation mode.
<table><tr><th>IF1</th><th>IF0</th><th>MPU interface type</th></tr><tr><td>L</td><td>L</td><td>4-line serial interface</td></tr><tr><td>L</td><td>H</td><td>IIC serial interface</td></tr><tr><td>H</td><td>L</td><td>8-bit 6800 parallel interface</td></tr><tr><td>H</td><td>H</td><td>8-bit 8080 parallel interface</td></tr></table>Note: Refer to "Parallel / Serial Interface" for detailed information.</td></tr>
<tr><td>12</td><td>IF0</td></tr>
<tr><td>13</td><td>CSB</td><td>Chip select input pin</td></tr>
<tr><td>14</td><td>A0</td><td>Whether the access is related to data or command</td></tr>
<tr><td>15</td><td>ERD</td><td>Read or write enable terminal</td></tr>
<tr><td>16</td><td>RWR</td><td>Read/Write execution control pin</td></tr>
<tr><td>17</td><td>RSTB</td><td>Reset input pin</td></tr>
<tr><td>18~25</td><td>D0~D7</td><td>Data bus line</td></tr>
<tr><td>26</td><td>ITOGND</td><td>ESD PIN</td></tr>
</table>

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Contour Drawing



PIN NO.	SYMBOL
1	ITOGND
2	VG
3	V0
4	XV0
5	CA1P
6	CA1N
7	VDDA
8	VDD
9	VSS
10	COMSCN
11	IF1
12	IF0
13	CSB
14	A0
15	ERD
16	RWR
17	RSTB
18	D0
19	D1
20	D2
21	D3
22	D4
23	D5
24	D6
25	D7
26	ITOGND

The non-specified tolerance of dimension is ±0.3mm.

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