



WINSTAR Display Co.,Ltd.
華凌光電股份有限公司

SPECIFICATION

MODULE NO.: WG320240D1

General Specification

Item	Dimension	Unit
Number of dots	320 x 240	—
Module dimension	142.0 x 96.0 x 15.7 (MAX)	mm
View area	104.0 x 79.3	mm
Active area	95.97 x 71.97	mm
Dot size	0.27 x 0.27	mm
Dot pitch	0.30 x 0.30	mm
Duty	1/240	
Backlight Type	LED	

Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	T_{OP}	-20	—	+70	°C
Storage Temperature	T_{ST}	-30	—	+80	°C
Input voltage	V_{IN}	-0.3	—	$V_{DD}+0.3$	V
Supply Voltage For Logic	$V_{DD}-V_{SS}$	-0.3	—	7.0	V
Supply Voltage For LCD	$V_{DD}-V_0$	0	—	32	V

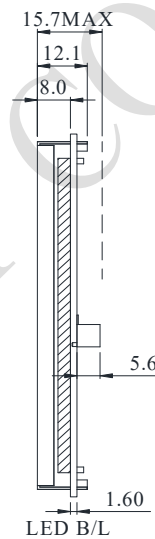
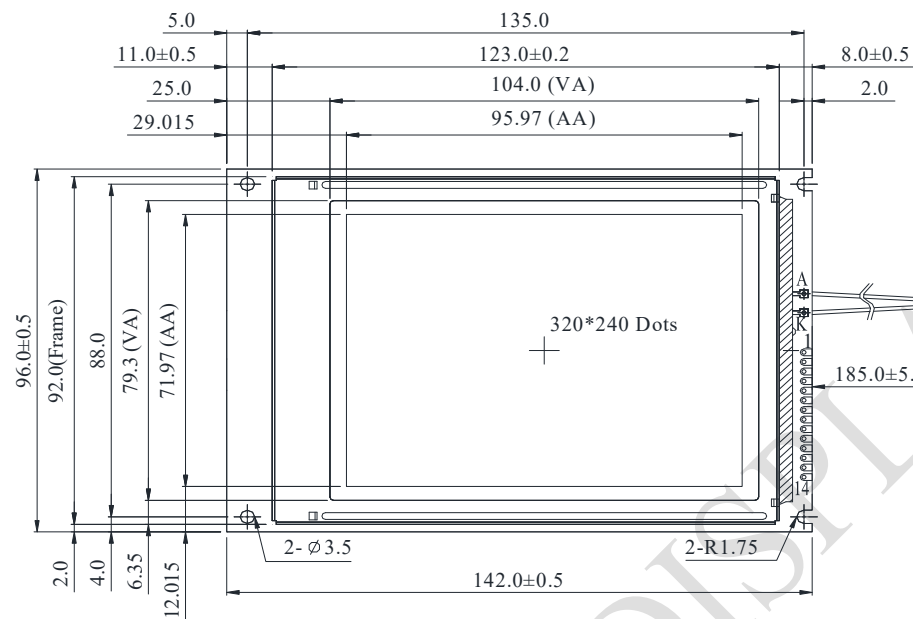
Electrical Characteristics

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage For Logic	$V_{DD}-V_{SS}$	—	2.7	—	5.5	V
Supply Voltage For LCD	$V_{DD}-V_0$	$T_a=-20^{\circ}\text{C}$	—	—	23.5	V
		$T_a=25^{\circ}\text{C}$	21.0	21.6	22.2	V
		$T_a=+70^{\circ}\text{C}$	19.8	—	—	V
Input High Volt.	V_{IH}	—	$0.8V_{DD}$	—	V_{DD}	V
Input Low Volt.	V_{IL}	—	0	—	$0.2V_{DD}$	V
Output High Volt.	V_{OH}	—	$V_{DD}-0.4$	—	V_{DD}	V
Output Low Volt.	V_{OL}	—	0	—	0.4	V
Supply Current	I_{DD}	—	—	79	120	mA

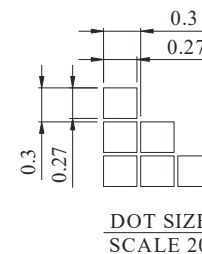
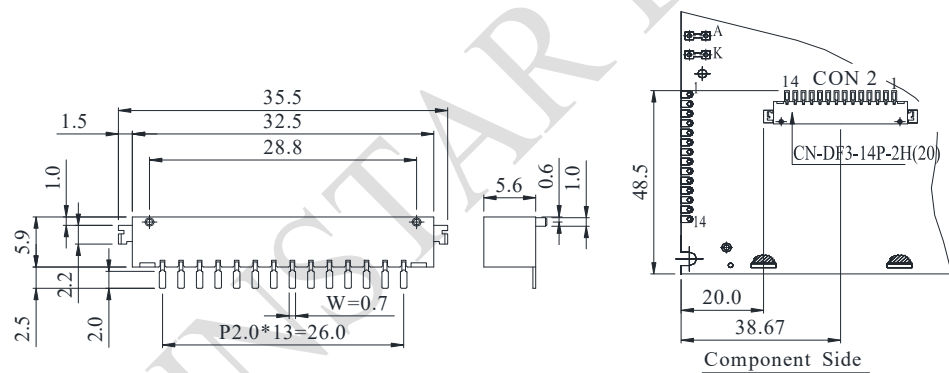
Interface Pin Function

Pin No.	Symbol	Level	Description
1	FRAME	H/L	Scan start-up signal
2	DF	H/L	Frame reverse signal(alternate signal)
3	LOAD	H to L	Data latch pulse
4	CP	H to L	Data shift pulse
5	DISPOFF	H/L	H: Display ON, L: Display OFF
6	D0	H/L	Display data, bit0
7	D1	H/L	Display data, bit1
8	D2	H/L	Display data, bit2
9	D3	H/L	Display data, bit3
10	V _{DD}	5.0V	Power supply for Logic
11	V _{SS}	0V	Ground
12	V _{EE}	-25	Negative Voltage Output
13	V _O	(Variable)	Driving voltage for LCD
14	FG		Frame Ground

Contour Drawing



PIN NO.	SYMBOL
1	FRAME
2	DF
3	LOAD
4	CP
5	DISPOF
6	D0
7	D1
8	D2
9	D3
10	VDD
11	VSS
12	VEE
13	V0
14	FG



The non-specified tolerance of dimension is $\pm 0.3\text{mm}$.