



WINSTAR Display Co.,Ltd.
華凌光電股份有限公司

SPECIFICATION

MODULE NO.:

WH1202A2

General Specification

Item	Dimension	Unit
Number of Characters	12 characters x 2Lines	—
Module dimension	55.7 x 32.0 x 14.5(MAX)	mm
View area	46.0 x 14.5	mm
Active area	37.85 x 11.7	mm
Dot size	0.45 x 0.60	mm
Dot pitch	0.55 x 0.70	mm
Character size	2.65 x 5.50	mm
Character pitch	3.20 x 6.20	mm
Duty	1/16	
Backlight Type	LED	
IC	RW1063	
Interface	IIC	

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	—	5.5	V
Supply Voltage For LCD	$V_{DD}-V_0$	$V_{SS}-0.3$	—	$V_{SS}+7.0$	V

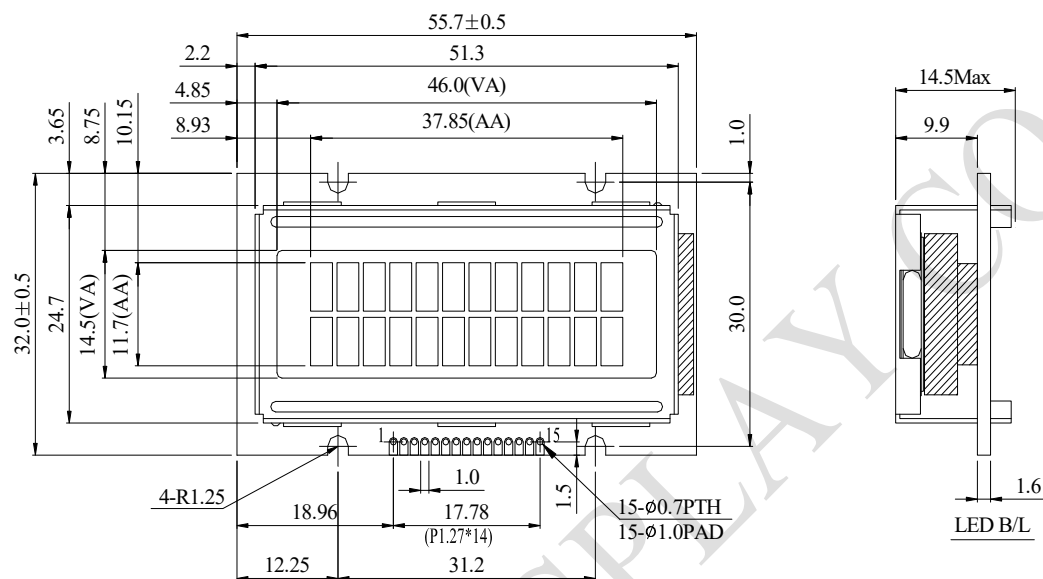
Electrical Characteristics

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage For Logic	$V_{DD}-V_{SS}$	—	4.5	5.0	5.5	V
Supply Voltage For LCD	$V_{DD}-V_0$	$T_a=-20^{\circ}\text{C}$	—	—	5.7	V
		$T_a=25^{\circ}\text{C}$	4.1	4.2	4.3	V
		$T_a=70^{\circ}\text{C}$	3.5	—	—	V
Input High Volt.	V_{IH}	—	2.5	—	V_{DD}	V
Input Low Volt.	V_{IL}	—	-0.3	—	0.6	V
Output High Volt.	V_{OH}	—	3.9	—	V_{DD}	V
Output Low Volt.	V_{OL}	—	—	—	0.4	V
Supply Current	I_{DD}	$V_{DD}=5.0\text{V}$	0.5	1.0	2.0	mA

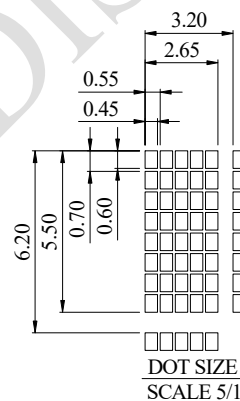
Interface Pin Function

Pin No.	Symbol	Level	Description
1	V _{SS}	0V	Ground
2	V _{DD}	5.0V	Supply Voltage for logic
3	VO	(Variable)	Operating voltage for LCD
4	NC	—	No connection
5	NC	—	No connection
6	NC	—	No connection
7	SA0	H/L	In IIC interface ,DB1(SA1) and DB0(SA0) are used for Slave address, must be connect to VDD or VSS
8	SA1	H/L	
9	NC	—	No connection
10	NC	—	No connection
11	NC	—	No connection
12	CSB	H/L	In IIC serial mode, used as chip selection input. When CSB = “Low”, selected When CSB = “High”, not selected. (Low access enable)
13	SDA	H/L	serial input data
14	SCL	H/L	serial clock input
15	A	—	LED+

Contour Drawing



PIN NO.	SYMBOL
1	Vss
2	Vdd
3	Vo
4	NC
5	NC
6	NC
7	SA0
8	SA1
9	NC
10	NC
11	NC
12	CSB
13	SDA
14	SCL
15	A



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