



**WINSTAR Display Co.,Ltd.**  
**華凌光電股份有限公司**

## SPECIFICATION

**MODULE NO.: WO2004C**

### General Specification

Item	Dimension	Unit
Module dimension	68.3 x 36.4 x 6.0	mm
View area	60.5 x 22.18	mm
Active area	58.5 x 20.18	mm
Dot size	0.45x 0.54	mm
Dot pitch	0.50 x 0.59	mm
Character size	2.45 x 4.67	mm
Character pitch	2.95 x 5.17	mm
Duty	1/33DUTY,1/6BIAS	
Backlight Type	LED	
IC	IST3602	
Interface	I2C	

## Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	TOP	-20	—	+70	°C
Storage Temperature	TST	-30	—	+80	°C
Input Voltage	VIN	-0.3	—	V <sub>DD</sub> +0.3	V
Power Supply Voltage	V <sub>DD</sub>	-0.3	—	4.0	V
LCD Driver Voltage	VLCD	-0.3	—	18.0	V

## Electrical Characteristics

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage For Logic	V <sub>DD</sub>	—	2.7	3.0	3.3	V
Supply Voltage For LCD	V <sub>O</sub> -V <sub>SS</sub>	Ta=-20°C	—	—	—	V
		Ta=25°C	7.6	7.8	8.0	V
		Ta=70°C	—	—	—	V
Input High Volt.	V <sub>IH</sub>	—	0.8 V <sub>DDIO</sub>	—	V <sub>DD</sub>	V
Input Low Volt.	V <sub>IL</sub>	—	V <sub>SS</sub>	—	0.2 V <sub>DD</sub>	V
Output High Volt.	V <sub>OH</sub>	—	0.8 V <sub>DDIO</sub>	—	V <sub>DD</sub>	V
Output Low Volt.	V <sub>OL</sub>	—	—	—	0.2 V <sub>DD</sub>	V
Supply LCM current	IDD	VDD=3.0V	—	0.5	—	mA

# Interface Pin Function

Pin	Symbol	Function Description
1	ITO ESD	Ground
2	V0	LCD Power Supply
3	VSS	Ground(VSS2&VSS3)
4	VDD	Power Supply(VDD2&VDD3)
5	VSS1	Ground(VSS1)
6	VDD1	Power Supply(VDD1)
7	SDA	Serial input data
8	SCL	Serial input clock
9	RESB	Hardware Reset input pin
10	ITO ESD	Ground
11	K	LED-
12	A	LED+

# Contour Drawing

