Winstar Display Co., LTD
華凌光電股份有限公司
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SPECIFICATION

CUSTOMER : _____

MODULE NO.: WG12232G-YYH-NE#J

APPROVED BY: (FOR CUSTOMER USE ONLY)	**PCB VERSION:** **DATA:**

SALES BY	APPROVED BY	CHECKED BY	PREPARED BY

VERSION	DATE	REVISED PAGE NO.	SUMMARY
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3.General Specification

Item	Dimension	Unit
Number of dots	122 x 32	—
Module dimension	65.4 x 28.2 x 6.8 (MAX)	mm
View area	54.8 x 19.0	mm
Active area	48.76 x 14.36	mm
Dot size	0.36 x 0.41	mm
Dot pitch	0.40 x 0.45	mm
LCD type	STN Positive, Yellow Green Transflective (In LCD production, It will occur slightly color difference. We can only guarantee the same color in the same batch.)	
Duty	1/32	
View direction	6 o'clock	
Backlight Type	LED, Yellow Green	
IC	AIP31520	
Interface	68 series	

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4.Absolute Maximum Ratings

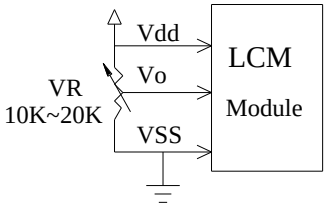
Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	T_{OP}	-20	—	+70	℃
Storage Temperature	T_{ST}	-30	—	+80	℃
Input Voltage	V_I	-0.3	—	V_{DD}+0.3	V
Supply Voltage For Logic	V_{DD}-V_{SS}	-0.3	—	+6.0	V
LCD bias voltage	V_{LCD}	3.5	—	13	V

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5.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 * Note	V_{DD}-V_0	Ta=-20℃	—	—	5.3	V
		Ta=25℃	4.6	4.7	4.8	V
		Ta=+70℃	4.2	—	—	V
Input High Volt.	V_{IH}	—	2		5	V
Input Low Volt.	V_{IL}	—	0	—	+0.8	V
Output High Volt.	V_{OH}	—	4.1	—	V_{DD}	V
Output Low Volt.	V_{OL}	—	V_{SS}	—	V_{SS}+0.4	V
Supply Current	I_{DD}	V_{DD}=5.0V	—	1.0	—	mA

* Note: Please design the VOP adjustment circuit on customer's main board



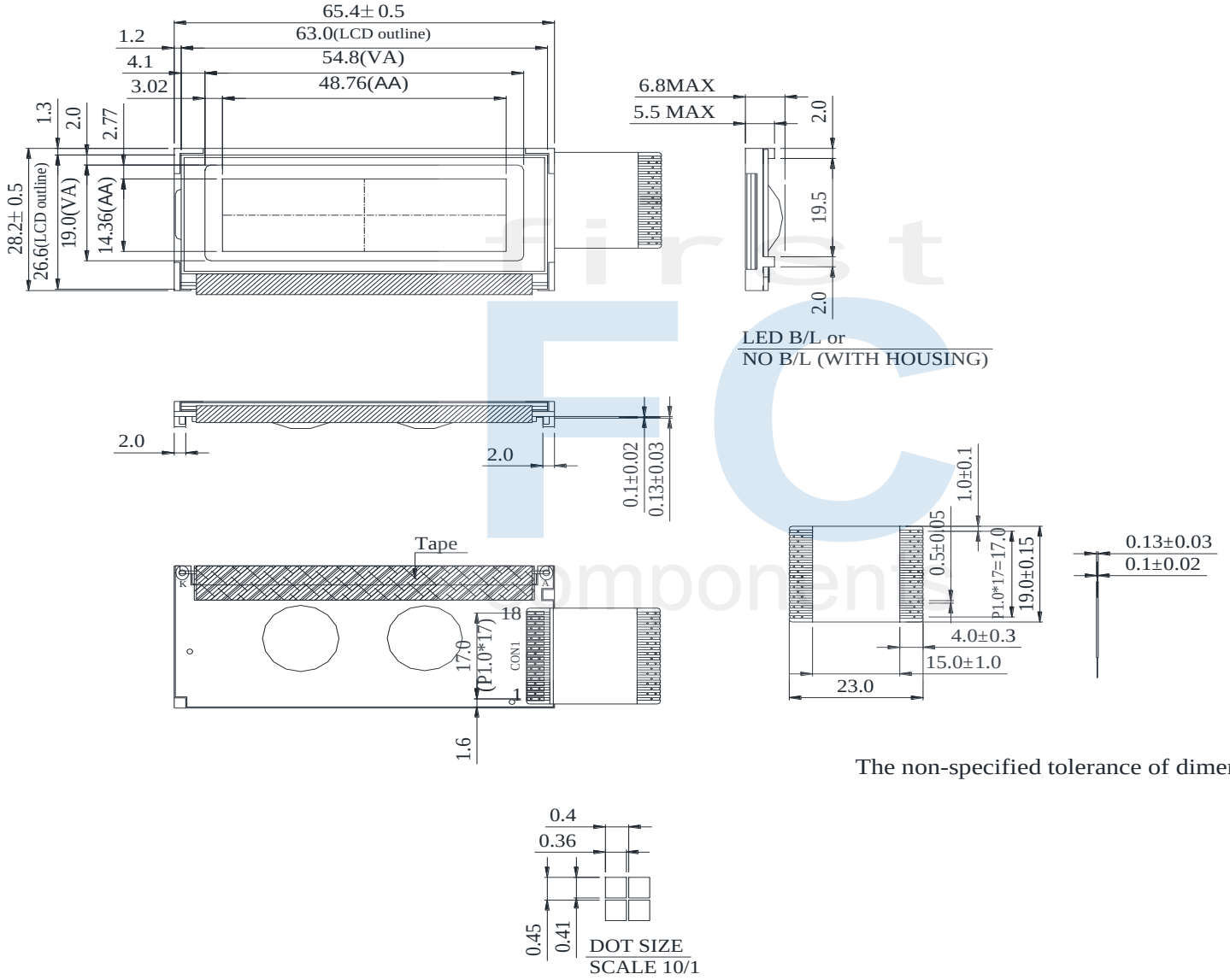
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7.Interface Pin Function

Pin No.	Symbol	Level	Description
1	VDD	5.0V	Supply voltage for logic
2	VSS	0V	Ground
3	Vo	(Variable)	Operating voltage for LCD
4	RES	H/L	Reset the LCD display , active " L "
5	E1	H/L	Chip select signal for IC1 ,active " H "
6	E2	H/L	Chip select signal for IC2 , active " H "
7	R/W	H/L	H : Read ; L : Write
8	A0	H/L	H : Data L : Instruction
9	DB0	H/L	Data bus line
10	DB1	H/L	Data bus line
11	DB2	H/L	Data bus line
12	DB3	H/L	Data bus line
13	DB4	H/L	Data bus line
14	DB5	H/L	Data bus line
15	DB6	H/L	Data bus line
16	DB7	H/L	Data bus line
17	A	—	Power Supply for LED backlight (+)
18	K	—	Power Supply for LED backlight (-)

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8.Contour Drawing &Block Diagram



PIN NO.	SYMBOL
1	Vdd
2	Vss
3	Vo
4	RES
5	E1
6	E2
7	R/$\overline{W}$
8	A0
9	DB0
10	DB1
11	DB2
12	DB3
13	DB4
14	DB5
15	DB6
16	DB7
17	A
18	K

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

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