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

CUSTOMER : _____

MODULE NO.: WF28-240320ED#001-FC

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General Specifications

Item	Dimension	Unit
Size	2.8”	
Dot Matrix	240 x RGB x 320(TFT)	dots
Module dimension	50.0(W) x 69.2(H) x 3.6(D)	mm
Active area	43.2 x 57.6	mm
Dot pitch	0.06 x 0.18	mm
LCD type	TFT, Normally White, Transmissive	
View Direction	6 o’clock	
Gray Scale Inversion Direction	12 o’clock	
Aspect Ratio	Portrait	
Backlight Type	LED,Normally White	
With /Without TP	With RTP	
Surface	Glare	

*Color tone slight changed by temperature and driving voltage.

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Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	TOP	-20	—	+70	℃
Storage Temperature	TST	-30	—	+80	℃

Note: Device is subject to be damaged permanently if stresses beyond those absolute maximum ratings listed above

1. Temp. ≦40℃, 90% RH MAX. Temp.＞40℃, Absolute humidity shall be less than 90% RH at 40℃

Electrical Characteristics

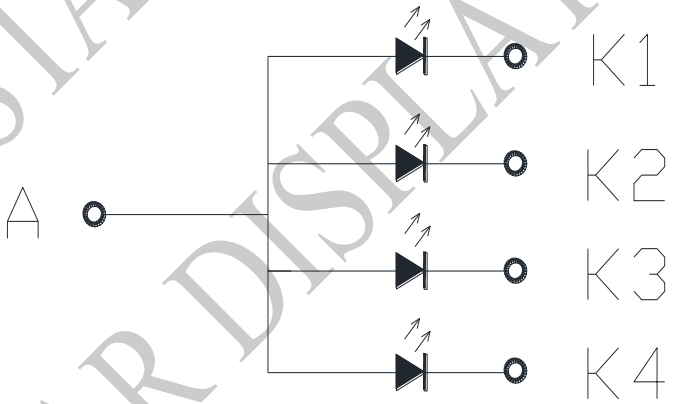
Operating conditions:

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage For Analog	VCI	—	2.5		3.3	V
Supply Voltage For Logic	IOVCC		1.65		3.3	V
Supply Current For LCM	ICC	—	—	5	7.5	mA

LED driving conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
LED current		-	80	-	mA	
Power Consumption		224	256	272	mW	
LED voltage	VBL+	2.9	3.2	3.4	V	Note 1
LED Life Time		-	30,000	-	Hr	Note 2,3,4

Note 1 : There are 1 Groups LED



Note 2 : Ta = 25 ℃

Note 3 : Brightness to be decreased to 50% of the initial value

Note 4 : The single LED lamp case

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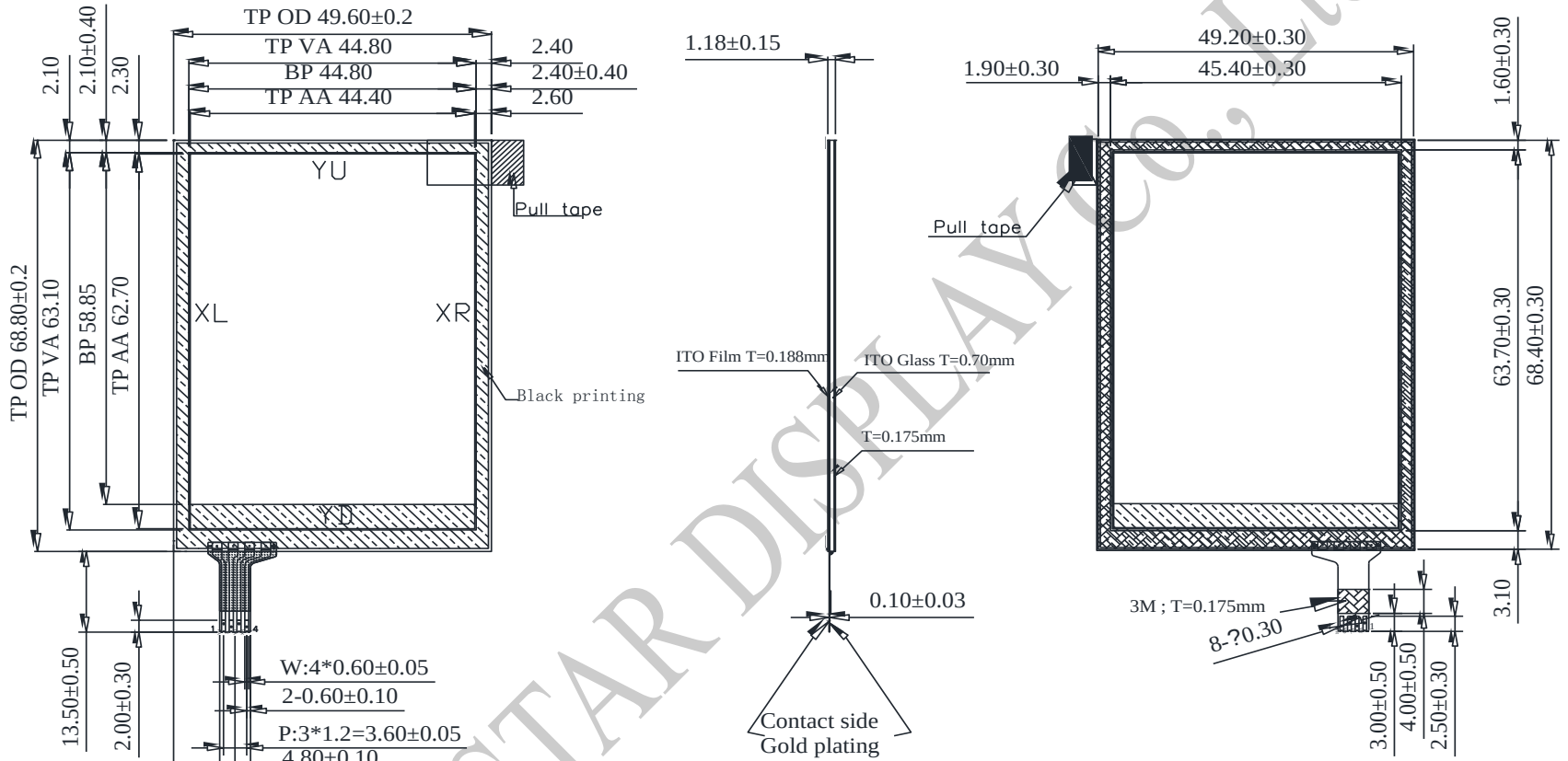
Interface

LCM PIN Definition

NO	Symbol	Function	I/O
1~4	DB8~DB11	Data bus	I/O
5	GND	Ground	P
6	IOVCC	power supply	P
7	/CS	Chip select signal.	I
8	RS	register select	I
9	/WR	Write data when WRX is Low.	I
10	/RD	Read strobe signal. Read out data when RDX is Low.	I
11	GND	Ground	P
12	XL	Left electrode	-
13	YU	Top electrode	-
14	XR	Right electrode	-
15	YD	Bottom electrode	-
16	LEDA	Anode of LED backlight.	P
17~20	LEDK1~4	Cathode of LED backlight.	P
21	IM0	IM0=0 8Bit DB8-15; IM0=1 16Bit DB0-DB15;	P
22	DB12	Data bus	I/O
23~30	DB0~DB7	Data bus	I/O
31	/RESET	System reset pin.	I
32~33	VCI	power supply	P
34	GND	Ground	P
35~37	DB13~DB15	Data bus	I/O

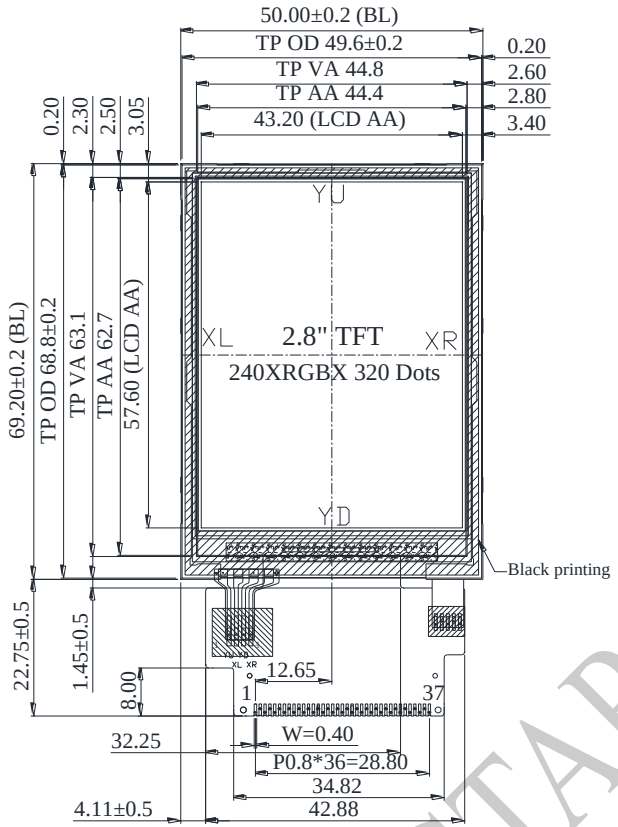
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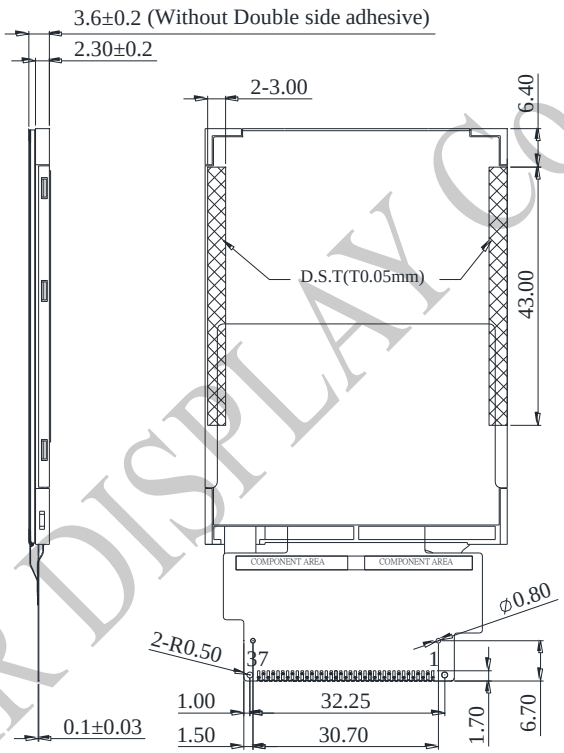
Touch Panel Information



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Contour Drawing





PIN NO.	SYMBOL
1	DB8
2	DB9
3	DB10
4	DB11
5	GND
6	IOVCC
7	/CS
8	RS
9	/WR
10	/RD
11	GND
12	XL
13	YU
14	XR
15	YD
16	LED-A
17	LED-K1
18	LED-K2
19	LED-K3
20	LED-K4

PIN NO.	SYMBOL
21	IMO
22	DB12
23	DB0
24	DB1
25	DB2
26	DB3
27	DB4
28	DB5
29	DB6
30	DB7
31	/RESET
32	VCI
33	VCI
34	GND
35	DB13
36	DB14
37	DB15

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

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