

TFT DISPLAY SPECIFICATION



WINSTAR Display Co.,Ltd.
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SPECIFICATION

MODULE NO.: WF0128BTYAA4DNN0#

General Specifications

Item	Dimension	Unit
Size	1.28	inch
Dot Matrix	240 x RGB x 240 (TFT)	dots
Module dimension	35.60 x 37.74 x 1.56	mm
Active area	32.40 x 32.40	mm
Dot pitch	0.043 x 0.135	mm
LCD type	TFT, Normally Black, Transmissive	
Viewing Angle	80/80/80/80	
TFT Interface	SPI	
Backlight Type	LED ,Normally White	
Driver IC	GC9A01	
Touch Panel	Without Touch Panel	
Surface	Anti-Glare	

*Color tone slight changed by temperature and driving voltage.



Absolute Maximum Ratings

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

Electrical Characteristics

Operating conditions

Item	Symbol	Conditions	Standard Value			Unit
			Min	Typ	Max	
Power Supply Voltage for Analog	VCI	Ta= +25°C	2.7	2.8	3.3	V
Input High Voltage for LCD	VIH	-	0.8lovcc	-	lovcc	V
Input Low Voltage for LCD	VIL	-	Vss	-	0.2 lovcc	V
Output High Voltage for LCD	VOH	-	0.8lovcc	-	lovcc	V
Output Low Voltage for LCD	VOL	-	Vss	-	0.2 lovcc	V



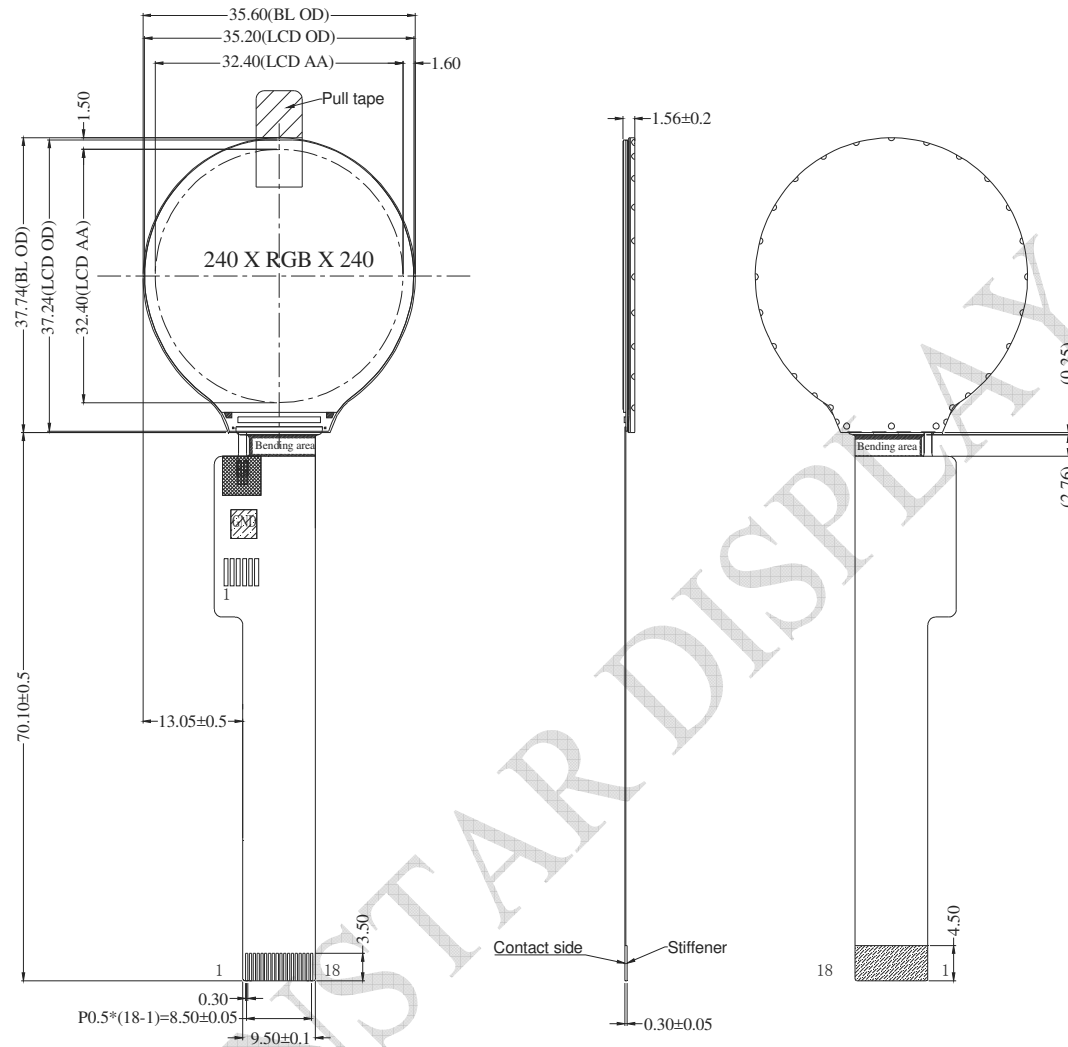
Interface

LCM PIN Definition

Pin	Symbol	Function	Remark
1-6	NC	No connection	
7	VLED+	Backlit positive	
8	VLED-	Backlit negative	
9	GND	Ground	
10	CS	Chip select signal	
11	SCL	Serial clock	
12	SDA	Serial data signal	
13	RS	Register select signal	
14	TE	TE signal	
15	RESET	LCD RESET Signal	
16	VCI3.3V	LCD Power supply	
17	NC	No connection	
18	GND	Ground	



Contour Drawing



PIN NO.	SYMBOL
1	NC
2	NC
3	NC
4	NC
5	NC
6	NC
7	VLED+
8	VLED-
9	GND
10	CS
11	SCL
12	SDA
13	RS
14	TE
15	RESET
16	VCI3.3V
17	NC
18	GND

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



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SPECIFICATION

MODULE NO.: WF0128BTYAA4DNF10#

General Specifications

Item	Dimension	Unit
Size	1.28	inch
Dot Matrix	240 x RGB x 240 (TFT)	dots
Module dimension	50.20 x 50.20 x 3.99	mm
Active area	32.40 x 32.40	mm
Dot pitch	0.043 X 0.135	mm
LCD type	TFT, Normally Black, Transmissive	
Viewing Angle	80/80/80/80	
TFT Interface	SPI	
Backlight Type	LED ,Normally White	
TFT Driver IC	GC9A01	
PCA Driver IC	CST816D or Equivalent	
CTP Support Operation	Support single-finger touch & gesture	
CTP Interface	I2C	
CTP FW Version	0X1	
CTP Resolution	240*240	
Touch Panel	Projected capacitive touch screen (PCAP)	
Surface	Glare	

*Color tone slight changed by temperature and driving voltage.



Absolute Maximum Ratings

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

Electrical Characteristics

1. Operating conditions

Item	Symbol	Conditions	Standard Value			Unit
			Min	Typ	Max	
Power Supply Voltage for Analog	VCI	Ta= +25°C	2.65	2.8	3.3	V
Supply CTP	TP_VDD3. 3	Ta= +25°C	2.65	2.8	3.3	V
	ICTP	Ta= +25°C	-	3.0	4.5	mA
Input High Voltage for LCD	VIH	-	0.8Iovcc	-	Iovcc	V
Input Low Voltage for LCD	VIL	-	Vss	-	0.2 Iovcc	V
Output High Voltage for LCD	VOH	-	0.8Iovcc	-	Iovcc	V
Output Low Voltage for LCD	VOL	-	Vss	-	0.2 Iovcc	V

2. LED driving conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit
LED current	-	-	40	-	mA
LED voltage	VLED+	3.0	3.2	3.4	V
LED Life Time	-	-	20,000	-	Hr



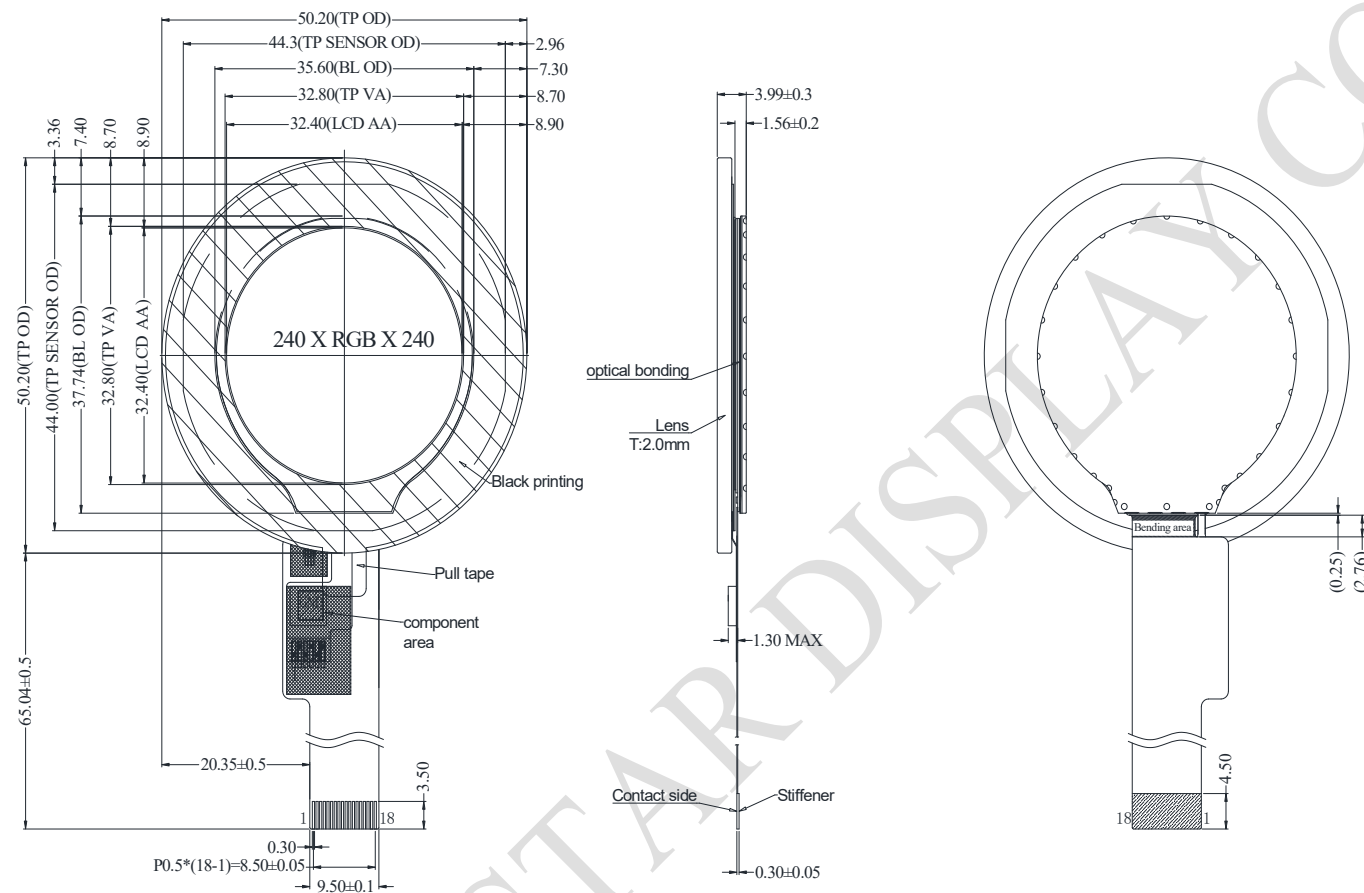
Interface

1. LCM PIN Definition

Pin	Symbol	Function
1	TP_INT	INTERUPT SIGNAL
2	TP_SDA	IIC DATA
3	TP_SCL	IIC CLOCK
4	TP_RESET	TP RESET SIGNAL
5	TP_GND	Ground
6	TP_VDD3.3V	CTP POWER SUPPLY
7	VLED+	Backlit positive
8	VLED-	Backlit negative
9	GND	Ground
10	CS	Chip select signal
11	SCL	Serial clock
12	SDA	Serial data signal
13	RS	Register select signal
14	TE	TE signal
15	RESET	LCD RESET Signal
16	VCI3.3V	LCD Power supply
17	NC	No connection
18	GND	Ground



Contour Drawing



PIN NO.	SYMBOL
1	TP_INT
2	TP_SDA
3	TP_SCL
4	TP_RESET
5	TP_GND
6	TP_VDD3.3V
7	VLED+
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9	GND
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12	SDA
13	RS
14	TE
15	RESET
16	VCI3.3V
17	NC
18	GND

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