

WAYTON TECHNOLOGY CO., LTD.

CONTACT ADDRESS: NO.220-10, LANE 80 CHINAN RD., TASHE
HSIANG, KAOHSIUNG HSIEN, TAIWAN, ROC.

TEL.: (07) 352-7101

FAX: (07) 352-7187

PART NO. : MFC042A-BH

FOR MESSRS. : _____

CONTENTS

NO.	ITEM	PAGE
1.	COVER	1
2.	RECORD OF REVISION	2
3.	GENERAL SPECIFICATION	3
4.	MECHANICAL DATA	3
5.	ABSOLUTE MAXIMUM RATINGS	3
6.	ELECTRICAL CHARACTERISTICS	4
7.	OPTICAL CHARACTERISTICS	4
8.	OUTLINE DIMENSION	5
9.	INPUT TEMINAL PIN ASSIGNMENT	6

ACCEPTED BY : _____

PROPOSED BY : _____

RECORD OF REVISION

DATE	REV.	PAGE	SUMMARY

3. General specifications

3.1 General specifications

MFC042A-BH is a 300X400 dot-matrix TFT LCD module. This module is composed of a TFT LCD Panel, driver IC, FPC.

3.2 Features

- 4.2 inch configuration
- Mono by 1 bit signal input
- RoHS Compliance & Halogen Free

4. Mechanical data

No	Item	Specification	Remark
1	Type	Reflective (B/W/R)	--
2	Display Mode	Normally White	--
3	Screen Size	4.2inch	--
4	Resolution	300 x400	--
5	Active Area	63.6 (W) x 84.8(L) (mm)	--
6	Pixel Size	0.212(W) x 0.212(L) (mm)	--
7	Interface	4 Line SPI	--
8	Operating Temp.	-20°C~ + 70°C	--
9	Storage Temp.	-30°C~+ 80°C	--
10	Weight	14	g
11	Module Dimension	67.6(W) x 91.0(L) x 1.1(H) mm	--

5. Absolute maximum ratings

5.1 Electrical absolute maximum ratings

(1) TFT-LCD Panel Absolute Maximum Ratings

Ta=25°C

Parameter	Symbol	Min	MAX	Unit	Notes
Supply Voltage (I/O)	VDD	-0.3	4.0	V	
Analog Supply Voltage	IOVCC	-0.3	4.0	V	
Logic Input Voltage	VIN	-0.3	VDDIO+0.5	V	
Operation Temperature	Top	-20	70	°C	
Storage Temperature	Tst	-30	80	°C	

- If the LSI is used above these absolute maximum ratings, it may become permanently damaged. Using the LSI within the following electrical characteristics limit is strongly recommended for normal operation. If these electrical characteristic conditions are also exceeded, the LSI will malfunction and cause poor reliability.

6. Electrical characteristics

(1)TFT-LCD Module

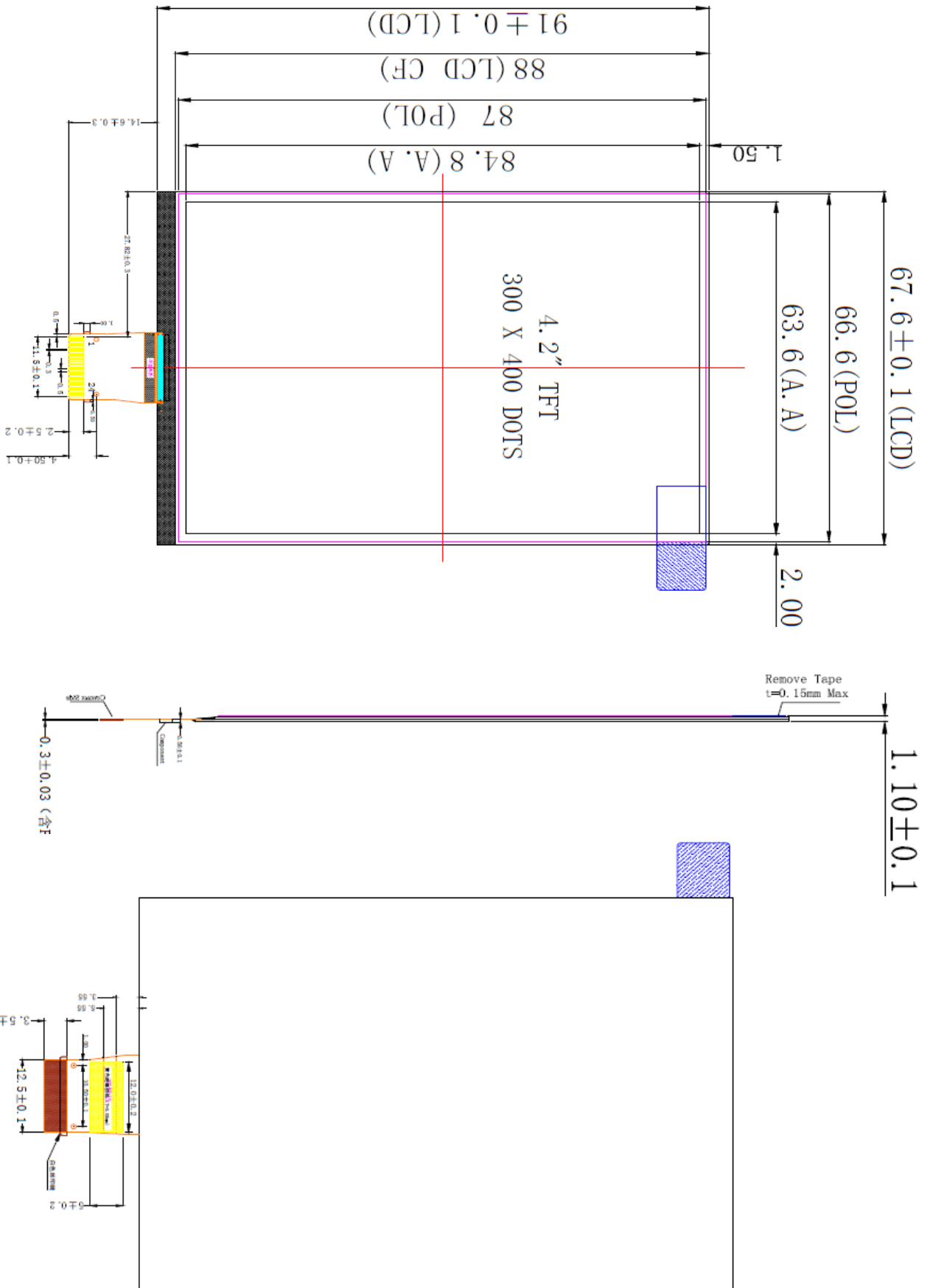
Parameter	Symbol	Min	TYP	MAX	Unit	Notes
System Voltage	VDD	2.55	2.8	3.3	V	
Interface Operation Voltage	IOVCC	1.65	1.8	3.3	V	
Gate Driver High Voltage	VGH	8	-	16.5	V	
Gate Driver Low Voltage	VGL	-10	-	-5	V	
Input voltage 'H' level	VIH	0.7VDDI/IOVCC	-	VDDI/IOVCC	V	
Input voltage 'L' level	VIL	VSS	-	0.3VDDI/IOVCC	V	
Output voltage 'H' level	VOH	0.8VDDI/IOVCC	-	VDDI/IOVCC	V	
Output voltage 'L' level	VOL	VSS	-	0.2VDDI/IOVCC	V	

Item of Characteristics	Symbol	Min	TYP	MAX	Unit	Condition
Operating Current for VDD	IDD	-	30	-	uA	use 1.8s's consumption of average.

7. Optical characteristics

Item	Symbol	Measuring Conditions		Min.	Typ.	Max.	Unit	Remark
Viewing Angle	θ	$\phi = 0^\circ$	25 °C	-	65	-	Deg	Note1
		$\phi = 180^\circ$	25 °C	-	65	-		
	θ	$\phi = 90^\circ$	25 °C	-	65	-		
		$\phi = 270^\circ$	25 °C	-	65	-		
Reflectance	T%	--	-	-	40	-	%	
Contrast ration	CR	--	25 °C	-	15	-	--	Note2
Response Time	Tr+Tf	$\theta = 0^\circ$ $\phi = 0^\circ$	25 °C	-	-	-	ms	Note3
Color of CIE Coordinate	White	X	25 °C	-	-	-	--	BM-7A
		Y	25 °C	-	-	-		
	Red	X	25 °C	-	-	-		
		Y	25 °C	-	-	-		
	Green	X	25 °C	-	-	-		
		Y	25 °C	-	-	-		
	Blue	X	25 °C	-	-	-		
		Y	25 °C	-	-	-		

8. Outline dimension



9. Input Terminal Pin Assignment

9.1 Input Signal & Power

NO.	Symbol	Description
1	NC	No Connect.
2	NC	No Connect.
3	NC	No Connect.
4	NC	No Connect.
5	VCC(I-O)	VCCI is the power source of digital circuits
6	NC	No Connect.
7	NC	No Connect.
8	NC	No Connect.
9	TE	Tearing effect signal is used to synchronize MCU to frame memory writing
10	LCD_RES	Reset input pin. When LCD_RES is "L", internal initialization procedure is executed
11	LCD_D/C	Display data/command selection pin in 4-line serial interface.
12	LCD_CS	Chip selection pin; Low enable, high disable.
13	LCD_SCLK	This pin is used to be serial interface clock
14	LCD_SDI	SPI interface input/output pin. The data is latched on the rising edge of the SCL signal.
15	IOVCC	Power Supply(Digital). IOVCC=1.65V-3.3V
16	VCI	Power Supply(Analog). VCI=2.55V-3.3V
17	GND	Power Ground
18	VGH	Power output(Positive) pin for gate driver
19	NC	No Connect.
20	VIV	Power output pin for analog driver
21	AVDD	Power output pin for analog driver
22	VNV	Power output pin for analog driver
23	NC	No Connect.
24	VGL	Power output(Negative) pin for gate driver