

LCM Specification

Preliminary specification

Final Specification

Project No. 项目编号	TFT-T350MTVH-01		
Customer 客户名称			
Module No. 客户型号			
Product type 产品内容	TFT LCD Module 480 x 3RGB x 640 Dots 3.5" TFT LCD		
Signature by customer: 客户确认签章:			
<input type="checkbox"/> Trial production <input type="checkbox"/> Mass production			
编 制	电子审核	结构审核	批 准
Y.L			

深圳市鑫洪泰电子科技有限公司

Shenzhen Hot Display Technology Co., Ltd

1 Document revision history :

DOCUMENT REVISION	DATE	DESCRIPTION	PREPARED BY	APPROVED BY
0	2019-4-20	First Release.	Y.L	

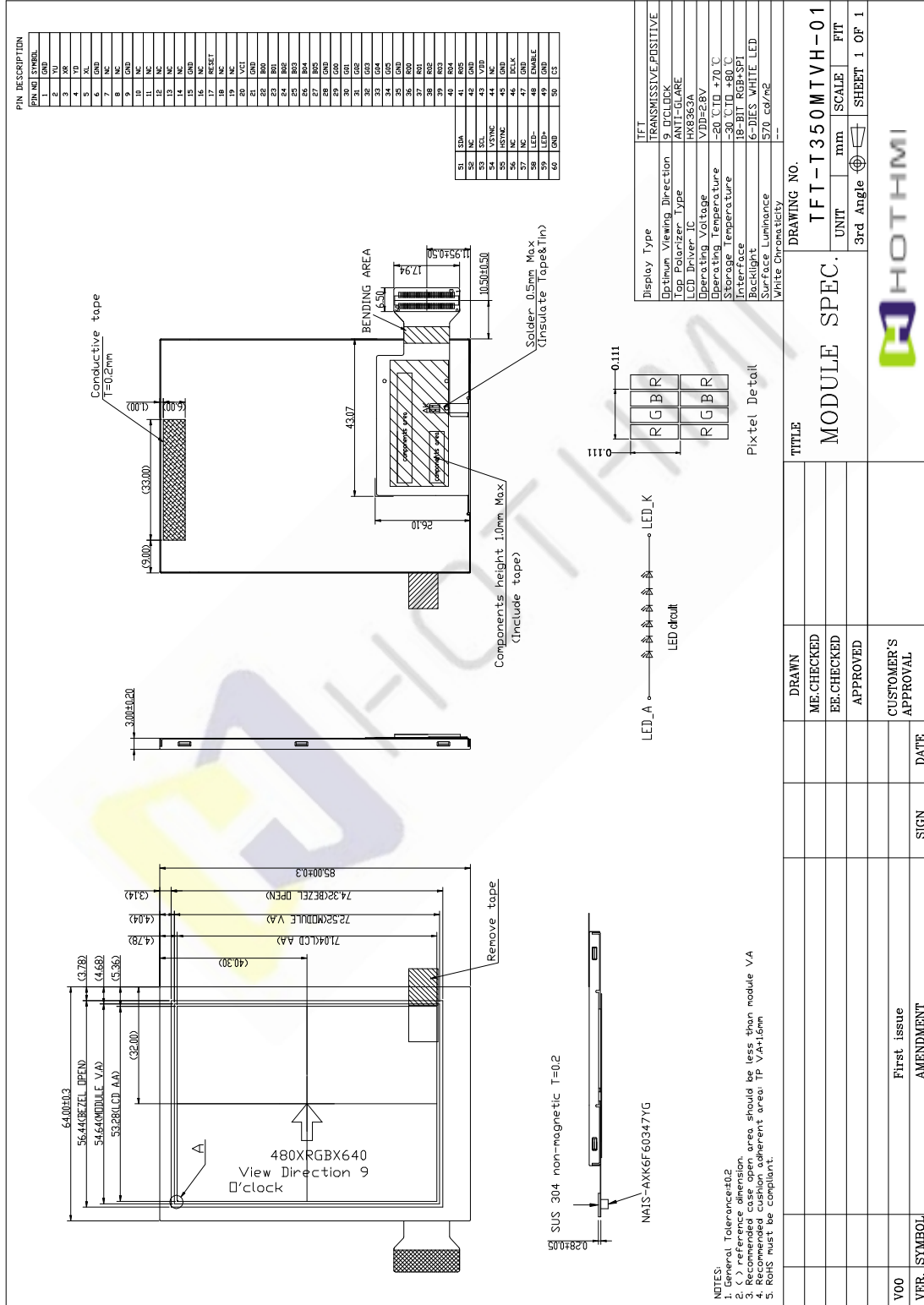
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1. General Specification

Item	Contents	Unit
LCD TYPE	TFT/TRANSMISSIVE	
MODULE SIZE (W*H*T)	64.0*85.0*3.0	MM
ACTIVE SIZE (W*H)	53.28*71.04	MM
PIXEL PITCH (W*H)	0.111*0.111	MM
NUMBER OF DOTS	480*640	
DIVER IC	HX8363A	
INTERFACE TYPE	SPI+18BIT RGB	
TOP POLARIZER TYPE	ANTI-GLARE	
RECOMMEND VIEWING DIRECTION	9	O'CLOCK
GRAY SCALE INVERSION DIRECTION	3	O'CLOCK
COLORS	262K	
BACKLIGHT TYPE	6-DIES WHITE LED	
TOUCH PANEL TYPE	WITHOUT	

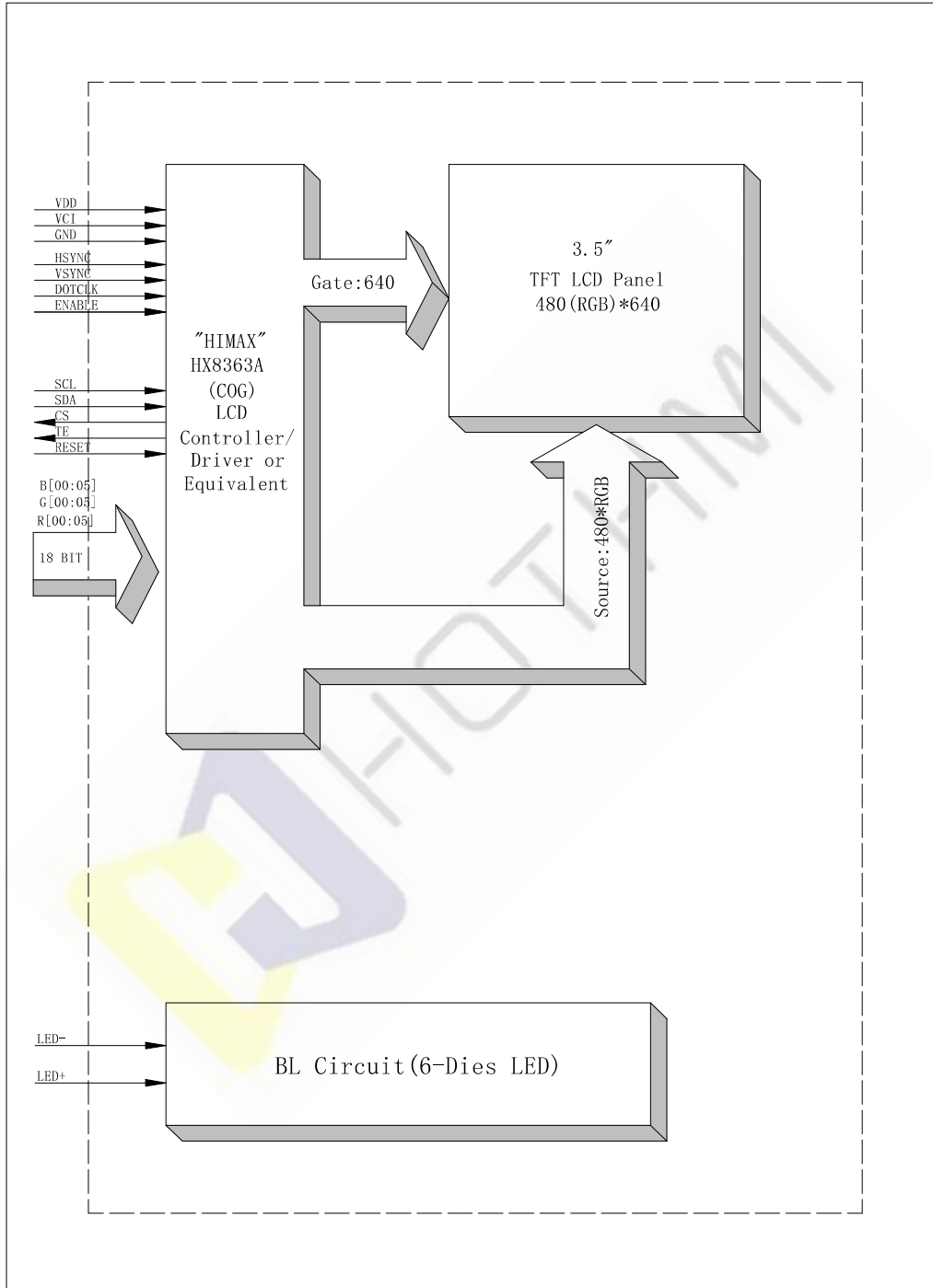
2. Mechanical Drawing



VER. SYMBOL	AMENDMENT	SIGN	DATE
V00	First issue		

DRAWING NO.		TFT-T350MTVH-01	
UNIT	mm	SCALE	1:1
3rd Angle		SHEET	1 OF 1
TITLE		MODULE SPEC.	
DRAWN	ME.CHECKED	EE.CHECKED	APPROVED
CUSTOMER'S APPROVAL			

3. Block Diagram



4. Interface Pin Function

Pin No.	Symbol	Description
1	GND	Power ground.
2	YU	Anode of LED backlight.
3	XR	Anode of LED backlight.
4	YD	Cathode of LED backlight.
5	XL	Cathode of LED backlight.
6	GND	Power ground.
7	NC	No connect
8	NC	No connect
9	GND	Power ground.
10-14	NC	No connect
15	GND	Power ground.
16	NC	No connect
17	RESET	RESET PIN
18~19	NC	No connect
20	VCI	Power supply for logic
21	GND	No connect
22~27	B00~B05	Blue Data bus.
28	GND	Power ground
29~34	G00~G05	Green data bus
35	GND	Power ground
36~41	R00~R05	Red data bus
42	GND	Power ground
43	VDD	Power supply for analog
44	NC	No connect
45	GND	Power ground
46	DCLK	Pixel clock signal
47	GND	Power ground
48	ENABLE	Display data enable signal
49	GND	Power ground
50	CS	Chip select
51	SDA	Serial data signal input/out
52	NC	No connect
53	SCL	Serial clock signal
54	VSYNC	Vertical signal YNC
55	HSYNC	Horizon signal YNC
56~57	NC	No connect
58	LED-	Cathode of backlight
59	LED+	Anode of backlight
60	GND	Power ground

5. Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Supply voltage for analog	VDD	-0.3	4.6	V
Supply voltage for logic	VCI	-0.3	4.6	V
Supply current (One LED)	I _{LED}		30	mA
Operating temperature	T _{OP}	-20	+70	°C
Storage temperature	T _{ST}	-30	+80	°C

6. Electrical Characteristics

6.1 Input Power

Item	Symbol	Min	Typ.	Max	Unit	Applicable terminal
Supply Voltage for Analog	VDD	2.5	2.8	3.3	V	
Supply Voltage for Logic	VCI	1.65	1.8/2.8	3.3	V	
Input Voltage	V _{IL}	GND	-	0.3VCI	V	
	V _{IH}	0.8 VCI	-	VCI		
Input leakage Current	I _{LKG}	-1		1	μA	

6.2 Backlight Driving Conditions

Item	Symbol	Value			Unit	Remark
		Min.	Typ.	Max.		
Voltage for LED Backlight	V _F	18.0	19.2	20.4	V	I _L =20mA
Current for LED Backlight	I _L		20	30	mA	
Power Consumption	P		0.384		W	
LED Life Time		30,000			Hr	Note

Note: Brightness to be decreased to 50% of the initial value at ambient temperature TA=25°C

7. Optical Characteristics

ITEM	SYMBOL	CONDITIONS	SPECIFICATIONS			UNIT	NOTE
			MIN	TYP.	MAX		
Luminance	L	$I_L = 20\text{mA}$	460	570	680	Cd/m^2	
Contrast Ratio	CR	$\theta = 0^\circ$	400	500			
Response Time	T_{ON}	25°C		25	35	ms	
	T_{OFF}						
CIE Color Coordinate	Red	X_R	Viewing normal angle				
		Y_R					
	Green	X_G					
		Y_G					
	Blue	X_B					
		Y_B					
	White	X_W		0.293	0.313	0.333	
		Y_W		0.337	0.357	0.377	
Viewing Angle	Hor.	θ_{X+}	$\text{CR} \geq 10$		70	Degree	
		θ_{X-}			60		
	Ver.	θ_{Y+}			70		
		θ_{Y-}			70		
Uniformity	Un		80			%	