



Description	7" TFT LCD Module with or without resistive Touch Panel
Model Name	TY700TFT800480
Product Revision	03
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Doc. Number	TY700TFT800480 Rev03
Doc. Revision	02

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1. Summary

This specification applies to 7" TFT LCD module with a LED backlight unit, a touch panel (optional), and 40-pin RGB interface. This module supports 800*RGB*480 WVGA mode and displays up to 16 million colors.

2. Features

- a. Thin and light weight. The thickness measures 3.55 mm of weight 135g without a Touch Panel.
- b. WVGA (800x480 pixels) resolution.
- c. RGB interface

3. General Specifications

Parameter	Specifications	Unit	
Screen Size	7" (Diagonal)	inch	
Display format	800* RGB * 480	dot	
Active area	151.68(H) x 85.92(V)	mm	
Pixel size	189.6(W) x 179.0(H)	µm	
Pixel Configuration	RGB vertical stripe		
Outline dimension	165.0(W) x 104.0(H) x 5.15(D) with TP	mm	
	165.0(W) x 104.0(H) x 3.55(D) w/o TP		
Weight	165 (with TP)	g	
	135 (w/o TP)		
Luminance for LCM	TBD		
	Typ. 530cd/cm2 (w/o) TP		
View angle direction	6 O'Clock		
Temperature	Operation	-20 - 70	°C
	Storage	-30 - 80	°C

4. Absolute Maximum Ratings (GND = 0V)

Item	Symbol	Condition	Min	Max	Unit	Remark
Power Voltage	Vcc	GND = 0	-0.5	5	V	-
Input Logic Voltage	Vi	GND = 0	-0.5	Vcc + 0.5	V	Note 1

Note 1: Device subject to permanent damage if stresses applied beyond those absolute maximum ratings above.

5. Electrical Characteristics

5.1 Recommended Operation Condition (GND = 0V, Ta = 25°C)

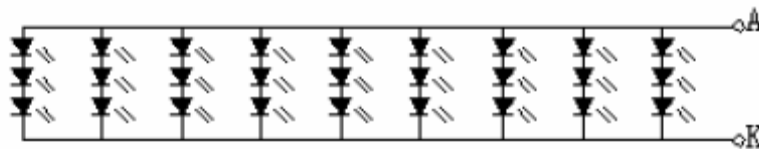
Parameter		Symbol	Rating			Unit	Condition
			Min.	Typ.	Max.		
Power Supply Voltage		V_{CC}	2.7	3.3	3.6	V	
Input logic voltage	High level	V_{IH}	$0.7V_{CC}$	-	V_{CC}	V	Note 2
	Low level	V_{IL}	0	-	$0.3V_{CC}$		Note 2

Note 2: DCLK, DE, R0-R7, G0-G7, B0-B7.

5.2 LED Driving Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
LED current	I_{LED}	-	180	-	mA	Note 3
LED voltage	V_{LED}	9.0	9.6	10.8	V	

Note 3: There are 9 Groups LED as shown below, $V_{LED} = 9.6V$, $I_{LED} = 180mA$

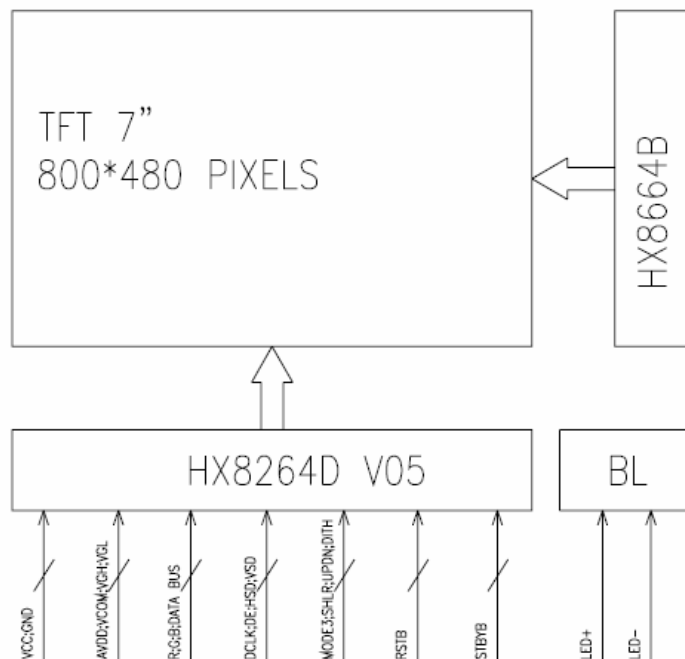


5.3 TFT-LCD current consumption

Parameter	Symbol	Rating			Unit	Condition
		Min.	Typ.	Max.		
LCD power current	I_{CC}	-	125	-	mA	
LED power current	I_{LED}	-	180	-	mA	

6. AC Characteristics

6.1 Block Diagram



6.2 AC Electrical Characteristics with resolution 800x480 Please refer to datasheet of HX8264-D for further details.

Horizontal timing

Parameter	Symbol	Spec.			Unit
		Min.	Typ.	Max.	
Horizontal Display Area	thd	800			DCLK
DCLK frequency	fclk	-	30	50	MHz
One Horizontal Line	th	889	928	1143	DCLK
HS pulse width	thpw	1	48	255	DCLK
HS back porch (blanking)	thb	88			DCLK
HS front porch	thfp	1	40	255	DCLK
DE mode blanking	th-thd	85	128	512	DCLK

Vertical timing

Parameter	Symbol	Spec.			Unit
		Min.	Typ.	Max.	
Vertical Display Area	tvd	480			th
VS period time	tv	513	525	767	th
VS pulse width	tvpw	3	3	255	th
VS back porch (blanking)	tvb	32			th
Vs front porch	tvfp	1	13	255	th
DE mode blanking	tv-tvd	4	45	255	th

7. Touch Panel

7.1 Block Diagram
TBD

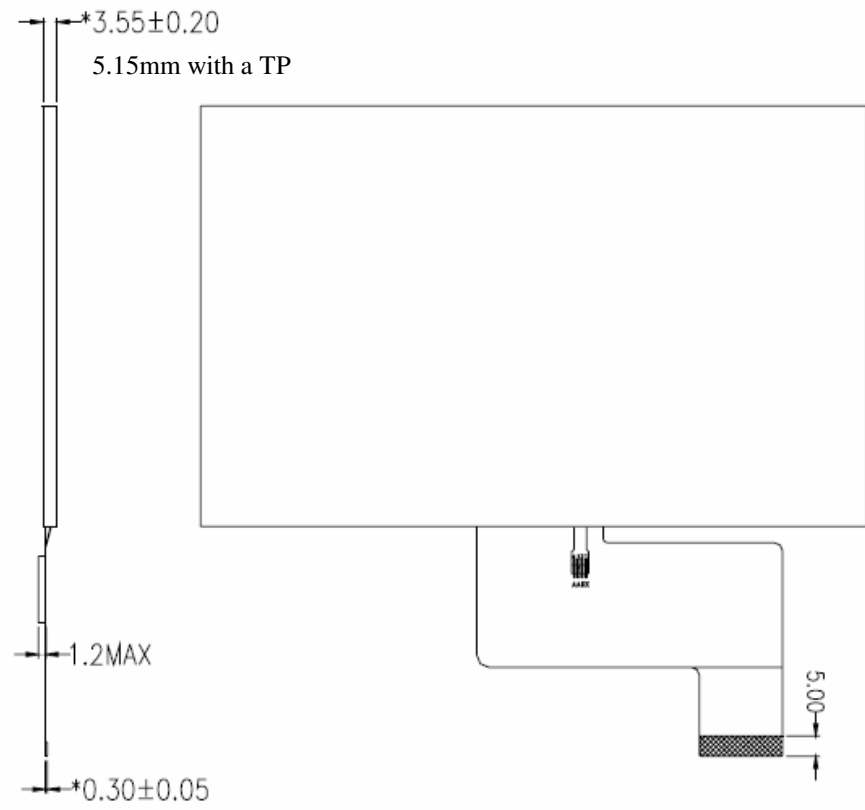
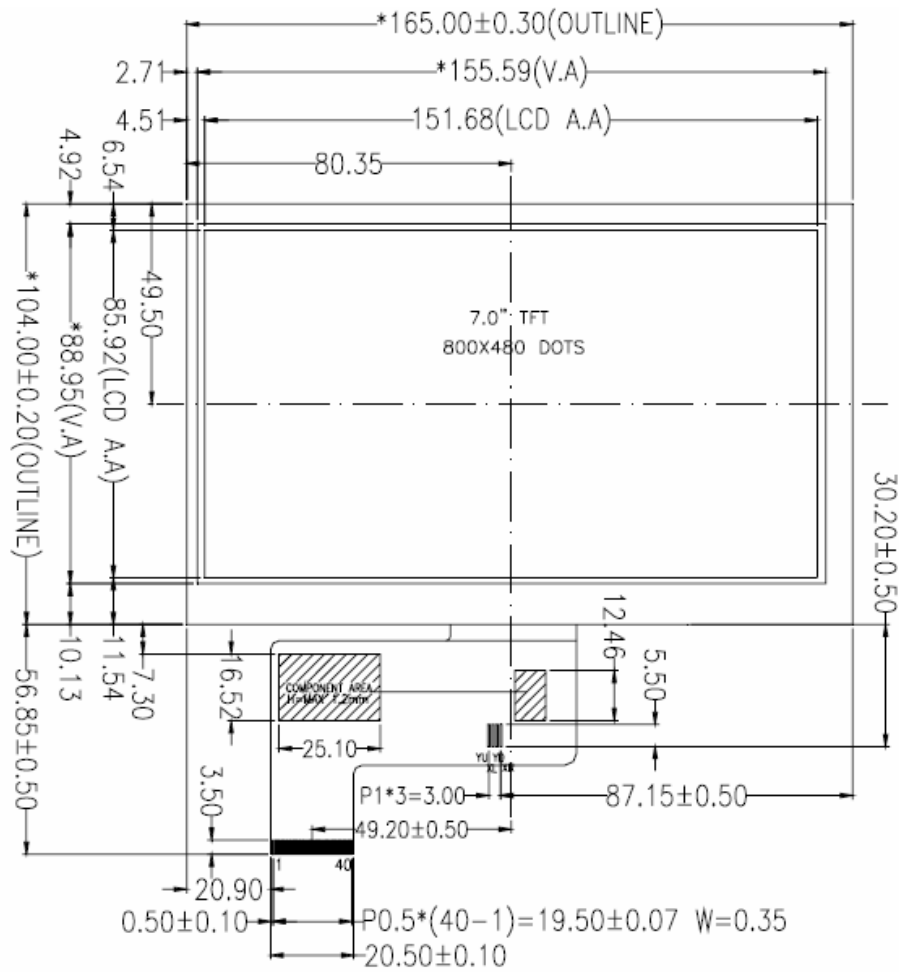
8. Interface

8.1 LCM PIN Definition

Pin No.	Symbol	Description	Remark
1	LED-K	LED backlight (Cathode)	
2	LED-A	LED backlight (Anode)	
3	GND	Ground	
4	V _{cc}	Power Supply for Digital Circuit (+3.0V)	
5-12	R0-R7	Red Data	
13-20	G0-G7	Green Data	
21-28	B0-B7	Blue Data	
29	GND	Ground	
30	CLK	Clock (Latch data at CLK falling edge)	
31	DISP	Display On/Off	
32	HSYNC	Horizontal sync input in RGB mode	
33	VSYNC	Vertical sync input in RGB mode	
34	DEN	Data Enable	
35	NC	Not connected	
36	GND	Ground	
37	XR	Touch panel at right side	
38	YD	Touch panel at down side	
39	XL	Touch panel at left side	
40	YU	Touch panel at up side	

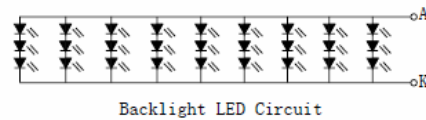
9. Quality Assurance

No.	Test Items	Test Condition	Note
1	High Temperature Storage Test	Ta = 80°C Dry 240h	
2	Low Temperature Storage Test	Ta = -30°C Dry 240h	
3	High Temperature Operation Test	Ta = 70°C Dry 240h	
4	Low Temperature Operation Test	Ta = -20°C Dry 240h	
5	High Temperature and High Humidity Operation Test	Ta = 60°C 90%RH 240h	
6	Electro Static Discharge Test	Panel surface / top case Contact / Air: ±4KV/±8KV	Non-operating
7	Vibration Test (non-operating)	Frequency Range: 8-33.3Hz Stroke: 1.3mm Sweep: 2.9G 33.3-400Hz 2 hours for each direction of X.Y.Z	



Specification:

- 1). Luminance: 550cd/m² (TYP)
- 2). Operating temp.: -10°C~+60°C
Storage temp.: -20°C~+70°C
- 3). All the raw material are Rohs complicant
- 4). Dimensions with mark "*" are important, with mark "()" are referenced



TECH TOYS TechToys Company		
Date	28 th Jun 2012	Drawing : TY800TFT800480
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