

Product Specification

Part Name: 3.40 inch TFT Display Module
Customer Part ID:
Topovision Part ID: **TFT-H0340A1**
Ver: A

Customer:
Approved by

Approved by

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1 General Specifications

Feature		Spec
Display Spec.	Size	3.4 inch
	Resolution	800(RGB)×800
	Technology Type	a-Si
	Pixel Configuration	R.G.B. Vertical Stripe
	Pixel pitch(mm)	0.1095×0.1095
	Display Mode	SFT
	Surface Treatment	HC
	Viewing Direction	All direction
Mechanical Characteristics	LCM (W x H x D) (mm)	96.6(W) x 99.0(H) x 2.45(D)
	LCD Active Area(mm)	87.6(W) ×87.6 (H)
	Matching Connection Type	ZIF
	LED Numbers	8 white LEDs
	Weight (g)	TBD
Electrical Characteristics	Interface	MIPI 3-Lane
	Color Depth	16.7M
	Driver IC	ILI9881C

Note 1: Viewing direction for best image quality is different from TFT definition. There is a 180 degree shift.

Note 2: Requirements on Environmental Protection: Q/S0002

Note 3: LCM weight tolerance: ± 5%

2 Input/Output Terminals

2.1 LCM Interface Description

Pin No.	Symbol	I/O	Function	Remark
1	GND	P	Ground	
2	LEDA	P	LED Anode	
3	LEDA	P	LED Anode	
4	LEDK	P	LED Cathode	
5	LEDK	P	LED Cathode	
6	GND	P	Ground	
7	VDD(-5V)	P	-5V INPUT	
8	VDD(-5V)	P	-5V INPUT	
9	GND	P	Ground	
10	VDD(+5V)	P	+5V INPUT	
11	VDD(+5V)	P	+5V INPUT	
12	GND	P	Ground	
13	IOVCC	P	Power supply 1.8V	
14	IOVCC	P	Power supply 1.8V	
15	GND	P	Ground	
16	RESET	I	Global Reset Pin	
17	GND	P	Ground	
18	TE	I	tearing effect output	
19	GND	P	Ground	
20	NC	/	No connect	
21	NC	/	No connect	
22	NC	/	No connect	
23	GND	P	Ground	
24	LAN2_P	I/O	MIPI lane 2+	
25	NC	/	No connect	
26	LAN2_N	I/O	MIPI lane 2-	
27	GND	P	Ground	
28	CLK_P	I/O	MIPI clock +	

29	NC	/	No connect	
30	CLK_N	I/O	IMIPi clock -	
31	GND	P	Ground	
32	LAN1_P	I/O	MIPI lane 1+	
33	NC	/	No connect	
34	LAN1_N	I/O	MIPI lane 1-	
35	GND	P	Ground	
36	LAN0_P	I/O	MIPI lane 0+	
37	NC	/	No connect	
38	LAN0_N	I/O	MIPI lane 0-	
39	GND	P	Ground	

3 Absolute Maximum Ratings

3.1 LCM absolute maximum ratings

GND=0V

Item	Symbol	MIN	MAX	Unit	Remark
Power Supply Voltage	IOVCC	-0.3	3.3	V	Note1
Power Supply Voltage	VDD(+5V)	-0.3	6.5	V	
Power Supply Voltage	VDD(-5V)	-6.5	+0.3	V	
Operating Temperature	Top	-20	70	°C	
Storage Temperature	Tst	-30	80	°C	
Relative Humidity Note2	RH	--	≤95	%	Ta≤40°C
		--	≤85	%	40°C < Ta ≤ 50°C
		--	≤55	%	50°C < Ta ≤ 60°C
		--	≤36	%	60°C < Ta ≤ 70°C
		--	≤24	%	70°C < Ta ≤ 80°C
Absolute Humidity	AH	--	≤70	g/m ³	Ta > 70°C

Table 3 Absolute Maximum Ratings

Note1: Input voltage include R0~R5, G0~G5, B0~B5, Dotclk, Hsync, Vsync, Enable, R/L, U/D.

4 Electrical Characteristics

4.1 LCD electrical characteristics

GND=0V, Ta=25°C

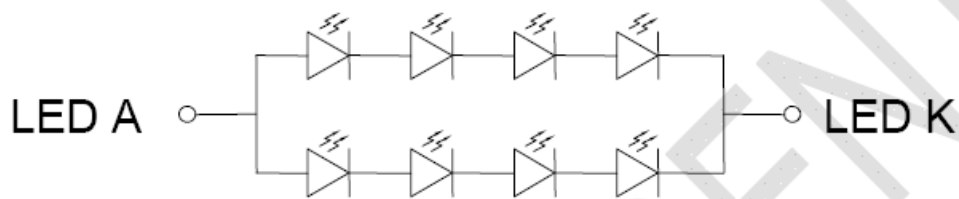
Item	Symbol	MIN	TYP	MAX	Unit	Remark
Logic operating voltage	IOVCC	1.7	1.8	1.9	V	
Positive source output voltage	VDD(+5V)	4.9	5	5.1	V	
Negative source output voltage	VDD(-5V)	-5.1	-5	-4.9	V	
Input Signal Voltage	High Level	VIH	0.7*IOVCC	-	IOVCC	V
	Low Level	VIL	0	-	0.3*IOVCC	
Output Voltage	High Level	VOH	0.8 IOVCC	-	IOVCC	
	Low Level	VOL	0	-	0.2 IOVCC	

Table 4.1 LCD module electrical characteristics

4.4 Backlight Unit
Ta=25°C

Item	Symbol	Min	Typ	Max	Unit	Remark
Forward Current	I_F	-	20	-	mA	For each LED
Forward Voltage	V_F	2.9	3.2	3.4	V	For each LED
Operating Life Time	-	-	20,000	-	Hrs	For each LED

Note1: Figure below shows the connection of backlight LED.



LED CIRCUIT

($I_f=40\text{mA}$ / $V_f=12.8\text{V}$ TYP)

Note 2: 1LED: $V_F = 3.2\text{V}$ $I_F = 20\text{mA}$

Note 3: I_F is defined for one LED.

Optical performance should be evaluated at $T_a=25^\circ\text{C}$ only.

If LED is driven by high current, high ambient temperature & humidity condition. The life time of LED will be reduced. Operating life means brightness goes down to 50% initial brightness. Typical operating life time is estimated data

8 Mechanical Drawing

8.1 LCM+CTP Drawing

