

Application

This specification is applied to the 5.7 inch VGA supported TFT-LCD module, and can display true 262,144 colors(6 bit/ color). The module is designed for OA, Car TV application and other electronic products which require flat panel display of digital signal interface. This module is composed of a 5.7" TFT-LCD panel, a driver circuit and backlight unit.

Features

- VGA (640×480 pixels) resolution.
- Digital 18 bit parallel RGB.
- Dot inversion mode with stripe type.
- LED drive circuit is built in this module to provide PWM Dimmer function
- Ultra Wide View Polarizer

General Specifications

Item	Specifications	Unit
Screen Size	5.7 (Diagonal)	inch
Display Format	640RGB(H)×480(V)	dot
Active Area	115.2(H)×86.4(V)	mm
Pixel Size	0.060(H)×0.180(V)	mm
Pixel Configuration	RGB Vertical Stripe	-
Display Mode	TN Type Transmissive Mode Normally White	-
Surface Treatment	Anti-Glare	-
Viewing Direction	6 O'clock (The Gray Inversion will appear at this direction)	-
Outline Dimension	144.0(W)×104.6(H)×13.0(D)	mm
Weight	(145.5)	g
RoHS Compliance	RoHS Compliance	-

▲ Absolute Maximum Ratings

Absolute Ratings of Environment

Item	Symbol	Value		Unit	Note
		Min.	Max.		
Storage Temperature	T _{ST}	-30	+80	°C	(1)(2)
Operating Ambient Temperature	T _{OP}	-30	+80	°C	(1)(2)

Note1: Background color changes slightly depending on ambient temperature.

This phenomenon is reversible.

Note2: Please refer to item of RELIABILITY.

▲ Electrical Absolute Ratings

TFT-LCD Module

(Ta=25±2°C, GND=VSS=0V)

Item	Symbol	Value		Unit	Note
		Min.	Max.		
Digital Power Supply Voltage	VCC	-0.3	4.3	V	-

LED Driver Absolute Maximum Ratings

(Ta=25±2°C)

Item	Symbol	Value		Unit	Note
		Min.	Max.		
LED Driver Supply Voltage	VLED	-0.3	17	V	(1)
LED Driver PWM	PWM	-0.3	6	V	(1)

Note (1) Permanent damage to the device may occur if maximum values are exceeded or reverse voltage is loaded.

Electrical Characteristics

TFT-LCD Module

(Ta=25±2°C)

Item	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
Power Supply Voltage	VCC	3.0	3.3	3.6	V	-
Input High Threshold Voltage	VIH	0.7VCC	-	VCC	V	-
Input Low Threshold Voltage	VIL	0	-	0.3VCC	V	-
Current dissipation	ICC	-	140	196	mA	-
Power Consumption	PL	-	0.462	0.504	W	(1)
Frame Frequency	Fv	-	60	-	Hz	-
Dot Clock	DCLK	-	25.175	-	MHz	-

Note (1) The specified power consumption is under the conditions at Vcc = 3.3V, FV=60Hz, Fv = 25 MHz, whereas a power dissipation check Pattern below is displayed.

Black Pattern / 0 Gray



Active Area

LED Driver Unit

(Ta=25±2°C)

Item	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
Voltage of LED Driver Unit	V _{LED(DU)}	11.2	12.0	12.6	V	-
Current of LED Driver Unit	I _{LED(DU)}	-	180	252	mA	B/L=200mA
Current of LED Driver Unit	I _{LED(DU)}	-	130	182	mA	B/L=150mA
Current of LED Driver Unit	I _{LED(DU)}	-	80	112	mA	B/L=100mA
Dimmer signal Low voltage	VPWML	-	-	0.2	V	-
Dimmer signal High voltage	VPWMH	4	5.0	5.5	V	-
Dimmer frequency	fPWM	-	120	-	Hz	-
PWM Pulse width	TPWMH	10			us	-
LED Life Time(25°C)	-	40000	50000	-	hr	-

Input / Output Terminals Pin Assignment

TFT-LCD

Connector: CVILUX CF25331D0R0-05

Pin No.	Symbol	I/O	Description
1	GND	I	Ground
2	CLK	I	Clock signal
3	IHS	I	Horizontal synchronous signal
4	IVS	I	Vertical synchronous signal
5	GND	I	Ground
6	R0	I	RED data (LSB)
7	R1	I	RED data
8	R2	I	RED data
9	R3	I	RED data
10	R4	I	RED data
11	R5	I	RED data(MSB)
12	GND	I	Ground
13	G0	I	GREEN data(LSB)
14	G1	I	GREEN data
15	G2	I	GREEN data
16	G3	I	GREEN data
17	G4	I	GREEN data
18	G5	I	GREEN data(MSB)
19	GND	I	Ground
20	B0	I	Blue data(LSB)
21	B1	I	Blue data
22	B2	I	Blue data
23	B3	I	Blue data
24	B4	I	Blue data
25	B5	I	Blue data(MSB)
26	TEST1	I	TEST1(Please be sure to connect 26pin with ground)
27	DEN	I	Input data enable control
28	VCC	I	+3.3V power supply

Pin No.	Symbol	I/O	Description
29	VCC	I	+3.3V power supply
30	R/L	I	Selection signal for horizontal scanning direction. Note (1)
31	U/D	I	Selection signal for vertical scanning direction. Note (1)
32	TEST2	I	TEST2(to be open, or connected to either GND or Vcc)
33	TEST3	I	TEST3(Please be sure to connect 33pin with ground)

Note (1)



R/L=L, U/D=H



R/L=H, U/D=H



R/L=L, U/D=L



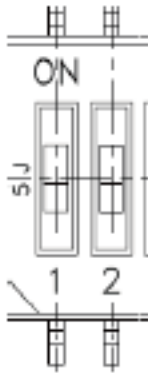
R/L=H, U/D=L

Backlight Unit

Connector: CVILUX CI1106M1HR0-LF

Pin No.	Symbol	Description
1	VLED	LED drive circuit power supply (12V)
2	VLED	LED drive circuit power supply (12V)
3	GND	Ground
4	GND	Ground
5	PWM	PWM Dimmer
6	NC	NO CONNECTION

JUMP: HCH HDS502-E



PIN 1	PIN2	Result
ON	ON	200mA
ON	OFF	150mA
OFF	ON	150mA
OFF	OFF	100mA

Outline Drawing

