

Application

This specification is applied to the 4.3 inch supported TFT-LCD module, and can display true 16.2M colors(8 bit/ color).The module is designed for PMP, GPS application and other electronic products which require flat panel display of digital signal interface. The model is composed of a TFT LCD panel, a driver circuit and a back-light system. and used as the input devices for general electric appliances via both finger and pen-entry.

Features

- WVGA (800×480 pixels) resolution.
- 24 bit parallel RGB.
- Transparent Touch panel
 - ☐ 4-Wire
 - ☐ Analog Resistive

General Specifications

Item	Specifications	Unit
Screen Size	4.3 (Diagonal)	inch
Display Format	800RGB(H)×480(V)	dot
Active Area	95.04(H)×53.856(V)	mm
Pixel Pitch	0.1188(H)×0.1122(V)	mm
Pixel Configuration	RGB Vertical Stripe	-
Display Mode	IPS Type / Transmissive Mode / Normally Black	-
Surface Treatment	Anti-Glare and Hard Coating(3H)	-
Viewing Direction	Full view angle	-
Outline Dimension	105.5(W)x67.2(H)x4.2(D)	mm
Weight	(55.6)	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}	-20	+70	°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, VSS=0V)

Item	Symbol	Value		Unit	Note
		Min.	Max.		
Digital Power Supply Voltage	DVDD	-0.5	5.0	V	-

Backlight Unit

(Ta=25±2°C)

Item	Symbol	Value		Unit	Note
		Min.	Max.		
Current of Backlight Unit	I _B	-	25	mA	(1)
Reverse Voltage	V _R	-	50	V	(1)

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

Electrical Characteristics

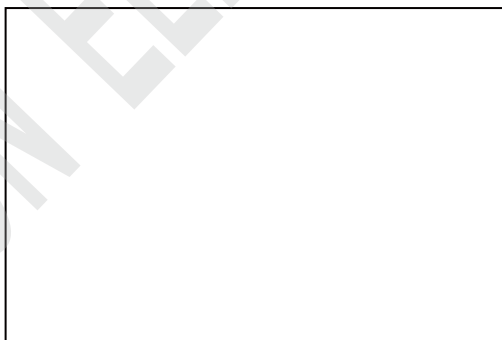
TFT-LCD Module

(Ta=25±2°C)

Item	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
Digital Power Supply Voltage	DVDD	3.0	3.3	3.6	V	-
Digital Current	IDVDD	-	208	291	mA	(1)
Input High Threshold Voltage	VIH	0.7xDVDD	-	DVDD	V	-
Input Low Threshold Voltage	VIL	0	-	0.3xDVDD	V	-
Pixel Clock	DCLK	-	9.0	-	MHz	-

Note (1) The specified power consumption is under the conditions at DVDD = 3.3V, FV=60Hz, DCLK=9.0 MHz, whereas a power dissipation check Pattern below is displayed.

White Pattern / 255 Gray



Active Area

Backlight Unit

(Ta=25±2°C)

Item	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
LED Voltage	V _B	-	(33)	-	V	(1),(3)
Current of Backlight Unit	I _B	-	20	-	mA	(1)
Power Consumption	P _{BL}	-	(660)	-	mW	(1)
LED life time	-	50000	60000	-	Hr	(2)

Note (1) The driving design of backlight unit is dependent on serial consideration of 10 LEDs.

(2) The LED life time is defined as the module brightness decrease to 50%,
original brightness at Ta=25°C , I_B =20mA.

(3)The BLU is driven by constant current, the voltage value is for reference only.

Transparent Touch panel

Item		Value			Unit	Note
		Min.	Typ.	Max.		
Operating Voltage		-	5	10	V	-
Terminal Resistance	X-direction	500	-	1300	Ω	At connector
	Y-direction	100	-	540	Ω	At connector
Insulation Resistance		≥ 20MΩ				at DC25V
Chatting		≤ 10 ms				At connector
Linearity		≤ 1.5%				(1)
Linearity Force		≤120gf less input with stylus pen (R0.8mm) Activation force guarantee area: 3 mm inside of Active Area.				
Activation Force		≤100 gf(Typical 20 gf) less individual point on with stylus pen(R0.8 mm). Activation force guarantee area: 3mm inside of Active Area.				



Input / Output Terminals Pin Assignment

TFT-LCD Module

(Reference Connector :

Hirose Electric CO., LTD. Product No.: FH12A-40S-0.5SH(55) Top contact type)

Pin No.	Symbol	Description	Pin No.	Symbol	Description
1	VSS	Ground	21	B0	Blue data(LSB)
2	VSS	Ground	22	B1	Blue data
3	DVDD	POWER SUPPLY	23	B2	Blue data
4	DVDD	POWER SUPPLY	24	B3	Blue data
5	R0	Red data(LSB)	25	B4	Blue data
6	R1	Red data	26	B5	Blue data
7	R2	Red data	27	B6	Blue data
8	R3	Red data	28	B7	Blue data(MSB)
9	R4	Red data	29	VSS	Ground
10	R5	Red data	30	PCLK	Pixel clock
11	R6	Red data	31	STBYB	Standby mode, See Note1
12	R7	Red data(MSB)	32	HSYNC	Horizontal Sync input with negative polarity
13	G0	Green data(LSB)	33	VSYNC	Vertical Sync input with negative polarity
14	G1	Green data	34	NC	No connection
15	G2	Green data	35	XL	X-axis left terminal
16	G3	Green data	36	YD	Y-axis lower terminal
17	G4	Green data	37	XR	X-axis right terminal
18	G5	Green data	38	YU	Y-axis upper terminal
19	G6	Green data	39	LEDK	Backlight LED Cathode
20	G7	Green data(MSB)	40	LEDA	Backlight LED Anode

Note 1 : STBYB ="H", normal operation(Default)

STBYB ="L", timing controller, source driver will turn off, all output are High-Z

EVERVISION ELECTRONICS CO., LTD

Outline Drawing

