

Application

This specification is applied to the 12.28 inch supported TFT-LCD module, and can display true 16.7M colors (8 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 12.28" TFT-LCD panel, a driver circuit and backlight unit and used as the input devices for general electric appliances via both finger and Capacitive stylus pen.

Features

- 1920×720 pixels resolution
- HDMI Interface*
- LED driver circuit is built in this module to provide PWM Dimmer function.
- Projected Capacitive Touch
 - ☐ USB Interface
 - ☐ Multi Touch (Five points)
 - ☐ 4096 x 4096 resolution

*Support HDMI Interface, suit for your digital device.

General Specifications

Item	Specifications	Unit
Screen Size	12.28 (8:3 Diagonal)	inch
Display Format	1920RGB(H)×720(V)	dot
Active Area	292.032(H)×109.512(V)	mm
Pixel Pitch	0.1521(H)×0.1521(V)	mm
Pixel Configuration	RGB Vertical Stripe	-
Display Mode	IPS Type/ Transmissive Mode / Normally Black	-
Surface Treatment	Clear(7H)	-
Viewing Direction	Full view angle	-
Outline Dimension	308.1(W)×130.0(H)×21.55(D)	mm
Weight	(774)	g
RoHS Compliance	RoHS Compliance	-

▲ Absolute Maximum Ratings

Absolute Ratings of Environment

Item	Symbol	Min	Max	Unit	Note
Operating Temperature	TOP	-30	+80	°C	-
Storage Temperature	TST	-30	+80	°C	-

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=V_{SS}=0V)

Item	Symbol	Value		Unit	Note
		Min.	Max.		
Power Supply Voltage	VCC	-0.3	18	V	-

Electrical Characteristics

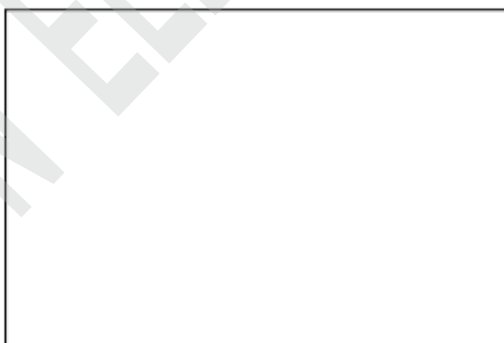
TFT-LCD Module

(Ta=25±2°C)

Item	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
Power Supply Voltage	VCC	11.5	12.0	12.5	V	-
Power Supply Current	ICC	-	1.07	1.49	A	(1)
Enable voltage	EN	2	3.3	5.5	V	-
PWM signal Low voltage	VPWML	0	-	0.4	V	-
PWM signal High voltage	VPWMH	1.5	-	5	V	-
PWM frequency	fPWM	100	-	1000	Hz	-
LED Life Time(25°C)	-	30000	-	-	hr	(2)

Note (1) The specified power consumption is under the conditions at VCC=12V, F_V=60Hz, whereas a power dissipation check pattern below is displayed.

White Pattern / 255 Gray



Active Area

Note (2) : LED life time is defined as under 25±2°C , when the average brightness decrease to 50% of original brightness

Projected Capacitive Touch

(Ta=25±2°C)

Item	Symbol	Value			Unit	Note
		Min.	Typ.	Max.		
Power Supply Voltage	V _{TP}	4.8	5.0	5.2	V	-
Power Supply Current	I _{TP}	-	30.5	42.7	mA	(1)
Output High Threshold Voltage	V _{OH}	2.8	-	-	V	-
Output Low Threshold Voltage	V _{OL}	-	-	0.8	V	-
Differential Input Sensitivity (D+)-(D-)	V _{DI}	0.2	-	-	V	-
Differential Input Common Mode Range	V _{CM}	0.8	-	2.5	V	
Power Consumption	P _L	-	152.5	222.0	mW	@5.0V
Report Rate	R _R	-	60	-	Hz	-

Note (1) This test condition is touched with 5 points.

Input / Output Terminals Pin Assignment

TFT-LCD Module

Connector: HDMI Connector

No.	Symbol	I/O	Description
1	TMDS Data2+	I	Channel-2 positive receiver input – Positive side of channel-2 TMDS low-voltage signal differential input pair.
2	TMDS Data2 Shield	I	Ground
3	TMDS Data2–	I	Channel-2 negative receiver input – Negative side of channel-2 TMDS low-voltage signal differential input pair.
4	TMDS Data1+	I	Channel-1 positive receiver input – Positive side of channel-1 TMDS low-voltage signal differential input pair.
5	TMDS Data1 Shield	I	Ground
6	TMDS Data1–	I	Channel-1 negative receiver input – Negative side of channel-1 TMDS low-voltage signal differential input pair.
7	TMDS Data0+	I	Channel-0 positive receiver input – Positive side of channel-0. TMDS low-voltage signal differential input pair.
8	TMDS Data0 Shield	I	Ground
9	TMDS Data0–	I	Channel-0 negative receiver input – Negative side of channel-0. TMDS low-voltage signal differential input pair.
10	TMDS Clock+	I	Clock positive receiver input – Positive side of reference clock. TMDS low-voltage signal differential input pair
11	TMDS Clock Shield	I	Ground
12	TMDS Clock–	I	Clock negative receiver input – Negative side of reference clock. TMDS low-voltage signal differential input pair
13	N.C.	-	Not Connection
14	N.C.	-	Not Connection

Outline Drawing

