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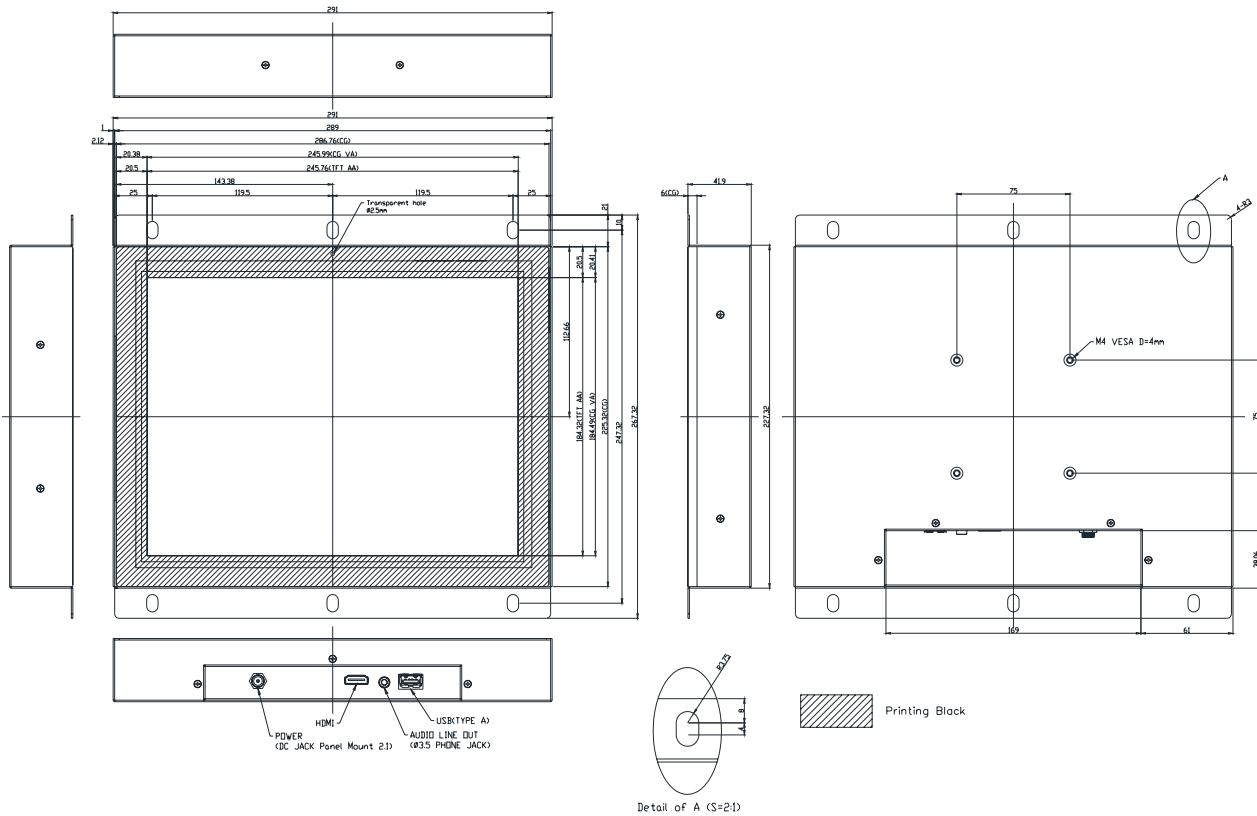
Description

MP011385 is a 12.1 (4:3) inch diagonally measured active display with metal frame, high resolution for 1024x768 and high brightness. This model is composed of a TFT LCD module, a projected capacitive touch, HDMI interface, audio line-out, automatic dimming with Ambient Light Sensor, and bracket. Easy use this TFT display with SBC, HMI, or as a computer display with any device which has HDMI output. The model supports a Rear mount and VESA mount, which would be great for embedded applications.

Features

No.	Item	Specification	Unit
1	Panel Size	12.1	Inch
2	Number of Pixels	1024 (W) × RGB × 768 (H)	Pixels
3	Active Area	245.76 (W) × 184.32 (H)	mm
4	Pixel Pitch	0.24 (W) × 0.24 (H)	mm
5	Outline Dimension	291 (W) × 267.32 (H) × 41.9 (T)	mm
6	Number of Colours	16.7M	--
7	Display Mode	IPS / Normally Black / Transmissive	--
8	View Direction	Free direction	--
9	Display Format	RGB vertical stripe	--
10	Surface Treatment	Clear (7H)	--
11	Bonding	OCR (0.6)	--
12	Contrast Ratio	900 (Typ.)	--
13	Luminance (cd/m ²)	1300 (Typ.)	cd/m ²
14	Video Input Interface	HDMI (Compliance HDMI V1.4)	--
15	Audio Output Interface	Analog Output	--
16	Backlight	White LED	--
17	Operation Temperature	-30 to 70	°C
18	Storage Temperature	-30 to 80	°C
19	Weight	(3110)	g

Mechanical Specification



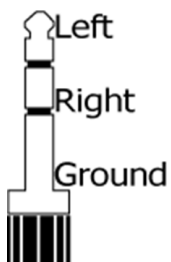
Pin Description

Power Input [DC JACK Ø2.0mm]

Symbol	I/O	Function	Note
12V	P	Power Supply +12V	
GND	P	Ground	

Standard 3.5mm Phone Jack

HDMI Audio Analog Output



HDMI [HDMI A TYPE]

Pin No.	Symbol	I/O	Function
1	TMDS 2+	I	TMDS Data2+
2	GND	P	TMDS Data2 Shield
3	TMDS 2-	I	TMDS Data2-
4	TMDS 1+	I	TMDS Data1+
5	GND	P	TMDS Data1 Shield
6	TMDS 1-	I	TMDS Data1-
7	TMDS 0+	I	TMDS Data0+
8	GND	P	TMDS Data0 Shield
9	TMDS 0-	I	TMDS Data0-
10	TMDS CLK+	I	TMDS Clock+
11	GND	P	TMDS Clock Shield
12	TMDS CLK-	I	TMDS Clock-
13	N.C.	-	N.C.
14	N.C.	-	N.C.
15	DDC_SCL	I	IIC SCL to EDID ROM
16	DDC_SDA	I/O	IIC SDA to EDID ROM
17	GND	P	DDC/CEC Ground
18	HD_5V	P	+5V Power
19	HPD	O	Hot Plug Detect

PCT Control:USB

Symbol	I/O	Function	Note
VBUS	P	Power supply for USB I/F	5V
D-	I/O	USB data -	
D+	I/O	USB data +	
GND	P	Power Ground for USB I/F	

Absolute Maximum Ratings

Electrical Absolute Rating

HDMI TFT LCD Module

Item	Symbol	Values		Unit
		Min	Max.	
Power supply voltage	12V	10	14	V

Environment Absolute Rating

Item	Symbol	Values		Unit	Note
		Min	Max.		
Operating Temperature	Top	-30	70	°C	Ambient temperature
Storage Temperature	Tst		80		

Electrical Characteristics

HDMI TFT LCD Module

Item	Symbol	Values			Unit	Note
		Min	Typ.	Max.		
Supply Voltage	12V	11	12	13	V	
Supply Current	ICC(12V)	-	930	1050	mA	
LED life time		50000	-	-	Hr	(1)

Note

The "LED life time" is defined as the module brightness decrease to 50% original brightness that the ambient temperature is 25°C 60% RH.

Projected Capacitive Touch Panel Specification

Main Feature

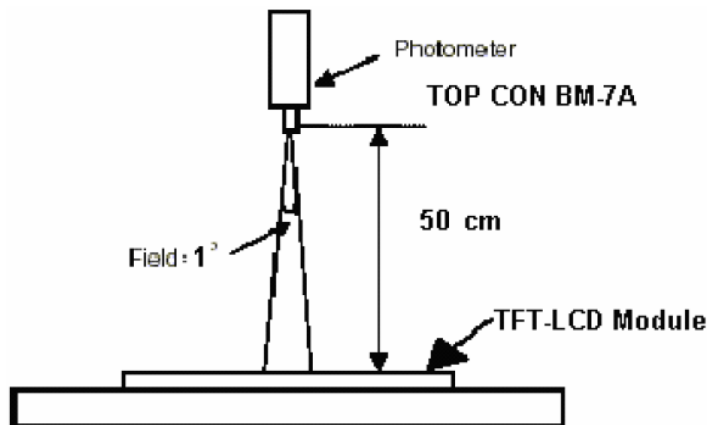
Item	Specification	Unit
Screen Size	12.1 inches	Diagonal
Type	Transparent Type Projected Capacitive Touch Panel	
Input Mode	Human's Finger	
Interface	USB	
Touch number	1 points	
Cover glass pencil-hardness	7H	
Cover Glass Thickness	6mm	
Response time	≤25ms	ms
Controller IC	EE80H462938	

Optical Characteristics

Item	Symbol	Condition	Min.	Typ.	Max.	Unit	
Brightness	--	Note1, Note 3, ($\theta = 0^\circ$, Normal Viewing Angle)	1040	1300	--	cd/m ²	
Contrast Ratio	CR		600	900	--	--	
Response Time	Tr+Tf		--	30	40	ms	
Colour Chromaticity	White		Wx	0.232	0.282	0.332	--
			Wy	0.274	0.324	0.374	
	Red		Rx	0.606	0.656	0.706	
			Ry	0.274	0.324	0.374	
	Green		Gx	0.236	0.286	0.336	
			Gy	0.59	0.64	0.69	
	Blue		Bx	0.09	0.14	0.19	
		By	0.037	0.087	0.137		
View angle	Horizontal	θ_{x+}	Center CR \geq 10	80	85	--	
		θ_{x-}					
	Vertical	θ_{Y+}					
		θ_{Y-}					

Note: The following optical specifications shall be measured in a darkroom or equivalent state (ambient luminance \leq 1 lux, and at room temperature). The operation temperature is 25°C \pm 2°C. The measurement method is shown in Note1.

Note1: The method of optical measurement

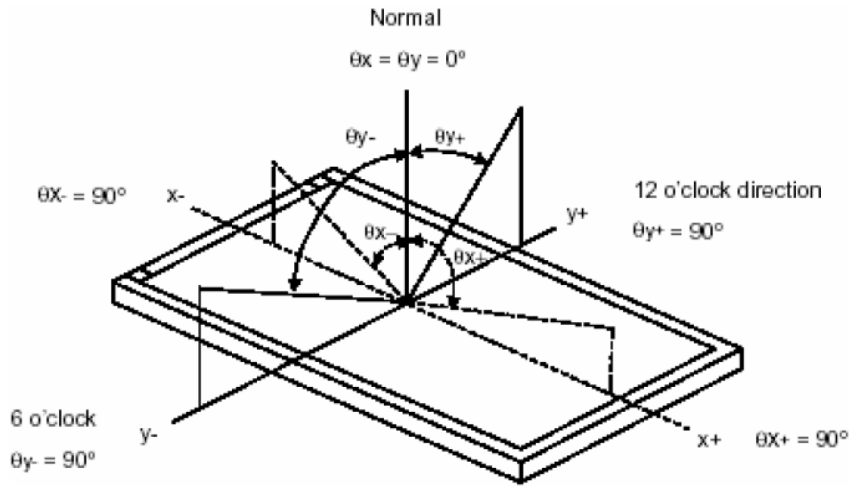


Note2: Measured at the center area of the panel and at the viewing angle of the $\theta_x = \theta_y = 0^\circ$

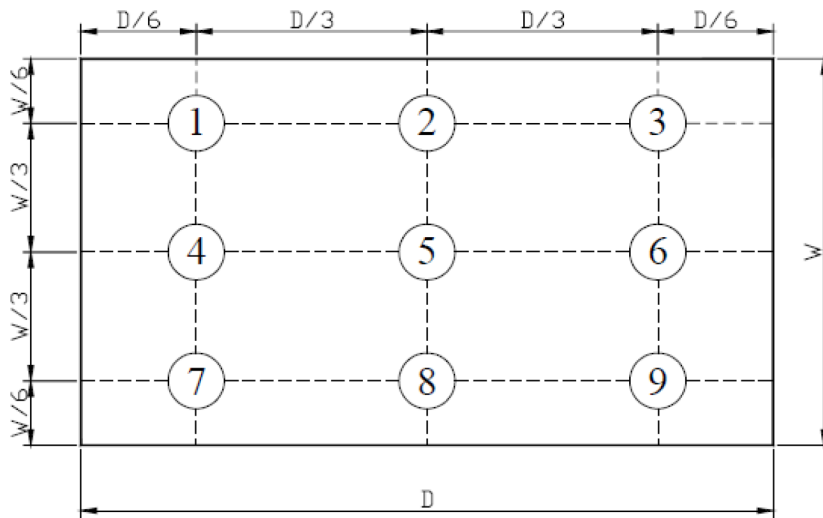
Note3: Definition of Contrast Ratio (CR):

CR = Luminance with all pixels in white state \div Luminance with all pixels in Black state

Definition of Viewing Angle



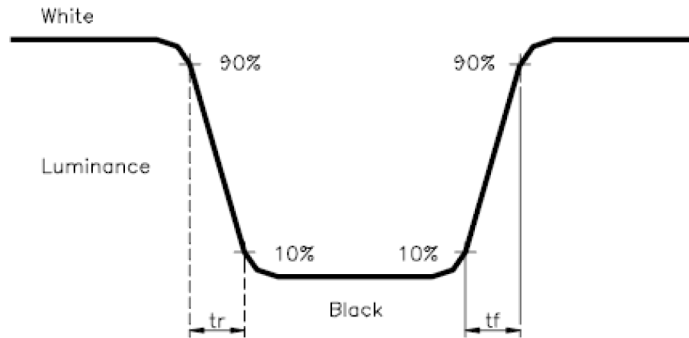
Definition of Brightness Uniformity (B-uni)



B-uni = (Minimum luminance of 9 points ÷ Maximum luminance of 9 points) × 100%

Note 6: Definition of Response Time:

The Response Time is set initially by defining the “Rising Time (Tr)” and the “Falling Time (Tf)” respectively. Tr and Tf are defined as following figure



Note 7: Definition of Chromaticity:

The color coordinates (Wx,Wy),(Rx,Ry),(Gx,Gy),and (Bx,By) are obtained with all pixels in the viewing field at white, red, green, and blue states, respectively.

Part Number Table

Description	Part Number
TFT LCD, 12.1", HDMI, Capacitive Touch	MP011385

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