



SHENZHEN APTUS TECHNOLOGY CO., LIMITED

PRODUCT SPECIFICATION

11.26" COLOR TFT-LCD MODULE

MODEL NAME: DHC112BVN40M035A

DOC VERSION: 1.0

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FOR CUSTOMER	
CUSTOMER APPROVED	

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1. Use Modules

1. When modules switch on or off, after accessing positive supply power with 3 ± 0.5 voltage, then input signal levels, if signal levels input before supply power becomes stable or switches off, IC circuits off, modules will be damaged, as a result, modules will be damaged.
2. Dot matrix modules are high path-number LCDs, they are largely related to the contrast, view angle, driving voltage when displaying, so you should adjust it to get best contrast and view angle, if it is too high, not only displays are affected, but also let life shorted.
3. When using under regulated working temperature below, the display responsiveness is too slow, when using under regulated temperature above, whole display surface turns dark, this is not damaged, when the temperature returns normal, all displays become normal.

1.1 Module storage

1. Storage temperature: -30 to $+80$
2. Place in dark sites to avoid strong lights
3. Don't place other thing on their surfaces
4. Packaged in polyester materials (with anti-static electricity layers) and sealed

1.2 Soldering

1. Iron head temperature: $280 \pm 10^{\circ}\text{C}$
2. Soldering time: $< 3-4\text{S}$
3. Soldering material: eutectic nature, low melting point
4. Don't use acid solder
5. Soldering don't repeat above 3 times



■ GENERAL SPECIFICATION

Item	Contents	Unit
Panel size	11.26	
Display Format	440(R,G,B)*1920	Dots
Input Data	MIPI 4 LANE	\
View Angle	Full view	\
IC Driver	ICNL9707-AC02	\
Display Colors	16.7M TRUE COLOR	\
Module Size	64.98(W)*266.44*4.60(T)	mm
Active Area	57.948(W)*252.864(H)	mm
Pixel Size	0.0469(W)*0.1317(H)	mm
Operating	-20 to +70	°C
Storage	-30 to +80	°C
Weight	T.B.D	g

■ LCM MODULE DRAWING

■ INTERFACE PIN ASSIGNMENT

No.	Symbol	Function	Remark
1	GND	Ground	
2	D0P	Positive MIPI differential data input	
3	D0N	Negative MIPI differential data input	
4	GND	Ground	
5	D1P	Positive MIPI differential data input	
6	D1N	Negative MIPI differential data input	
7	GND	Ground	
8	CLKP	Positive MIPI differential clock input	
9	CLKN	Negative MIPI differential clock input	
10	GND	Ground	
11	D2P	Positive MIPI differential data input	
12	D2N	Negative MIPI differential data input	
13	GND	Ground	
14	D3P	Positive MIPI differential data input	
15	D3N	Negative MIPI differential data input	
16-17	GND	Ground	
18-19	IOVCC	Power supply(1.8v)	
20-23	NC	DUMMY PIN	
24	RSTB	Reset pin	
25-26	NC	DUMMY PIN	
27	GND	Ground	
28-29	LEDK	LED Cathode	
30	GND	Ground	
31	NC	DUMMY PIN	
32-33	GND	Ground	
35-36	LEDA	LED Anode	
37	GND	Ground	
38-39	VCC	Power supply(2.8v)	
40	NC	DUMMY PIN	



■ BACKLIGHT CHARACTERISTICS

Item	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminance	Lv	--	350	--	cd /m ²	If=20*1mA T=25℃
Uniformity	Avg	80	--	--	%	
Color Coordinate	X	0.25	--	0.29		
	Y	0.25	--	0.29		
Forward Voltage	Vf	-	24	-	V	

■ ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Min.	Max.	Unit
Power supply voltage (Logic)	IOVCC	-0.3	4.6	V
Power supply voltage(Analog)	VCC/VCI	-0.3	4.6	
Operating temperature	T _{OP}	-20	70	℃
Storage temperature	T _{ST}	-30	80	
Humidity	RH	-	90%(Max60 °C)	RH

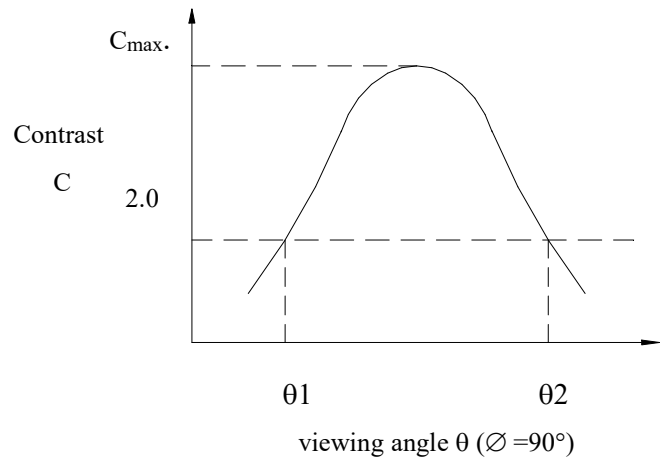
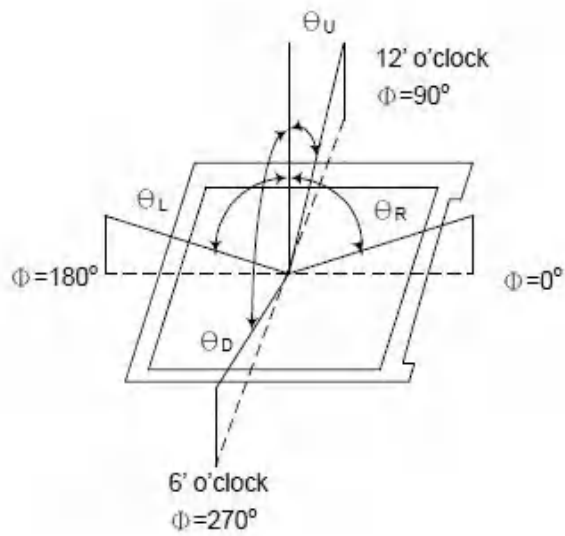


■ DC ELECTRICAL CHARACTERISTICS

Item	Symbol	Min.	Typ.	Max.	Unit
Power supply for logic	IOVCC	1.65	1.8/2.8	3.3	V
Input power supply	VCC/VCI	2.5	2.8	3.3	V
Input current	I _{IN}	-	TBD	TBD	mA
Input high voltage	V _{IH}	0.7IOVCC	-	IOVCC	V
Input low voltage	V _{IL}	0	-	0.3IOVCC	V
Output high voltage	V _{OH}	0.8IOVCC	-	IOVCC	V
Output low voltage	V _{OL}	0	-	0.2IOVCC	V

■ OPTICAL CHARACTERISTICS

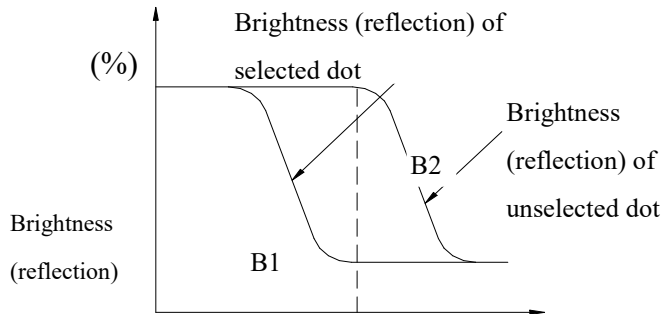
Item	Symbol	Conditions	Min.	Typ.	Max	Reference
Viewing angle	θ	$C \geq 2.0$	$\varnothing=0^\circ$	-	85	Notes 1 & 2
			$\varnothing=90^\circ$	-	85	
			$\varnothing=180^\circ$	-	85	
			$\varnothing=270^\circ$	-	85	
Contrast	C	$\theta=5^\circ, \varnothing=0^\circ$	800	1000	-	Note 3
Response time	t _{r+f}	$\theta=5^\circ, \varnothing=0^\circ$	-	30ms	35ms	Note 4



Note : Optimum viewing angle with the naked eye and viewing angle θ at C_{max} . Above are not always the same

Note 3: Definition of contrast C

$$C = \frac{\text{Brightness (reflection) of unselected dot (B2)}}{\text{Brightness (reflection) of selected dot (B1)}}$$



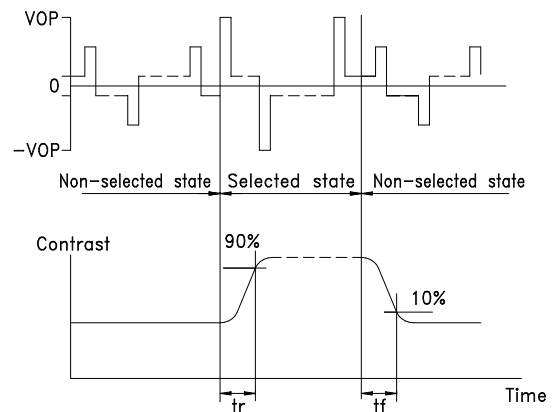
Note:

operating voltage (v)

V_{OPR} : Operating voltage

t_{ON} : Response time (rise)

Note 4: Definition of response time



Measured with a transmissive LCD

panel which is displayed 1 cm^2

f_{FRM} : Frame frequency

t_{OFF} : Response time (fall)



■ RELIABILITY

Item	Conditions	Criteria
High temperature operation	70°C for 48 hours	● No defect in cosmetic and Operational functions. ● Total current consumption Below double of initial value.
Low temperature operation	-20°C for 48 hours	
High humidity storage	40°C.90% RH for 48 hours	
High Temperature storage	80°C for 48 hours	
Low temperature storage	-30°C for 48 hours	
Temperature cycling	-20°C (30min) ↓ ↑ -25°C (5min) ↓ ↑ 70°C (30min)	

Note:

To ensure timely delivery of products, the materials we used will be from at least two vendors.