



AND002004B-OLED Intelligent Character Display

Features

- Blue emitting OLED
- Contrast ratio 2000:1
- Thin, light weight, fast response
- Wide operating temp -40 °C to +80 °C
- No crosstalk and no ghosting
- No backlight needed
- ROHS Compliant

Mechanical Characteristics

Item	Standard Value	Unit
Number of Characters	20 characters x 4 lines	—
Module Dimension	98.0 x 60.0 x 10.0 (Max)	mm
Viewing Area	70.0 x 25.2	mm
Active Area	70.16 x 20.95	mm
Dot Size	0.54 x 0.55	mm
Dot Pitch	0.6 x 0.59	mm
Character Size	2.9 x 4.75	mm
Character Pitch	3.54 x 5.4	mm
LCD Type	OLED, Blue	
Duty	1/16	

Electrical Absolute Maximum Ratings

Item	Symbol	Min.	Typ.	Max.	Unit
Operating Temperature	TOP	-40	—	+80	°C
Storage Temperature	TST	-40	—	+80	°C
Input Voltage	VI	-0.3	—	VDD	V
Supply Voltage for Logic	VDD-VSS	-0.3	—	5.3	V

Product specifications contained herein may be changed without prior notice.

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Electrical Characteristics

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Supply Voltage for Logic	VDD-VSS	—	3.0	5.0	5.3	V
Input High Voltage	VIH	—	0.9 VDD	—	VDD	V
Input Low Voltage	VIL	—	GND	—	0.1 VDD	V
Output High Voltage	VOH	IOH = -0.5 mA	0.8 VDD	—	VDD	V
Output Low Voltage	VOL	IOL = 0.5 mA	GND	—	0.2 VDD	V
Supply Current	IDD	VDD = 5V	—	60	—	mA
CIE _x (Blue)		x, y (CIE 1931)	0.12	0.16	0.20	
CIE _y (Blue)		x,y (CIE 1931)	0.19	0.23	0.27	

Optical Characteristics (T_a = 25 °C)

Item	Symbol	Condition	Min.	Specifications Typ.	Max.	Units
Viewing Angle	(V) θ		160	—	—	deg
	(H) ψ		160	—	—	
Response Time	T rise	—	—	10	—	μ s
	T fall		—	10	—	
Contrast	CR	Dark	2000:1	—	—	—
Supply Voltage for Logic 5V 50% Check Board Brightness <i>*When random texts pattern is running, averagely, at any instance about 1/2 pixels will be on.</i>		With polarizer 300 mW (5V x 60 mA)	—	40	—	Nits *
Supply Voltage for Logic 3 V 50% Check Board Brightness		With polarizer	—	15	—	Nits

Interface Pin Assignment

Pin No.	Symbol	Level	Description	Pin No	Symbol	Level	Description
1	VSS	0V	Ground	9	DB2	H/L	Data Bit 2
2	VDD	5.0V	Supply Voltage for Logic	10	DB3	H/L	Data Bit 3
3	NC	—		11	DB4	H/L	Data Bit 4
4	RS	H/L	H: Data, L: Instruction code	12	DB5	H/L	Data Bit 5
5	R/W	H/L	H: Red (MPU → Module), L: Write (MPU → Module)	13	DB6	H/L	Data Bit 6
6	E	H, H → L	H → L Enable Signal	14	DB7	H/L	Data Bit 7
7	DB0	H/L	Data Bit 0	15	NC		
8	DB1	H/L	Data Bit 1	16	NC		

Block Diagram

