

General Specification

Item	Dimension	Unit
Number of Characters	100*8 Dots	—
Module dimension	80.0 x 36.0 x 10.0(MAX)	mm
View area	66.0 x 16.0	mm
Active area	59.95 x 6.35	mm
Dot size	0.55 x 0.75	mm
Dot pitch	0.60x 0.80	mm
LCD type	OLED , Yellow	
Duty	1/8	

Absolute Maximum Ratings

Item	Symbol	Min	Max	Unit	Notes
Operating Temperature	T _{OP}	-40	+80	°C	
Storage Temperature	T _{ST}	-40	+80	°C	
Input Voltage	V _I	-0.3	VDD	V	
Supply Voltage For Logic	VDD-V _{SS}	-0.3	5.3	V	

Electrical Characteristics

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage For Logic	VDD-VSS	—	3.0	5.0	5.3	V
Input High Volt.	VIH	—	0.9 VDD	—	VDD	V
Input Low Volt.	VIL	—	GND	—	0.1VDD	V
Output High Volt.	VOH	IOH=-0.5mA	0.8 VDD	—	VDD	V
Output Low Volt.	VOL	IOL=0.5mA	GND	—	0.2 VDD	V
Supply Current	IDD	VDD=5V	—	15	—	mA
CIE _x (Yellow)		x,y(CIE1931)	0.44	0.48	0.52	
CIE _y (Yellow)		x,y(CIE1931)	0.46	0.50	0.54	

Optical Characteristics

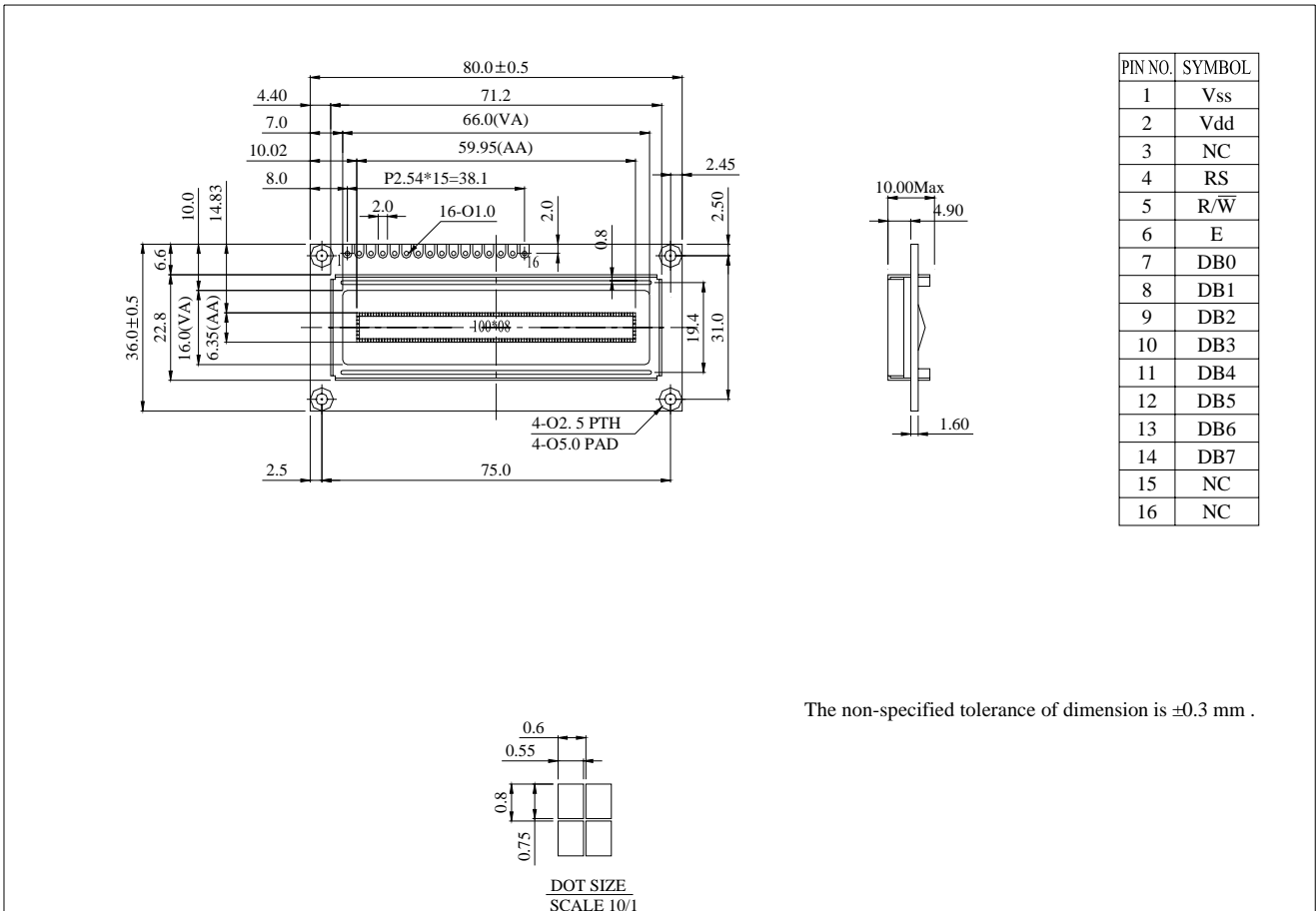
Item	Symbol	Condition	Min	Typ	Max	Unit
View Angle	(V) θ		160			deg
	(H) ϕ		160			deg
Contrast Ratio	CR	Dark	2000:1		—	—
Response Time	T rise	—		10		μ s
	T fall	—		10		μ s
Supply Voltage For Logic 5V 50% Check Board Brightness		With polarizer 65mW(5V*15mA)		120		nits Note1
Supply Voltage For Logic 3V 50% CheckBoard Brightness		With polarizer		35		nits

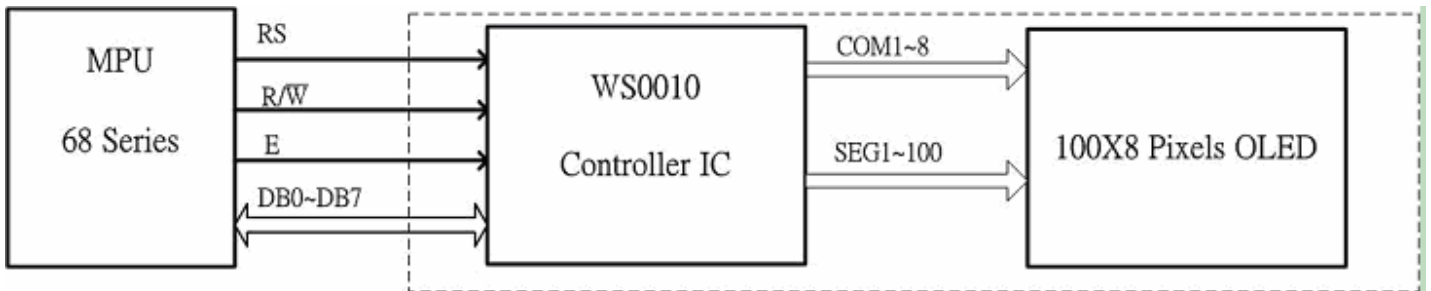
Notes: 1. When random texts pattern is running , averagely , at any instance , about 1/2 of pixels will be on.
2. You can to use the display off mode to make long life.

Interface Pin Function

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

Counter Drawing & Block Diagram





Address Format	DB7	DB6	DB5	DB4	DB3	DB2	DB1	DB0
GXA(Graphic X-axis Address	1	ADD6	ADD5	ADD4	ADD3	ADD2	ADD1	ADD0
GYA(Graphic Y-axis Address	0	1	0	0	0	0	0	CGA0

	1	2	3	4	.....	.....	97	98	99	100
CGA=0	GXA=10000000	GXA=10000001	GXA=10000010	GXA=10000011	.....	.....	GXA=11100000	GXA=11100001	GXA=11100010	GXA=11100011
	GYA=01000000	GYA=01000000	GYA=01000000	GYA=01000000	.....	.....	GYA=01000000	GYA=01000000	GYA=01000000	GYA=01000000

OLED Lifetime

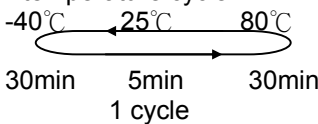
ITEM	Conditions	Typ	Remark
Operating Life Time	Ta=25°C /Initial 50% checkboard brightness 120nits	100,000 Hrs	Note

Notes:

1. Simulation pattern for operation test: interchanging with 50% checkboard
The brightness decay does not exceed 50%
2. You can use the display off mode to make long life.
3. The average operating lifetime at room temperature is estimated by the accelerated operation at high temperature conditions.

Reliability

Content of Reliability Test

Environmental Test			
Test Item	Content of Test	Test Condition	Applicable Standard
High Temperature storage	Endurance test applying the high storage temperature for a long time.	80°C 240hrs	—
High Temperature Operation	Endurance test applying the electric stress (Voltage & Current) and the thermal stress to the element for a long time.	80°C 240hrs	—
Low Temperature Operation	Endurance test applying the electric stress under low temperature for a long time.	-40°C 240hrs	—
High Temperature/ Humidity Storage	Endurance test applying the high temperature and high humidity storage for a long time.	60°C, 90%RH 240hrs	—
Temperature Cycle	Endurance test applying the low and high temperature cycle. 	-40°C/80°C 100 cycles	—
Mechanical Test			
Vibration test	Endurance test applying the vibration during transportation and using.	10~22Hz→1.5mmp-p 22~500Hz→1.5G Total 0.5hrs	—
Shock test	Constructional and mechanical endurance test applying the shock during transportation.	50G Half sign wave 11 msdc 3 times of each direction	—
Atmospheric pressure test	Endurance test applying the atmospheric pressure during transportation by air.	115mbar 40hrs	—
Others			
Static electricity test	Endurance test applying the electric stress to the terminal.	VS=800V,RS=1.5kΩ CS=100pF 1 time	—

***Supply voltage for logic system=5V. Supply voltage for LCD system =Operating voltage at 25°C