

2.23 inch OLED module



PROFILE

- Type: Passive graphic
- Display Color: Monochrome (White)
- Display format: 128 x 32 dots
- Duty cycle: 1/32
- +2.8V power supply
- Controller IC: SSD1305
- Interface: 8-bit 68XX/80XX Parallel, 4-wire SPI, I²C

FEATURES

NO.	ITEM	SPECIFICATION	UNIT
1	Panel Size	2.23	inch
2	Outline Dimension	62.0(W) x 24.0(H) x 2.0(T)	mm
3	Viewing Area	57.02 x 15.1	mm
4	Active Area	55.02 x 13.1	mm
5	Number of Dots	128 × 32	pixels
6	Dot Size	0.41(W) × 0.39(H)	mm
7	Dot Pitch	0.43(W) × 0.41(H)	mm
8	Display Mode	Passive graphic	-
9	Viewing Direction	All	Degree
10	Display Color	White	-
11	Luminance(cd/m ²)	140(TYP.)	cd/m ²
12	Contrast Ratio	2000(TYP. In Dark Room)	-
14	Interface	8-bit 68XX/80XX Parallel, 4-wire SPI, I ² C	-
16	Drive IC	SSD1305	-
18	Operation Temperature	-40~85	°C
19	Storage Temperature	-40~85	°C

ABSOLUTE MAXIMUM RATINGS				
ITEM	SYMBOL	MIN	MAX	UNIT
Supply Voltage for Logic	V _{DD}	-0.3	4	V
Supply Voltage for Display	V _{CC}	0	15	V
Operating Temperature	T _{OP}	-40	85	°C
Storage Temperature	T _{STG}	-40	85	°C
Life Time (220 cd/m ²)		13,000	-	hour
Life Time (200 cd/m ²)		15,000	-	hour
Life Time (180 cd/m ²)		16,000	-	hour

ELECTRICAL CHARACTERISTICS						
ITEM	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Supply Voltage for Logic	V _{DD}		1.65	2.8	3.3	V
Supply Voltage for Display (Supplied Externally)	V _{CC}	Internal DC/DC Disable	-	12	-	V
High Level Input	V _{IH}	I _{OUT} =100μA, 3.3MHz	0.8xV _{DD}	-	V _{DD}	V
Low Level Input	V _{IL}	I _{OUT} =100μA, 3.3MHz	0	-	0.2xV _{DD}	V
High Level Output	V _{OH}	I _{OUT} =100μA, 3.3MHz	0.9xV _{DD}	-	V _{DD}	V
Low Level Output	V _{OL}	I _{OUT} =100μA, 3.3MHz	0	-	0.1xV _{DD}	V
Supply Current for V _{DD}	I _{DD}	Contrast = FFh	-	180	300	μA
Supply Current for V _{CC}	I _{CC}		-	18	25	mA
Sleep Mode Current for V _{DD}	I _{DD, SLEEP}		-	1	5	μA
Sleep Mode Current for V _{CC}	I _{CC, SLEEP}		-	2	10	μA

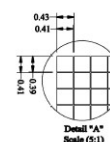
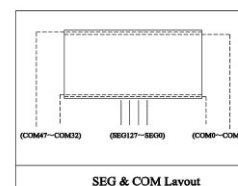
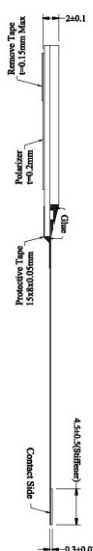
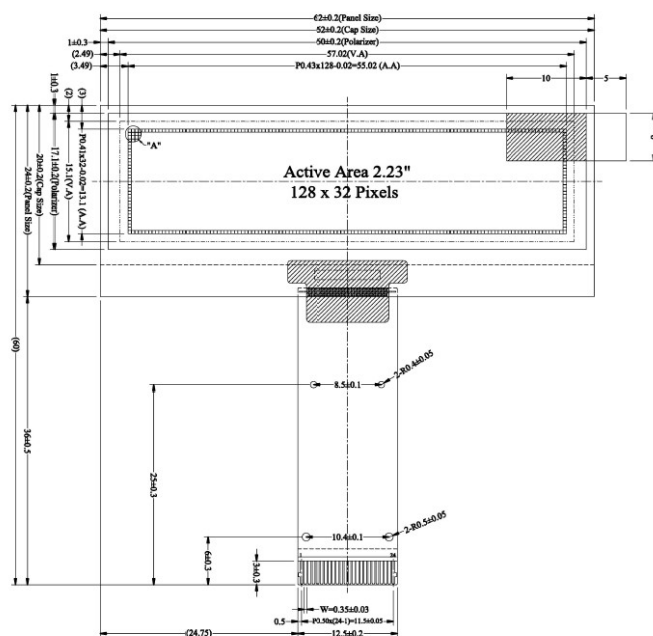
For detailed information, please refer to the “Product Numbering System” document.

PIN DESCRIPTION FOR OLED MODULE					
NO.	SYMBOL	I/O	FUNCTION		
1	N.C. (GND)	-	Reserved Pin (Supporting Pin)		
2	VLSS	P	Ground of Analog Circuit		
3	Vss	P	Ground of Logic Circuit		
4	N.C.	-	Reserved Pin		
5	VDD	P	Power Supply for Logic		
6 7	BS1 BS2	I	Communicating Protocol Select These pins are MCU interface selection input. See the following table:		
				BS1	BS2
			I ² C	1	0
			4-wire SPI	0	0
			8-bit 68XX Parallel	0	1
			8-bit 80XX Parallel	1	1
8	CS	I	Chip Select		

9	RES	I	Power Reset for Controller and Driver
10	D/C	I	Data/Command Control
11	R/W	I	Read/Write Select or Write
12	E/RD	I	Read/Write Enable or Read
13	D0	I/O	Host Data Input/Output Bus
14	D1	I/O	Host Data Input/Output Bus
15	D2	I/O	Host Data Input/Output Bus
16	D3	I/O	Host Data Input/Output Bus
17	D4	I/O	Host Data Input/Output Bus
18	D5	I/O	Host Data Input/Output Bus
19	D6	I/O	Host Data Input/Output Bus
20	D7	I/O	Host Data Input/Output Bus
21	IREF	I	Current Reference for Brightness Adjustment
22	VCOMH	O	Voltage Output High Level for COM Signal
23	Vcc	P	Power Supply for OEL Panel
24	N.C. (GND)	-	Reserved Pin (Supporting Pin)

I/O: I: input, O: output, P: power

DIMENSIONS in millimeters



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