

1.50 inch OLED module



PROFILE

- Type: Passive graphic
- Display Color: Monochrome (White)
- Display format: 128 x 128 dots
- Duty cycle: 1/128
- +2.8V power supply
- Controller IC: SH1107
- Interface: 8-bit 68XX/80XX Parallel, 3-/4-wire SPI, I²C

FEATURES

NO.	ITEM	SPECIFICATION	UNIT
1	Panel Size	1.50	inch
2	Outline Dimension	33.9(W) x 37.3(H) x 1.44(T)	mm
3	Viewing Area	28.855 x 28.855	mm
4	Active Area	26.855 x 26.855	mm
5	Number of Dots	128 × 128	pixels
6	Dot Size	0.185(W) × 0.185(H)	mm
7	Dot Pitch	0.210(W) × 0.210(H)	mm
8	Display Mode	Passive graphic	-
9	Viewing Direction	All	Degree
10	Display Color	White	-
11	Luminance(cd/m ²)	100(TYP.) (V _{cc} Supplied Externally)	cd/m ²
12	Contrast Ratio	10,000(TYP. In Dark Room)	-
14	Interface	8-bit 68XX/80XX Parallel, 3-/4-wire SPI, I ² C	-
16	Drive IC	SH1107	-
18	Operation Temperature	-40~70	°C
19	Storage Temperature	-40~85	°C

ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	MIN	MAX	UNIT
Supply Voltage for Logic	V _{DD}	-0.3	3.6	V
Supply Voltage for Display	V _{CC}	7	16.5	V
Operating Temperature	T _{OP}	-40	85	°C
Storage Temperature	T _{STG}	-40	85	°C
Life Time (100 cd/m ²)		10,000	-	hour

ELECTRICAL CHARACTERISTICS

ITEM	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Supply Voltage for Logic	V _{DD}		1.65	2.8	3.5	V
Supply Voltage for Display (Supplied Externally)	V _{CC}	Internal DC/DC Disable	11.5	12.0	12.5	V
Supply Voltage for DC/DC	V _{BAT}	Internal DC/DC Enable	3.5	-	4.2	V
Supply Voltage for Display (Generated by Internal DC/DC)	V _{CC}	Internal DC/DC Enable	6.4	-	9	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	0.8xV _{DD}	-	V _{DD}	V
Low Level Output	V _{OL}	I _{OUT} =100μA, 3.3MHz	0	-	0.2xV _{DD}	V
Operating Current for V _{CI}	I _{DD}		-	55	100	μA
Operating Current for V _{CC}	I _{PP}		-	25	32	mA
Operating Current for V _{CC} (V _{CC} Generated by Internal DC/DC)	I _{BAT}		-	45	50	mA
Sleep Mode Current for V _{DD}	I _{DD, SLEEP}		-	0.1	5	μA
Sleep Mode Current for V _{PP}	I _{CC, SLEEP}		-	0.5	5	μA

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

PIN DESCRIPTION FOR OLED MODULE

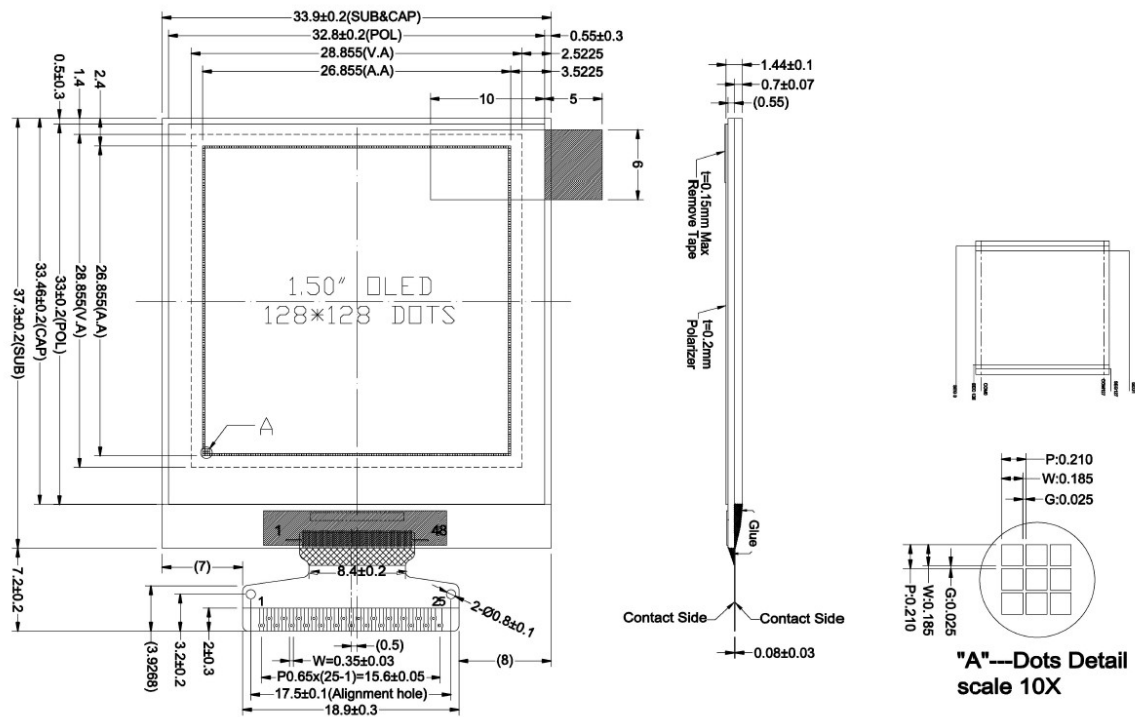
NO.	SYMBOL	I/O	FUNCTION
1	V _{SS}	P	Ground of OEL System
2	V _{CC}	P	Power Supply for OEL Panel
3	V _{COMH}	O	Voltage Output High Level for COM Signal
4	N.C.	-	Reserved Pin
5	V _{DD}	P	Power Supply for Logic
6	N.C.	-	Reserved Pin
7 8	BS1 BS2	I	Communicating Protocol Select These pins are MCU interface selection input. See the following table:
			IM1
			IM2
			8-bit 68XX Parallel
			8-bit 80XX Parallel
			4-wire SPI
			I ² C

Display Zone

9	Vss	P	Ground of OEL System
10	IREF	I	Current Reference for Brightness Adjustment
11	CS	I	Chip Select
12	RES	I	Power Reset for Controller and Driver
13	D/C	I	Data/Command Control
14	WR	I	Read/Write Select or Write
15	RD	I	Read/Write Enable or Read
16	D0	I/O	Host Data Input/Output Bus
17	D1	I/O	Host Data Input/Output Bus
18	D2	I/O	Host Data Input/Output Bus
19	D3	I/O	Host Data Input/Output Bus
20	D4	I/O	Host Data Input/Output Bus
21	D5	I/O	Host Data Input/Output Bus
22	D6	I/O	Host Data Input/Output Bus
23	D7	I/O	Host Data Input/Output Bus
24	Vcc	P	Power Supply for OEL Panel
25	Vss	P	Ground of OEL System

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

DIMENSIONS in millimeters



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