

1.92 inch OLED module

**PROFILE**

- Type: Passive graphic
- Display Color: Monochrome (White/Yellow/Blue)
- Display format: 128 x 160 dots
- Duty cycle: 1/128
- +2.8V power supply
- Controller IC: CH1127
- Interface: 8-bit 68XX/80XX Parallel, 3/4-wire SPI, I²C

FEATURES

NO.	ITEM	SPECIFICATION	UNIT
1	Panel Size	1.92	inch
2	Outline Dimension	34.5(W) x 48.8(H) x 1.4(T)	mm
3	Viewing Area	30.908 x 41.34	mm
4	Active Area	28.908 x 39.34	mm
5	Number of Dots	128 × 160	pixels
6	Dot Size	0.206(W) × 0.226(H)	mm
7	Dot Pitch	0.226(W) × 0.246(H)	mm
8	Display Mode	Passive graphic	-
9	Viewing Direction	All	
10	Display Color	White	-
11	Luminance(cd/m ²)	100(TYP.)	nit
12	Contrast Ratio	2000(TYP. In Dark Room)	-
14	Interface	8-bit 68XX/80XX Parallel, 3/4-wire SPI, I ² C	-
16	Drive IC	CH1127	-
18	Operation Temperature	-40~70	°C
19	Storage Temperature	-40~85	°C

ABSOLUTE MAXIMUM RATINGS				
ITEM	SYMBOL	MIN	MAX	UNIT
Supply Voltage for Logic	VDD	-0.3	3.6	V
Supply Voltage for Display	VPP	-0.3	18	V
Operating Temperature	T _{OP}	-40	70	°C
Storage Temperature	T _{STG}	-40	85	°C
Life Time (100 cd/m ²)		10,000	-	hour
Life Time (90 cd/m ²)		11,000	-	hour
Life Time (80 cd/m ²)		12,000	-	hour

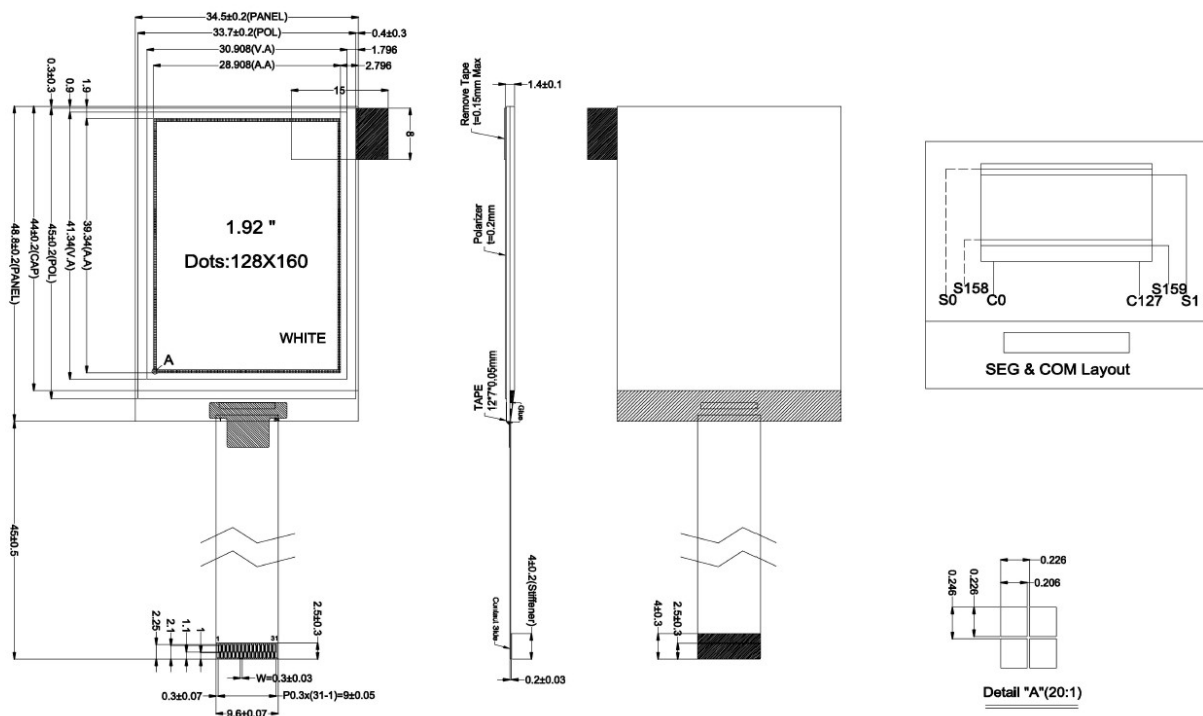
ELECTRICAL CHARACTERISTICS						
ITEM	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Supply Voltage for Logic	VDD		1.65	2.8	3.3	V
Supply Voltage for Display	VPP		11.5	12.0	12.5	V
High Level Input	V _{IH}	I _{OUT} =100μA, 3.3MHz	0.8xV _{DD}	-	V _{DD}	V
Low Level Input	V _{IL}	I _{OUT} =100μA, 3.3MHz	0	-	0.2xV _{DD}	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
Operating Current for V _{DD}	I _{DD}		-	4	5.5	mA
Operating Current for V _{PP}	I _{CC}		-	25	30	mA
Sleep Mode Current for V _{DD}	I _{DD, SLEEP}		-	1	5	μA
Sleep Mode Current for V _{PP}	I _{CC, SLEEP}		-	5	60	μA

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

PIN DESCRIPTION FOR OLED MODULE			
NO.	SYMBOL	I/O	FUNCTION
1	NC	-	Reserved pin, no connection
2	VPP	P	Power Supply for OEL Panel
3	VSEGM	O	regulator circuit.
4	VCOMH	O	Voltage Output High Level for COM Signal
5	VSL	P	Discharge voltage level pad.
6	NC	-	Reserved pin, no connection
7	IREF	O	Current reference for brightness adjustment
8	VPP	P	Power Supply for OEL Panel
9	NC	-	Reserved pin, no connection
10	VSS	P	Ground of Logic Circuit
11	VCL	P	Discharge voltage level pad.
12,15	VDD	P	1.65V– 3.6V Power supply for logic and input/output.

13 14 16	IM0 IM1 IM2	I	Communicating Protocol Select			
			These pins are MCU interface selection input. See the following table:			
				IM0	IM1	IM2
			I ² C	0	1	0
			3-wire SPI	1	0	0
			4-wire SPI	0	0	0
			8-bit 68XX Parallel	1	0	0
			8-bit 80XX Parallel	0	1	1
17	CS	I	Chip Select			
18	RES	I	Power Reset for Controller and Driver			
19	A0	I	Data/Command Control			
20	WR	I	Read/Write Enable or Write			
21	RD	I	Read/Write Enable or Read			
22	D0	I/O	Host data input/output bus			
23	D1	I/O	Host data input/output bus			
24	D2	I/O	Host data input/output bus			
25	D3	I/O	Host data input/output bus			
26	D4	I/O	Host data input/output bus			
27	D5	I/O	Host data input/output bus			
28	D6	I/O	Host data input/output bus			
29	D7	I/O	Host data input/output bus			
30	NC	-	Reserved pin, no connection,			
31	VPP	P	Power Supply for OEL Panel			

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

DIMENSIONS in millimeters

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