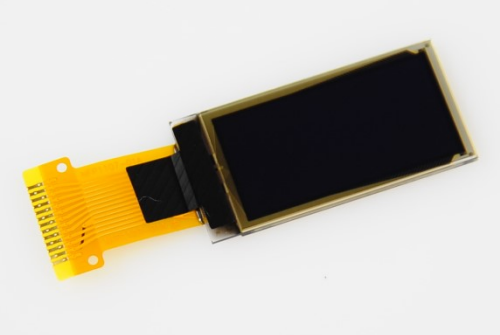
0.96 inch OLED module



PROFILE

- Type：Passive graphic
- Display Color: Monochrome (White)
- Display format: 64 x 128 dots
- Duty cycle: 1/64
- +2.8V power supply
- Controller IC: SSD1312
- Interface: 4-wire SPI, I²C

FEATURES

NO.	ITEM	SPECIFICATION	UNIT
1	Panel Size	0.96	inch
2	Outline Dimension	14(W) x 28(H) x 1.22(T)	mm
3	Viewing Area	11.86 x 22.74	mm
4	Active Area	10.86 x 21.74	mm
5	Number of Dots	64 × 128	pixels
6	Dot Size	0.15(W) × 0.15(H)	mm
7	Dot Pitch	0.17(W) × 0.175(H)	mm
8	Display Mode	Passive graphic	-
9	Viewing Direction	All	
10	Display Color	White	-
11	Luminance(cd/㎡)	160(TYP.) (V_{PP} Supplied Externally)	cd/㎡
12	Contrast Ratio	10,000(TYP. In Dark Room)	-
14	Interface	4-wire SPI, I²C	-
16	Drive IC	SSD1312	-
18	Operation Temperature	-40~70	℃
19	Storage Temperature	-40~85	℃

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	18	V
Operating Temperature	T_{OP}	-40	70	℃
Storage Temperature	T_{STG}	-40	85	℃
Life Time (100 cd/㎡)		10,000	-	hour

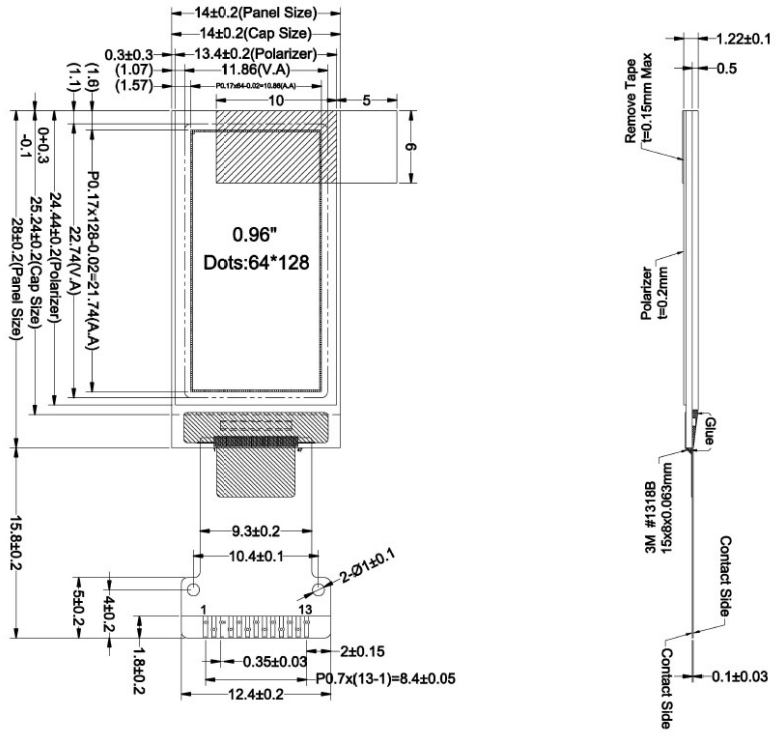
ELECTRICAL CHARACTERISTICS						
ITEM	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Supply Voltage for Logic	V_{DD}		1.65	2.8	3.5	V
Supply Voltage for Display	V_{PP}		8.5	9.0	9.5	V
High Level Input	V_{IH}	I_{OUT}=100μA, 3.3MHz	0.8xV_{DD}	-	V_{DD}	V
Low Level Input	V_{IL}	I_{OUT}=100μA, 3.3MHz	0	-	0.2xV_{DD}	V
High 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_{CI}	I_{DD}		-	180	300	μA
Operating Current for V_{PP}	I_{PP}		-	16.0	23	mA
Sleep Mode Current for V_{DD}	$I_{DD, SLEEP}$		-	1	5	μA
Sleep Mode Current for V_{PP}	$I_{CC, SLEEP}$		-	2	10	μA

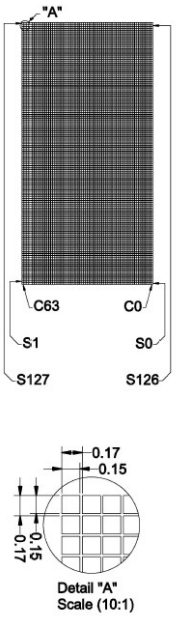
For detailed information, please refer to the “Product Numbering System” document.

PIN DESCRIPTION FOR OLED MODULE			
NO.	SYMBOL	I/O	FUNCTION
1	N.C.	-	Reserved Pin
2	V_{PP}	P	Power Supply for OEL Panel
3	VCOMH	O	Voltage Output High Level for COM Signal
4	V_{DD}	P	Power Supply for Logic
5	IM1	I	Communicating Protocol Select These pins are MCU interface selection input. See the following table: IM1 4-wire SPI: 0 I^2C: 1
6	IREF	I	Current Reference for Brightness Adjustment
7	CS	I	Chip Select
8	RES	I	Power Reset for Controller and Driver
9	A0	I	Data/Command Control
10	D0	I/O	Serial Data Input/Output and clock
11	D1	I/O	Serial Data Input/Output and clock
12	V_{SS}	P	Ground of OEL System
13	N.C.	-	Reserved Pin

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

DIMENSIONS in millmeters





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