


MCOT128032AY-BS	128 x 32	Blue	OLED Module
<b>Specification</b>			
Version: 1		Date: 16/05/2017	
<b>Revision</b>			

Display Features					
Resolution	128 x 32				
Appearance	Blue on Black				
Logic Voltage	3V				
Interface	Parallel				
Module Size	30.00 x 11.50 x 1.45				
Operating Temperature	-40°C ~ +70°C			Box Quantity	Weight / Display
Construction	TAB	---	---		

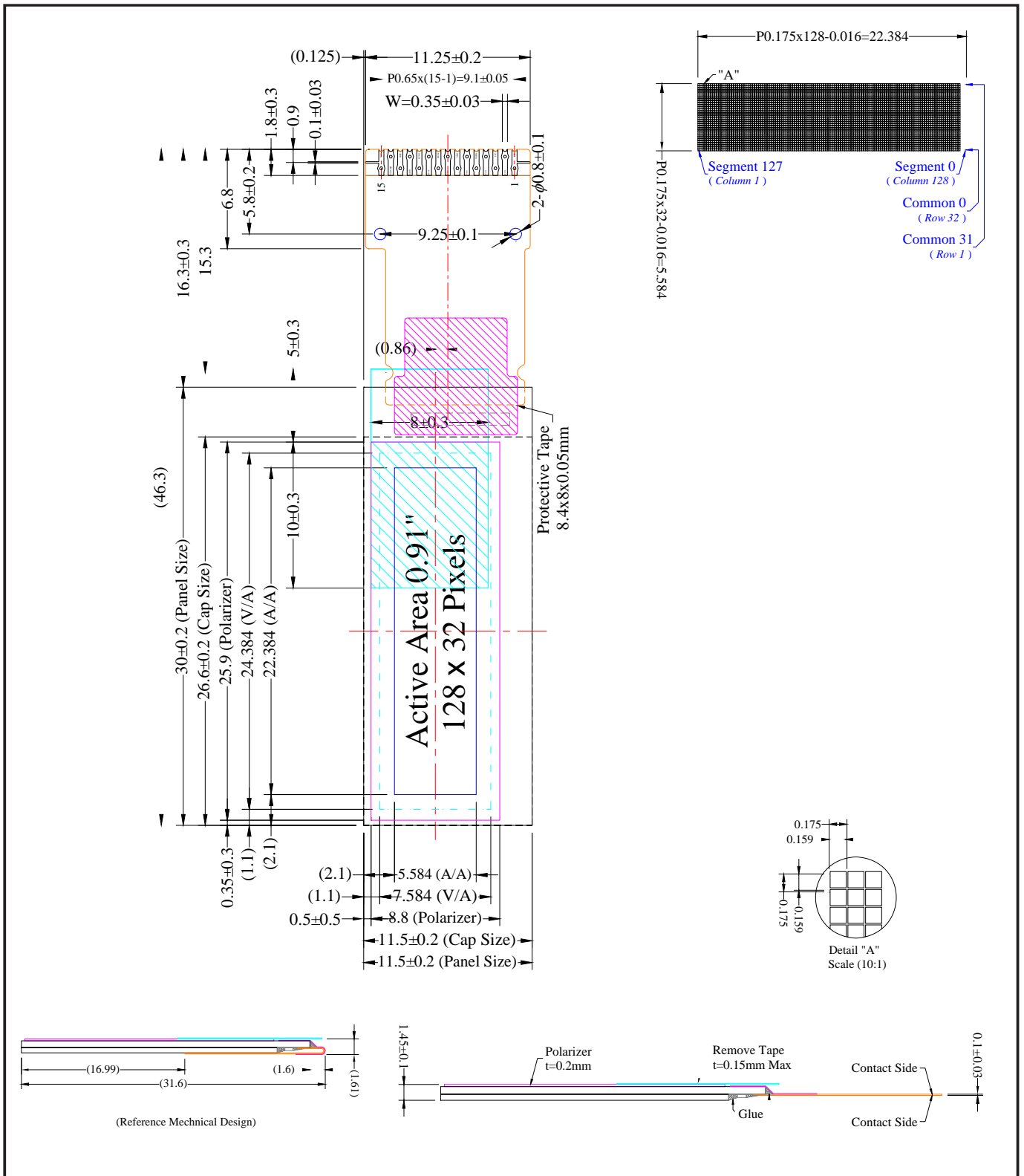
\* - For full design functionality, please use this specification in conjunction with the SSD1306 specification. (Provided Separately)

Display Accessories	
Part Number	Description

Optional Variants	
Appearance	Voltage
White on Black	

# Mechanical Specifications

Module Size	30.00 x 11.50 x 1.45 ( With Backlight)				W x H x D mm
Viewing Area	24.38 x 7.58	W x H mm	Hole-to-Hole	---	W x H mm
Dot Size	0.159 x 0.159	W x H mm	Dot Pitch	0.175 x 0.175	W x H mm



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## Pin layout

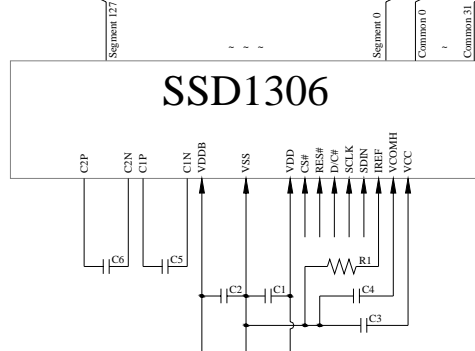
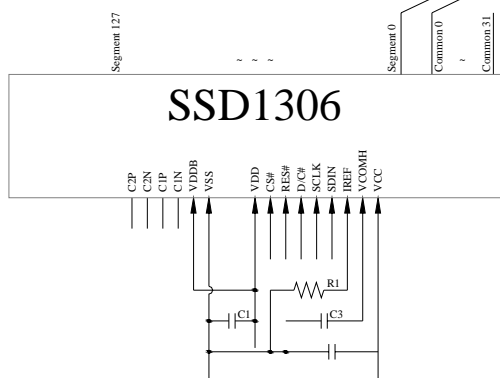
Pin	Symbol	Description	Remarks
1/2 3/4	C2P / C2N C1P / C1N	Positive terminal of the flying inverting capacitor. Negative terminal of the flying boost capacitor. The charge-pump capacitors are required between the terminals. They must be floated when the converter is not used.	I
5	VDDDB	Power Supply for DC / DC converter circuit.	P
6	VSS	Ground of OEL system	P
7	VDD	Power Supply for Logic Circuit.	P
8	CS#	Chip Select.	I
9	RES#	Power Reset for Controller and Driver.	I
10	D/C#	Data / Command Control.	I
11	SCLK	Serial Clock Input Signal.	I
12	SDIN	Serial Data Input Signal.	I
13	IREF	Current reference for Brightness Adjustment.	I
14	VCOMH	Voltage Output high level for COM Signal.	O
15	VCC	Power Supply for OEL Panel.	P

*VCC Supplied Externally*

*VCC Generated by Internal DC/DC Circuit*

Active Area 0.91"  
128 x 32 Pixels

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### Absolute Maximums Ratings

Item	Symbol	Minimum	Typical	Maximum	Unit
Supply Voltage for Display	VI	0.00	---	11.00	V
Supply Voltage for Logic	V0	-0.30	---	4.00	V
Supply Voltage for DC/DC	VDDDB	-0.30	---	5.00	V
Operating Temperature	Vopr	-40	---	70	°C
Storage Temperature	Vstg	-40	---	85	°C

### Electronic Characteristics

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Supply Voltage for Logic	VCI	Internal DC/DC Disable	1.65	2.80	3.30	V
Supply Voltage for Display (Supplied Externally)	VCC	Internal DC/DC Enable	7.00	7.25	7.50	V
Supply Voltage for DC/DC	VDDDB	Internal DC/DC Disable	3.30	---	4.20	V
Supply Voltage Display (Internal DC/DC)	VCC	Internal DC/DC Enable	7.00	---	7.50	V
High Level Input	VIH	Iout=100μA, 3.3Mhz	0.80 VDD	---	VDD	
Low Level Input	VIL	Iout=100μA, 3.3Mhz	0.00	---	0.20 VDD	
High Level Output	VOH	Iout=100μA, 3.3Mhz	0.90 VDD	---	VDD	
Low Level Output	VOL	Iout=100μA, 3.3Mhz	0.00	---	0.10 VDD	
Operating Current for VDD	IDD		---	180	300	μA
Operating Current for VCC (Supplied Externally)	ICC		---	3.00	3.80	mA
			---	4.50	5.60	mA
			---	7.80	9.80	mA
Operating Current for VCC (Generated internally by DC/DC)	IDDB		---	9.10	11.40	mA
			---	13.30	16.60	mA
			---	21.70	27.10	mA
Sleep Mode Current for VDD	IDD, Sleep		---	1.00	5.00	μA
Sleep Mode Current for VCC	ICC, Sleep		---	2.00	10.00	μA

### OLED Characteristics

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Viewing Angle	(V)θ	---	---	Free	---	Deg
	(H)φ	---	---	Free	---	Deg
Contrast Ratio	CR	Dark	---	>10,000:1	---	---
Display with 50% Checkboard Brightness			120	150	---	cd/m <sup>2</sup>
CIEx(Blue)		(CIE1931)	0.12	0.16	0.20	---
CIEy(Blue)		(CIE1931)	0.22	0.26	0.30	---

### OLED Life Time

Item	Conditions	Typical	Remark
Operating Life Time	Running at 80 cd/m <sup>2</sup>	25,000 Hours	---

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