


MCOT128064B1V-WM	128 x 64	White	OLED Module
Specification			
Version: 1	Date: 16/05/2017		
Revision			

Display Features			Box Quantity	Weight / Display
Resolution	128 x 64			
Appearance	White on Black			
Logic Voltage	3V			
Interface	Parallel / SPI / I2C			
Module Size	42.04 x 27.22 x 1.45 mm			
Operating Temperature	-40°C ~ +80°C			
Construction	TAB	---	---	

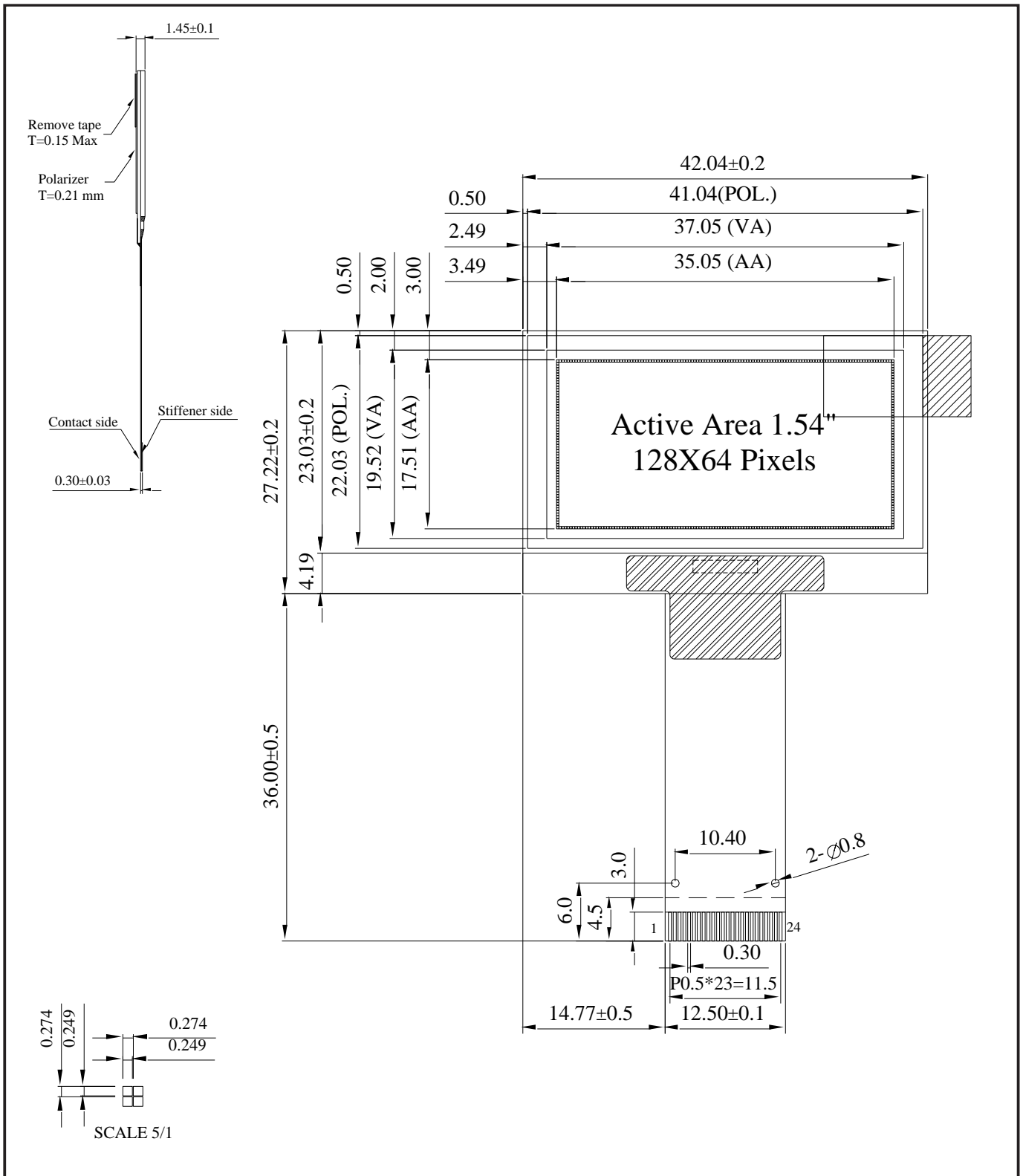
* - For full design functionality, please use this specification in conjunction with the SSD1309ZC specification. (Provided Separately)

Display Accessories	
Part Number	Description
MPBV7	30 Way FFC to cable and wires. Driven by any driver board that can be wired to a 1mm pitch SHDR-30V-S-B receptacle.
MCIB-12	UC32 Breakout Board. With SD Card and LED backlight driver. Used in conjunction with MPBV7

Optional Variants	
Appearance	Voltage
Yellow on Black	

Mechanical Specifications

Module Size	42.04 x 27.22 x 1.45 (With Backlight)			W x H x D mm	
Viewing Area	37.05 x 19.52	W x H mm	Hole-to-Hole	---	W x H mm
Dot Size	0.249 x 0.249	W x H mm	Dot Pitch	0.274 x 0.274	W x H mm



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Pin layout			
Pin	Symbol	Description	Remarks
1	NC (Ground)	No Connection	
2	VLSS	Analog ground Pin.	
3	VSS	Ground.	
4	NC	No Connection.	
5	VDD	Power Supply pin for core logic operation.	
6	BS1	MCU bus interface selection pins. Select appropriate logic setting, as described below: (Note: "0" is connected to VSS and "1" is connected to VDD) I2C = BS1: 1 BS2: 0 4-wire SPI = BS1: 0 BS2: 0 8-bit 68XX = BS1: 0 BS2: 1 8-bit 80XX = BS1: 1 BS2: 1	
7	BS2		
8	CS#	Chip Select Input connecting to MCU. Chip is enabled for MCU communication when CS# is pulled Low.	
9	RES#	Reset Signal Input. Initialisation is executed when pulled Low. Keep pulled High during normal operation.	
10	D/C#	Data / Command control pin connect to MCU. High= Data at D(7:0) interpreted as data. Low= Data at D(7:0) transferred to command register. I2C mode = SA0 for slave address selection. 3-Wire SPI = Connect to VSS	
11	R/W#	Read / Write input pin, connecting to MCU interface. 6800 Mode= R/W (R/W#) selection input, read mode carried out when pulled High, write mode when Low. 8080 Mode= WR (W/R#) input, data write initiated when pin is pulled Low and chip is selected. I2C or SPI selected = Connect to VSS.	
12	E/RD#	MCU Interface Input. 6800 Mode= Enable signal pin, Read/Write initiated when pin is pulled High and chip is selected. 8080 Mode= Read (RD#) signal pin, read operation initiated when pin is pulled Low and chip is selected. I2C or SPI selected = Connect to VSS.	
13~20	D0~D7	Bi-directional data bus connecting to MCU data bus. Unused pins to tie low. SPI Mode= D0 will be Serial Clock input (SCLK). D1 will be the Serial Data input (SDIN) and D2 should be kept NC. I2C Mode= D2 and D1 should be tied together and serve as SDAout, SDAin in application and D0 is Serial Clock input (SCL).	
21	IREF	Segment output current reference pin. IREF supplied externally.	
22	VCOMH	COM signal deselected voltage level. Capacitor between here and VSS.	
23	VCC	Power Supply for driving voltage. Positive power voltage supply pin.	
24	NC (GND)	No Connection	

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Absolute Maximums Ratings					
Item	Symbol	Minimum	Typical	Maximum	Unit
Supply Voltage for Display	VCC	0.00	---	15.00	V
Supply Voltage for Logic	VDD	-0.30	---	4.00	V
Operating Temperature	Vopr	-40	---	80	°C
Storage Temperature	Vstg	-40	---	80	°C

Electronic Characteristics						
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Input High Voltage	VIH	---	0.80	---	VDD	V
Input Low Voltage	VIL	---	GND	---	0.20	V
Output High Voltage	VOH	---	0.90	---	VDD	V
Output Low Voltage	VOL	---	GND	---	0.10	V
Supply Voltage for Logic	VDD	---	2.80	3.00	3.30	V
Supply Voltage for Display	VCC	---	12.00	12.50	13.00	V
50% Checkboard Operating Current.	IDD	VDD=12.5V	---	16.00	45.00	mA

OLED Characteristics						
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Viewing Angle	(V) θ	---	160	---	---	Deg
	(H) ϕ	---	160	---	---	Deg
Contrast Ratio	CR	Dark	2000:1	---	---	---
Response Time	T Rise	---	---	10	---	μ s
	T Fall	---	---	10	---	μ s
Display with 50% Checkboard Brightness			100	120	---	cd/m ²
CIEx(White)		(CIE1931)	0.26	0.28	0.30	---
CIEy(White)		(CIE1931)	0.30	0.32	0.34	---

OLED Life Time			
Item	Conditions	Typical	Remark
Operating Life Time	Ta=25°C. Initial checkboard brightness, 50%.	20,000 Hours	---

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