Electra House, 32 Southtown Road
Great Yarmouth, Norfolk
NR31 0DU, England

Telephone +44 (0)1493 602602
Fax +44 (0)1493 665111
Email:sales@midasdisplays.com
www.midasdisplays.com

MCOT128064E1V-GM	128 x 64	Green	OLED Module

Specification

Version: 2	Date: 07/06/2017

Revision

1	04/03/2016	First Release.
2	01/06/2016	Modify Static Electricity Test.

Display Features	
Resolution	128 x 64
Appearance	Green on Black
Logic Voltage	3V
Interface	Parallel / SPI / I2C
Module Size	60.50 x 37.00 x 2.15 mm
Operating Temperature	-40°C ~ +80°C
Construction	TAB

RoHS compliant

Box Quantity	Weight / Display
---	---

* - For full design functionality, please use this specification in conjunction with the SSD1309Z specification. (Provided Separately)

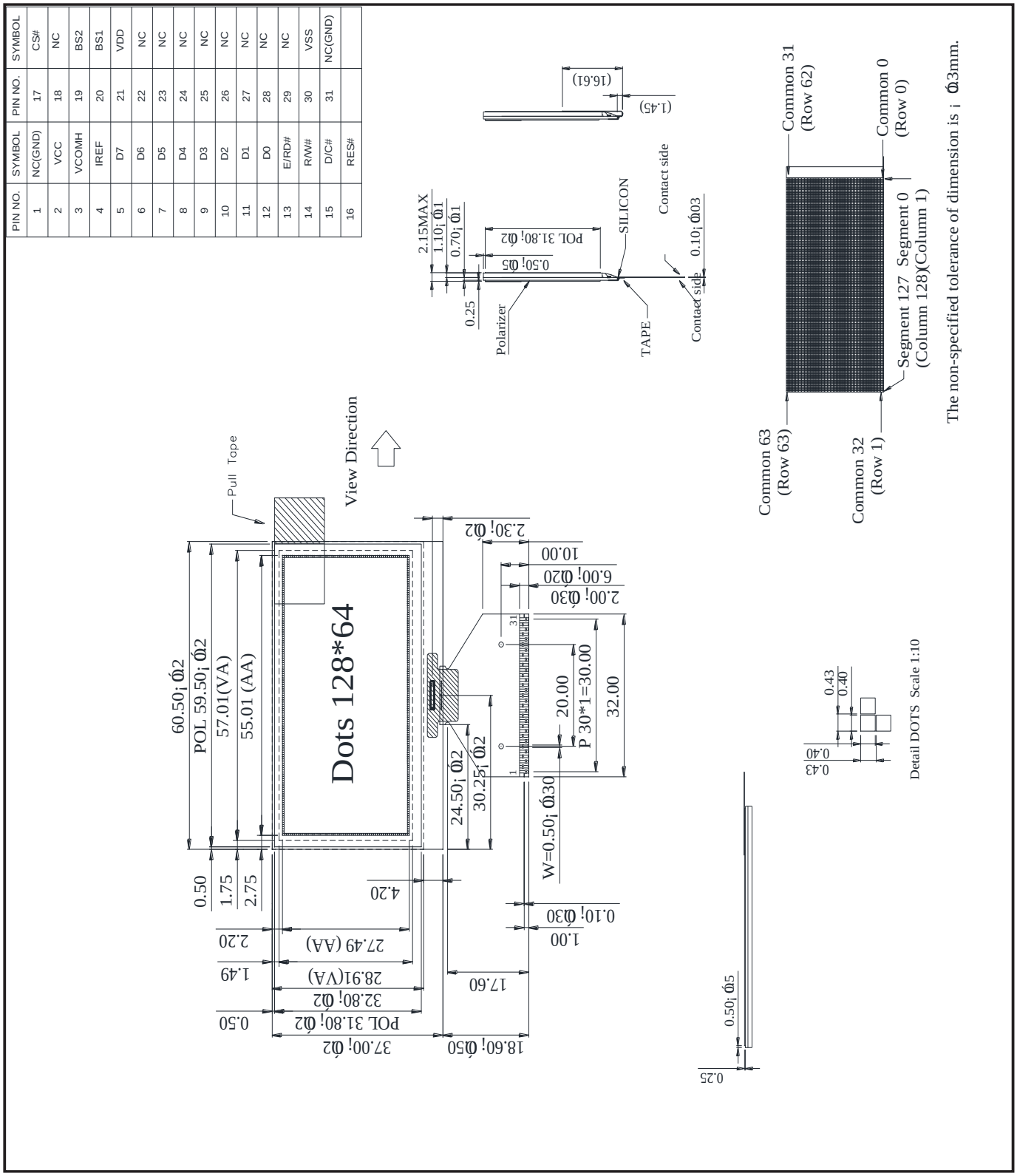
Display Accessories

Part Number	Description
MPBV2	Direct solder-to-2mm pitch DIL pinout interface board. Compatible with any display with up to 51-way FFC 0.3~0.5mm pitch.
MCIB12	UC32 Breakout Board with SD card and LED back light driver. Used in conjunction with MPBV6.

Optional Variants

Appearance	Voltage
Yellow on Black Blue on Black White on Black	

Mechanical Specifications					
Module Size	60.50 x 37.00 x 2.15 (Without Backlight)				W x H x D mm
Active Area	55.01 x 27.49	W x H mm	Hole-to-Hole	---	W x H mm
Dot Size	0.40 x 0.40	W x H mm	Dot Pitch	0.43 x 0.43	W x H mm



MCOT128064E1V-GM	128 x 64	Green	OLED Module
Specification			
Version: 2		Date: 07/06/2017	
Revision			

Pin layout			
Pin	**Symbol**	**Description**	**Remarks**
1	NC	No Connection.	
2	VCC	Power supply driving voltage.	
3	VCOMH	COM signal deselected voltage level. Connect capacitor between here and VSS.	
4	IREF	Segment output current reference pin. Supplied externally.	
5-12	D0~D7	Bi-directional data bus connecting to the MCU data bus. Unused pins to tie Low. SPI Mode = D0 is Serial Clock input (SCLK) D1 will be Serial Data input (SDIN), D2 to be kept NC. I2C Mode = D2, D1 tied together serving as SDAout. SDAin in application and D0 is the Serial Clock input (SCL).	
13	E/RD#	MCU interface input. 6800 selected = Pin used as Enable (E) Signal. Read/write initiated when pin pulled High and chip selected. 8080 selected = Pin receives Read (RD#) Signal. Read initiated when pin pulled Low and chip selected. I2C / SPI selected = Connect to VSS.	
14	R/W#	Read / Write control input connecting to MCU interface. 6800 Mode = Pin used as Read/write (R/W#) selection input. Read mode when pin is pulled High; Write mode when pulled Low. 8080 Mode = Pin used as Write (WR#) input. Data Write initiated when pin pulled Low and chip selected. I2C / SPI selected = Connect to VSS.	
15	D/C#	Data / Command control pin connecting to MCU. Pulled High= D(7:0) interpreted as data. Pulled Low = D(7:0) transferred to a command register. I2C Mode = Pin acts as SA0 for slave address selection. 3-Wire SPI Mode = Connect to VSS	
16	RES#	Reset Signal Input. Initialisation executed when pulled Low. Keep pulled High during normal operation.	
17	CS#	Chip Select Input connecting to the MCU. Chip is enabled when CS# is pulled Low.	
18	NC	No Connection.	
19	BS2	MCU bus interface pins. Select appropriate logic settings: I2C: BS1= 1 BS2= 0 4-Wire SPI: BS1= 0 BS2= 0 6800 Parallel: BS1= 0 BS2= 1 8800 Parallel: BS1= 1 BS2= 1	
20	BS1		
21	VDD	Power Supply pin for core logic operation.	
22~29	NC	No Connection	
30	VSS	Ground	
31	NC	No Connection.	

Absolute Maximums Ratings

Item	Symbol	Minimum	Typical	Maximum	Unit
Supply Voltage for Logic	VDD	-0.30	---	4.00	V
Supply Voltage for Display	VCC	0.00	---	15.00	V
Operating Temperature	TOP	-40	---	80	°C
Storage Temperature	TSTG	-40	---	80	°C

Electronic Characteristics

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Input High Voltage	VIH	---	0.80xVDD	---	VDD	V
Input Low Voltage	VIL	---	GND	---	0.20xVDD	V
Output High Voltage	VOH	---	0.90xVDD	---	VDD	V
Output Low Voltage	VOL	---	GND	---	0.10xVDD	V
Supply Voltage for Logic	VDD	---	2.80	3.00	3.30	V
Supply Voltage for Display	VCC	---	12.00	13.00	15.00	V
50% Checkboard Operating Current.	IDD	VDD=13V	15	18	22	mA
CIEx(Green)	---	(CIE1931)	0.24	0.28	0.32	---
CIEy(Green)	---	(CIE1931)	0.59	0.63	0.67	---

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	---	μs
	T Fall	---	---	10	---	μs
Display with 50% Checkboard Brightness			70	90	---	cd/m^2

OLED Life Time

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