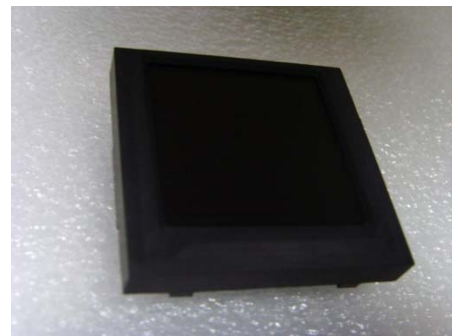


CY-3051 OLED Display Module 128RGBx128 (1.5")



☆ DISPLAY SPECIFICATIONS

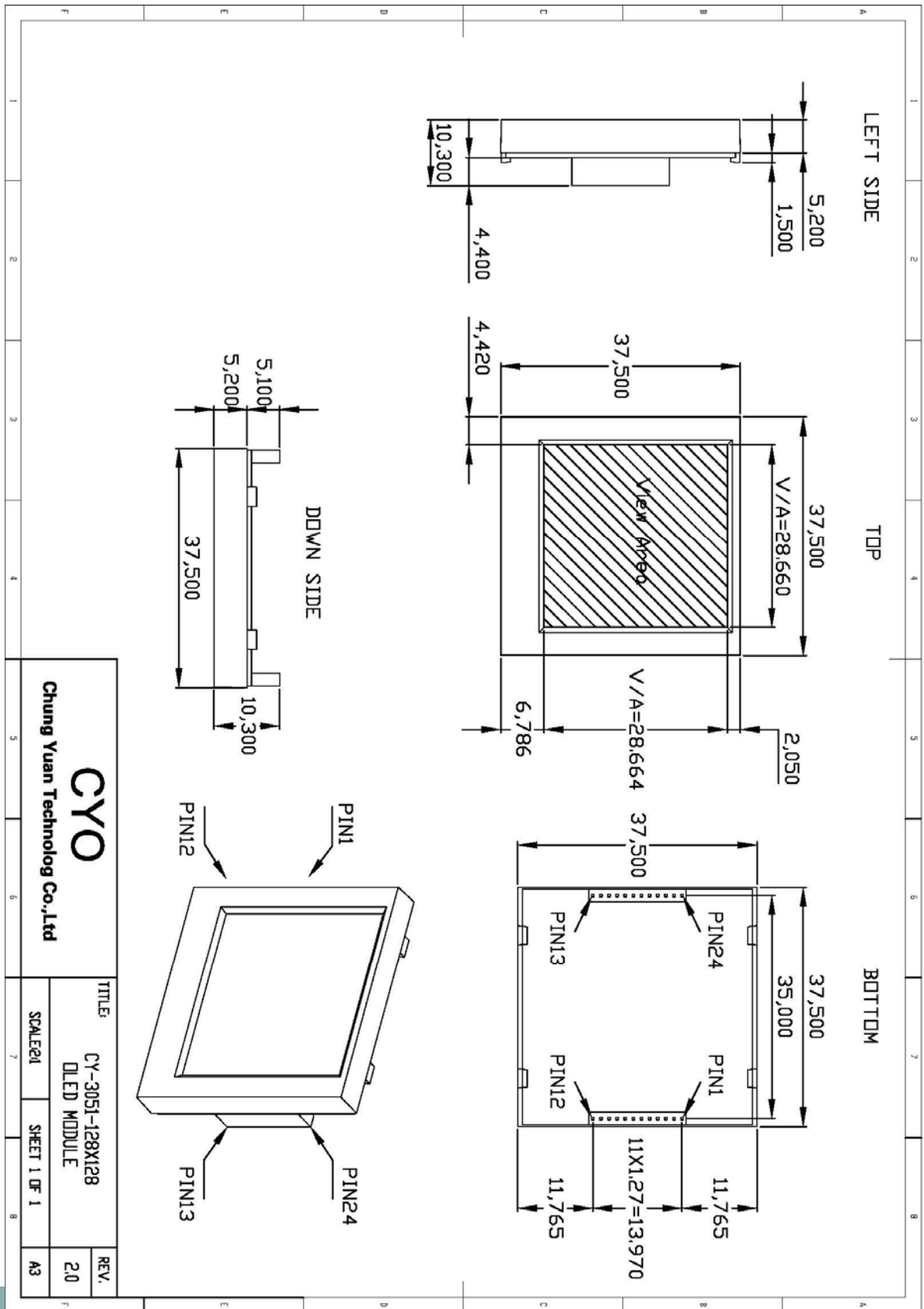
- **Display Type:** OLED
- **Display Mode:** Passive Matrix
- **Display Color :** 262,144 Colors (Maximum)
- **Drive Duty:** 1/128 Duty
- **Number of Pixels :** 128(RGB) x 128
- **Active Area:** 26.855 x 26.864 (mm)
- **Pixel Pitch:** 0.07 x 0.21 (mm)
- **Pixel Size:** 0.045 x 0.194 (mm)



★ MECHANICAL DIMENSIONS

- **DIMENSION:** 37.5 x 37.5 x 10.3 (mm)
- **WINDOW SIZE:** 28.660 x 28.664 (mm)

CY-3051 OLED Display Module 128RGBx128 (1.5")



Chung Yuan Technolog Co.,Ltd

CYO

TITLE	CY-3051-128X128	REV.	2.0
SCALE	1:1	SHEET	1 OF 1
OLED MODULE		A3	

CY-3051 OLED Display Module 128RGBx128 (1.5'')

☆ PIN DEFINITION

Pin No.	Symbol	Type	Function															
1	VDD	P	Power Supply for Core VDD This is a voltage supply pin. It must be connected to external source.															
2	VSS	P	Ground for System This a ground pin. It must be connected to external source.															
3	NC	-	Reserved Pin															
4	NC	-	Reserved Pin															
5 6	BS1 BS2	I	Communication Protocol Select These pins are MCU interface selection input. See the following table: <table border="1" style="margin-left: 20px; margin-top: 10px;"> <thead> <tr> <th></th> <th>BS1</th> <th>BS2</th> </tr> </thead> <tbody> <tr> <td>3-wire SPI</td> <td>1</td> <td>0</td> </tr> <tr> <td>4-wire SPI</td> <td>0</td> <td>0</td> </tr> <tr> <td>68XX-parallel (8-bit)</td> <td>1</td> <td>1</td> </tr> <tr> <td>80XX-parallel (8-bit)</td> <td>0</td> <td>1</td> </tr> </tbody> </table>		BS1	BS2	3-wire SPI	1	0	4-wire SPI	0	0	68XX-parallel (8-bit)	1	1	80XX-parallel (8-bit)	0	1
	BS1	BS2																
3-wire SPI	1	0																
4-wire SPI	0	0																
68XX-parallel (8-bit)	1	1																
80XX-parallel (8-bit)	0	1																
7	CS#	I	Chip Select This is the chip select input. The chip is enable for MCU communication only when CS# is pulled low.															
8	RES#	I	Power Reset for Controller and Drive This is reset signal input. When the pin is low , initialization of the chip is executed.															
9	D/C#	I	Data/ Command Control This pin is Data/Command control pin. When the pin is pulled high, the input at D0~D7 is treated as display data. When the pin is pulled low, the input at D0~D7 will be transferred to the command register.															
10	WR# (R/W#)	I	Write or Read/Write Select When 80xx interface mode is selected, the pin will be the Write (WR#) input. When interfacing to a 68xx-series microprocessor, the pin will be used as Read/Write (R/W#) selection input. Pull this pin to "High" for read mode and pull it to "Low" for write mode.															
11	RD#(E)	I	Read or Read/Write Enable When 80xx interface mode is selected, the pin will be the Read (RD#) input. When interfacing to a 68xx-series microprocessor, the pin will be used as the Enable (E) signal. Read/Write operation is initiated when this pin is pulled high and the CS# is pulled low.															

CY-3051 OLED Display Module 128RGBx128 (1.5'')

☆ PIN DEFINITION

12	NC	-	Reserved Pin
13~20	D0~D7	I/O	Host Data Input /Output Bus These pins are 8-bit bi-directional data bus to be connected to the microprocessor's data bus. When serial mode is selected, D1 will be the serial data input SDIN and the D0 will be the serial clock input SCLK. Unused pins must be connected to VSS except for D2.
21	VSS	P	Ground for System This a ground pin. It must be connected to external source.
22	VCC-CTL	I	OLED Driver Power Supply ON/ OFF Control When this pin is pulled high, the panel power supply will be turned ON. When this pin is pulled low, the panel power supply will be turned OFF.
23	NC	-	Reserved Pin
24	VCC	P	OLED Driver Power Supply Output This pin is OLED driver power supply output. When VCC-CTL is pulled high, the pin will be output about 13V voltage.

★ DC CHARACTERISTICS

Characteristics	Symbol	Conditions	Min	Type	Max	Unit
Supply Voltage for Operation	V _{CI}		2.4	2.8	3.5	V
Supply Voltage for Logic	V _{DD}		2.4	2.5	2.6	V
Supply Voltage for Display	V _{CC}	Note 1	12.5	13	13.5	V
High Level Input	V _{IH}		0.8xV _{DD}	-	V _{DD}	V
Low Level Input	V _{IL}		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 _{CI}		-	240	300	μA
Operating Current for V _{CC}	I _{CC}	Note 2	-	23.2	29.0	mA
		Note 3	-	33.4	41.8	mA
Sleep Mode Current for V _{CI}	I _{CI, SLEEP}		-	1	5	μA
Sleep Mode Current for V _{CC}	I _{CC, SLEEP}		-	1	5	μA

Note 1: Brightness (L_{br}) and Supply Voltage for Display (V_{CC}) are subject to the change of the panel characteristics and the customer's request.

Note 2: V_{CI} = 2.8V, V_{CC} = 13V, 50% Display Area Turn on.

Note 3: V_{CI} = 2.8V, V_{CC} = 13V, 100% Display Area Turn on.