

CY-5051 OLED Push Button 128RGBx128 (1.5")



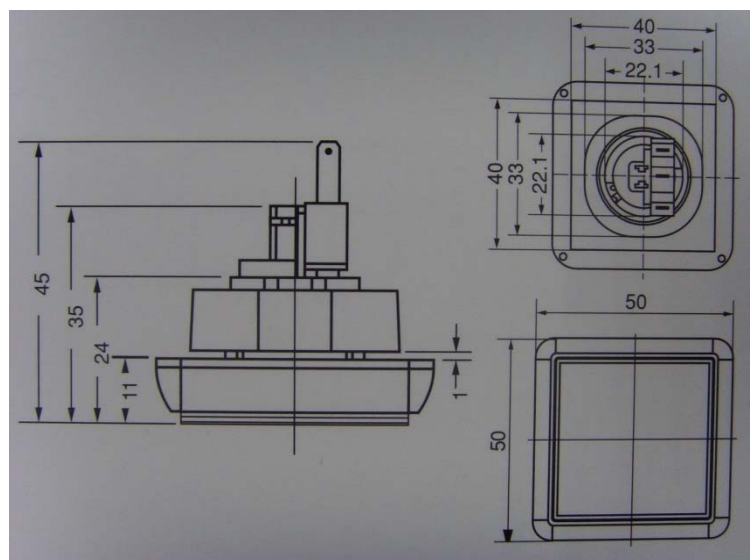
☆ DISPLAY SPECIFICATIONS

- Display Type: OLED
- Display Mode: Passive Matrix
- Display Color : 262,144 Colors
- Drive Duty: 1/128 Duty
- Diagonal Size: 1.5"
- Number of Pixels : 128RGB x 128
- Active Area: 26.855x26.864 (mm)
- Interface: 8-bit 68xx/80xx Parallel, 3-/4-wire SPI
- Driver IC: SSD1351 (Solomon Systech)



★ MECHANICAL DIMENSIONS

- DIMENSION: 50.0 x 50.0 x 45 (mm)
- WINDOW SIZE: 40.0 x 40.0 (mm)



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☆ 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	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.															
3	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.															
4	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.															
5	CS#	I	Chip Select This is the chip select input. The chip is enable for MCU communication only when CS# is pulled low.															
6	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.															
7	RES#	I	Power Reset for Controller and Drive This is reset signal input. When the pin is low , initialization of the chip is executed.															
8 9	BS1 BS2	I	Communication Protocol Select These pins are MCU interface selection input. See the following table: <table border="1" data-bbox="662 1702 1337 1908"> <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 98-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 98-bit)	0	1
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10	VSS	P	Ground for System This a ground pin. It must be connected to external source.
11	NC	-	Reserved Pin
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 D0 will be the serial clock input SCLK. Unused pins must be connected to VSS except for D2.

★ 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.