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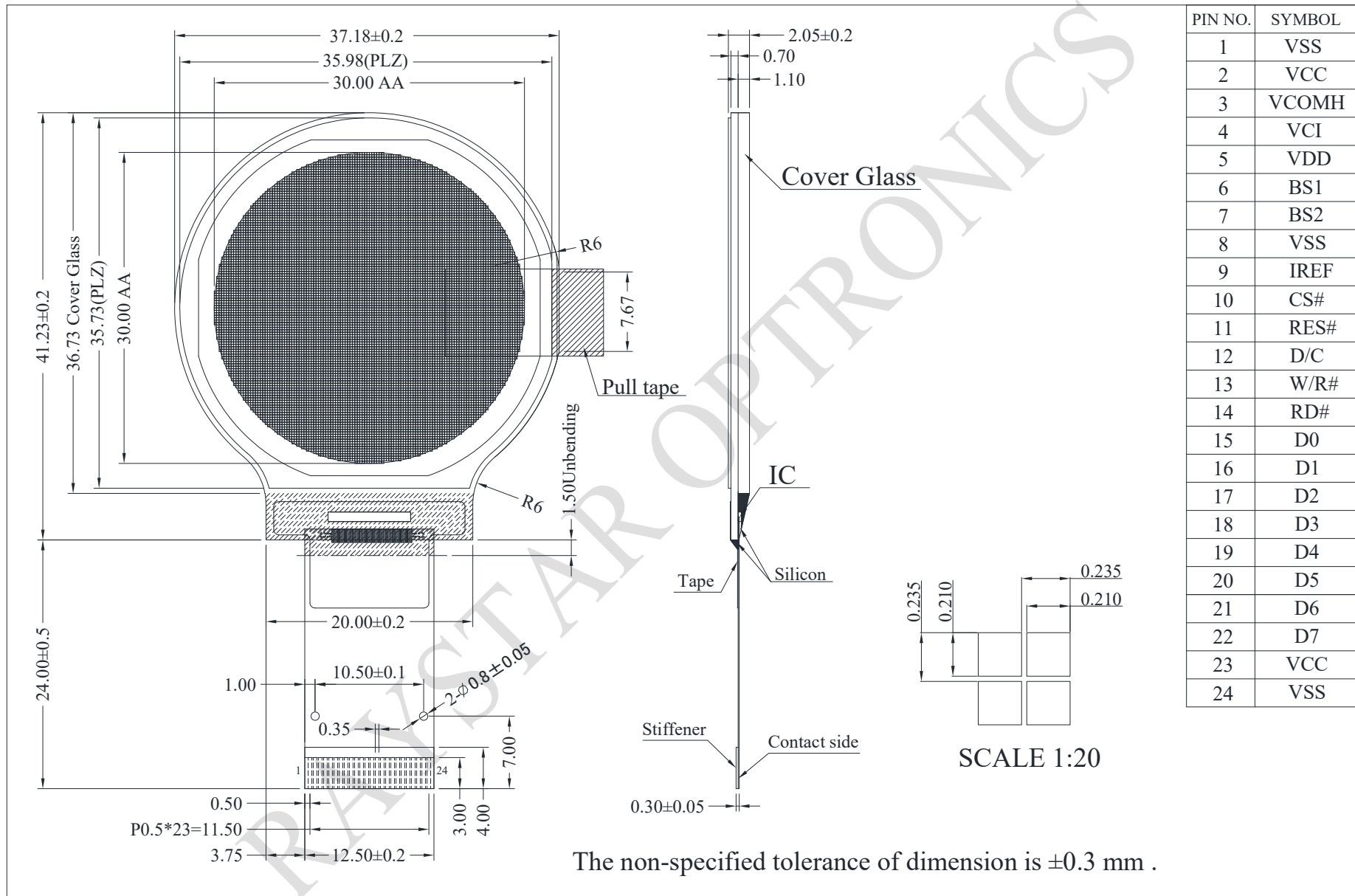# REX128128B

General Specification

- Module dimension: 37.18 x 41.23 x 2.05 mm

- Active area: 30.0 x 30.0 mm

- Dot Matrix: 128 x 128

- Pixel size: 0.210 x 0.210 mm

- Pixel pitch: 0.235 x 0.235 mm

- Display Mode: Passive Matrix

- Duty: 1/128 Duty

- Display Color: Monochrome

- IC: SSD1327ZB

- Interface: 6800, 8080, SPI, I2C

- Size: 1.18 inch

Interface Pin Function

No.	Symbol	Function
1	VSS	Ground pin. It must be connected to external ground.
2	VCC	Power supply for panel driving voltage. This is also the most positive power voltage supply pin. It is supplied by external high voltage source.
3	VCOMH	COM signal deselected voltage level. A capacitor should be connected between this pin and VSS. No external power supply is allowed to connect to this pin.
4	VCI	Low voltage power supply and power supply for interface logic level. It should match with the MCU interface voltage level and must be connected to external source. VCI must always set to be equivalent to or higher than VDD.
5	VDD	Power supply pin for core logic operation.
6	BS1	MCU bus interface selection pins. Select appropriate logic setting as described in the following table. BS2 and BS1 are pin select. Bus Interface selection
7	BS2	
8	VSS	Ground pin. It must be connected to external ground.
9	IREF	This pin is the segment output current reference pin
10	CS#	This pin is the chip select input connecting to the MCU. The chip is enabled for MCU communication only when CS# is pulled LOW (active LOW).
11	RES#	This pin is reset signal input. When the pin is pulled LOW, initialization of the chip is executed. Keep this pin pull HIGH during normal operation.
12	D/C	This pin is Data/Command control pin connecting to the MCU. When the pin is pulled HIGH, the data at D[7:0] will be interpreted as data. When the pin is pulled LOW, the data at D[7:0] will be transferred to a command register. In I2C mode, this pin acts as SA0 for slave address selection. When 3-wire serial interface is selected, this pin must be connected to VSS.
13	W/R#	This pin is read / write control input pin connecting to the MCU interface. When 6800 interface mode is selected, this pin will be used as Read/Write (R/W#) selection input. Read mode will be carried out when this pin is pulled HIGH and write mode when LOW. When 8080 interface mode is selected, this pin will be the Write (WR#) input. Data write operation is initiated when this pin is pulled LOW and the chip is selected.

Embedded in rows 6–7 (Bus Interface selection):

BS[2:1]	Interface
00	4 line SPI
01	I2C
11	8-bit 8080 parallel
10	8-bit 6800 parallel

14	RD#	This pin is MCU interface input. When 6800 interface mode is selected, this pin will be used as the Enable (E) signal. Read/write operation is initiated when this pin is pulled HIGH and the chip is selected. When 8080 interface mode is selected, this pin receives the Read (RD#) signal. Read operation is initiated when this pin is pulled LOW and the chip is selected. When serial or I2C interface is selected, this pin must be connected to VSS.
15	D0	These pins are bi-directional data bus connecting to the MCU data bus. Unused pins are recommended to tie LOW. When serial interface mode is selected, D0 will be the serial clock input: SCLK; D1 will be the serial data input: SDIN and D2 should be kept NC. When I2C mode is selected, D2, D1 should be tied together and serve as SDAout, SDAin in application and D0 is the serial clock input, SCL.
16	D1	
17	D2	
18	D3	
19	D4	
20	D5	
21	D6	
22	D7	
23	VCC	Power supply for panel driving voltage. This is also the most positive power voltage supply pin. It is supplied by external high voltage source.
24	VSS	Ground pin.

Contour Drawing

PIN NO.	SYMBOL
1	VSS
2	VCC
3	VCOMH
4	VCI
5	VDD
6	BS1
7	BS2
8	VSS
9	IREF
10	CS#
11	RES#
12	D/C
13	W/R#
14	RD#
15	D0
16	D1
17	D2
18	D3
19	D4
20	D5
21	D6
22	D7
23	VCC
24	VSS

37.18±0.2
35.98(PLZ)
30.00 AA
41.23±0.2
36.73 Cover Glass
35.73(PLZ)
30.00 AA
24.00±0.5
R6
7.67
Pull tape
1.50 Unbending
R6
20.00±0.2
10.50±0.1
1.00
2-φ0.8±0.05
0.35
7.00
1   24
0.50
P0.5*23=11.50
3.00
4.00
3.75
12.50±0.2

2.05±0.2
0.70
1.10
Cover Glass
IC
Tape
Silicon
Stiffener
Contact side
0.30±0.05

0.235
0.210
0.235
0.210
SCALE 1:20

The non-specified tolerance of dimension is ±0.3 mm .

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Supply Voltage for Operation	VCI	-0.3	4.0	V
Supply Voltage for Logic	VDD	-0.5	2.75	V
Supply Voltage for Display	VCC	-0.5	19.0	V
Operating Temperature	TOP	-40	+80	°C
Storage Temperature	TSTG	-40	+85	°C

Electrical Characteristics

DC Electrical Characteristics

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage for Logic	VCI	Note	2.8	3.0	3.3	V
Supply Voltage for Display	VCC	—	14	14.5	15	V
High Level Input	VIH	—	0.8×VCI	—	VCI	V
Low Level Input	VIL	—	0	—	0.2×VCI	V
High Level Output	VOH	—	0.9×VCI	—	VCI	V
Low Level Output	VOL	—	0	—	0.1×VCI	V
50% Check Board operating Current	VCC =14.5V		—	24	26	mA