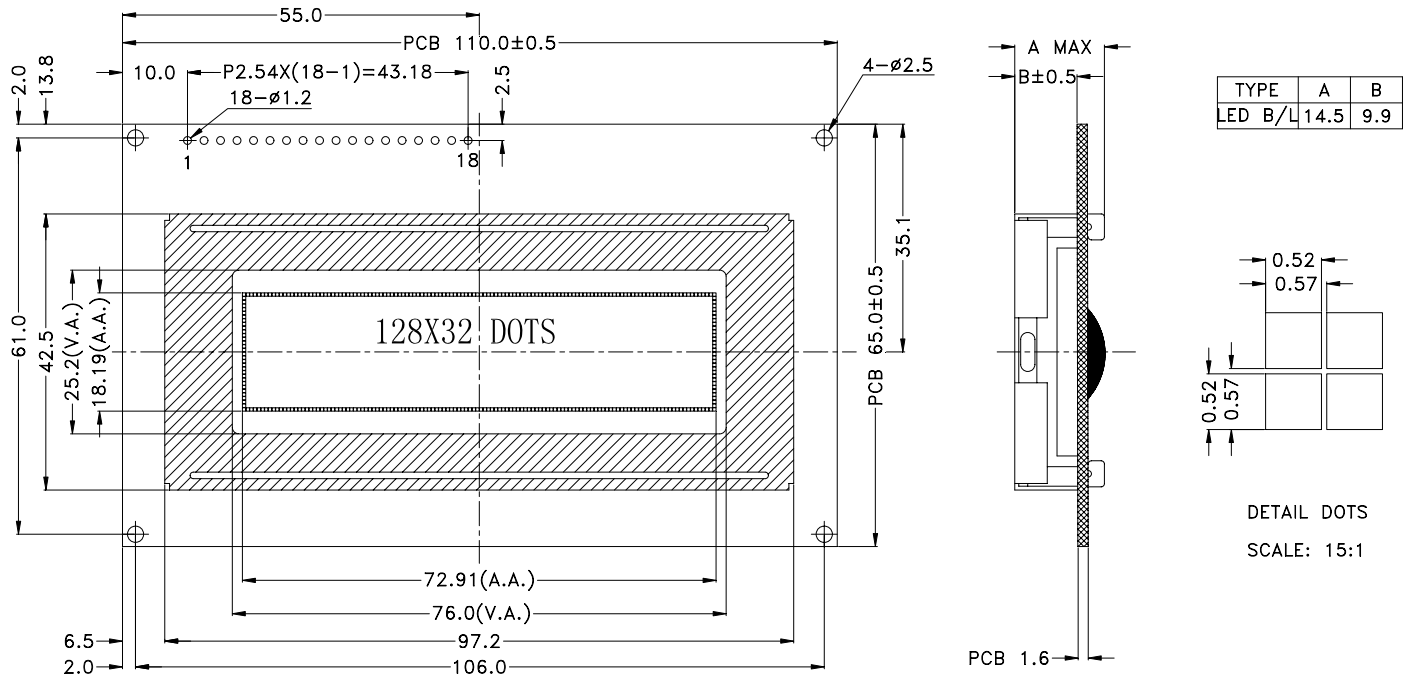


## Outline Dimension



## Graphic Type

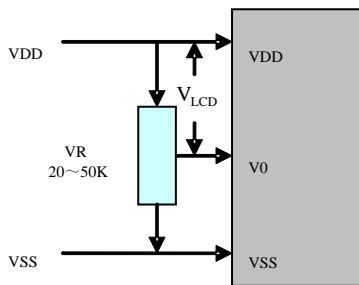
### Feature :

- 128x32 dot-matrix
- STN/Transmissive/Negative/Blue
- Backlight: White/Side Backlight
- Operating Temp.: -10°C ~ +60°C
- 1/32 duty cycle, 1/6 Bias
- Built-in Controller (SBN0064Gor equivalent)
- Viewing angle: 6 o'clock

### Absolute Maximum Rating :

Item	Symbol	Standard value			Unit
		M <sub>IN</sub>	T <sub>YP</sub>	M <sub>AX</sub>	
Power supply for logic	V <sub>DD</sub> -V <sub>SS</sub>	-0.3	--	7.0	V
Input voltage	V <sub>I</sub>	-0.3	--	V <sub>DD</sub> +0.3	V

### Adjusting Display Contrast :



Note: Adjust V0 to VSS as an initial setting. When the module is operational, readjust V0 for optimal display appearance.

### Electrical Characteristic : (V<sub>SS</sub>=0V, T<sub>a</sub> = 25°C)

Parameter	Symbol	Condition	M <sub>IN</sub>	T <sub>YP</sub>	M <sub>AX</sub>	Unit
Supply voltage for logic	V <sub>DD</sub>	--	4.8	5.0	5.2	V
Supply current for logic	I <sub>DD</sub>	--	--	2.0	--	mA
Operating voltage for LCD	V <sub>LCD</sub>	-10°C	--	--	--	V
		+25°C	--	5.0	--	V
		+60°C	--	--	--	V
Supply voltage for Backlight	V <sub>BL</sub>	--	--	5.0	--	V
Supply current for Backlight	I <sub>BL</sub>	--	--	30	--	mA

### Interface Pin Connections :

Pin No.	Symbol	Level	Description
1	LED+	5.0V	Power supply for Backlight
2	LED-	0V	The backlight ground.
3	V0	--	Adjusting voltage for LCD driving (variable).
4	VCC	+5.0V	Supply voltage for logic operating.
5	VSS	0V	Ground.
6	E	H/L	An enable signal for writing or reading data.
7	D/I	H/L	A signal for selecting registers: 1: Data Register (for read and write) 0: Instruction Register (for write), Busy flag-Address Counter (for read).
8	R/W	H/L	R/W = "H": Read mode. R/W = "L": Write mode.
9	CS	H/L	Chip Selection When CS=1, Left area is Selection When CS=0, Right area is Selection
10	RET	H/L	Hardware reset input. A LOW pulse added to this input resets the internal circuit of the SBN0064G. The duration of the low pulse must be longer than 1 μS.
11-18	DB0-DB7	H/L	8-bit bi-directional data bus.