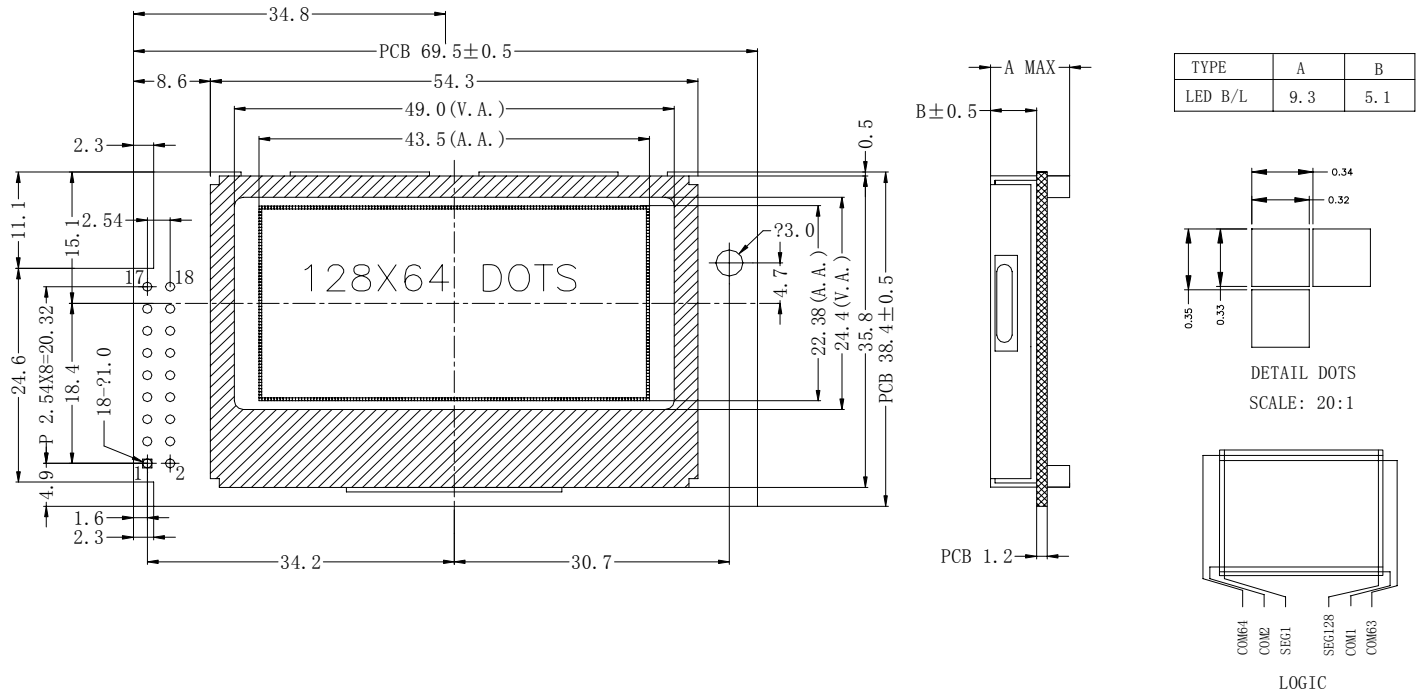


## Outline Dimension



## Graphic Type

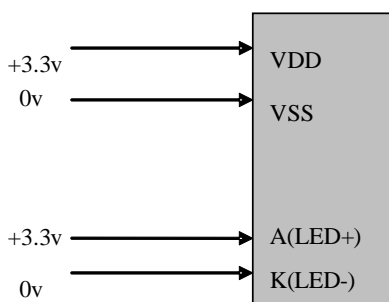
### Feature :

- 128x64 dot-matrix
- FSTN/Transflective/Positive/B-W
- Backlight: White/Side Backlight
- Operating Temp.: -20°C ~ +70°C
- 1/65 duty cycle, 1/9 Bias
- Built-in Controller (UC1601 or 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 VDD 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>	--	3.1	3.3	3.5	V
Supply current for logic	I <sub>DD</sub>	--	--	2.5	--	mA
Operating voltage for LCD	V <sub>LCD</sub>	-20°C	--	--	--	V
		+25°C	--	9.0	--	V
		+70°C	--	--	--	V
Supply voltage for Backlight	V <sub>BL</sub>	--	--	3.3	--	V
Supply current for Backlight	I <sub>BL</sub>	--	--	30	--	mA

### Interface Pin Connections :

Pin No.	Symbol	Level	Description
1	VSS	0V	Ground.
2	VDD	+3.3V	Supply voltage for logic operating.
3-7	NC		no connection
8	SDA	H/L	Serial data
9-10	NC		no connection
11	SCK	H/L	Serial clock
12-13	NC		no connection
14	C/D	H/L	Data bus registers Selection. When C/D=1 Data register When C/D=0 Instruction Register, Busy flag-Address Counter.
15	/RST	H/L	System reset. Low actively
16	/CS	H/L	Chip select. Low actively
17	LED+	+3.3V	Power supply for Backlight
18	LED-	0V	The backlight ground.