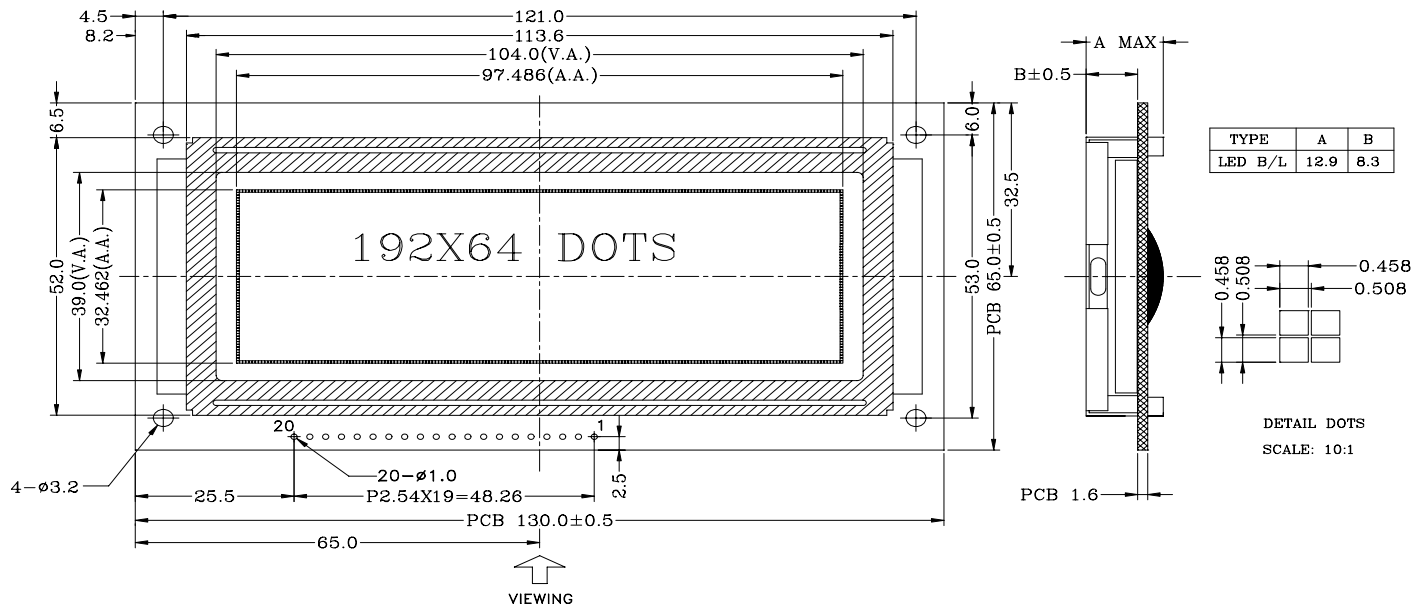


Outline Dimension



Graphic Type

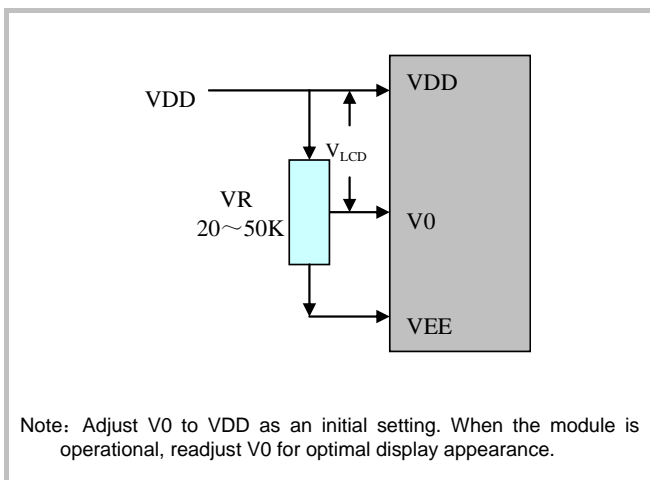
Feature :

- 192x64 dot-matrix
- STN/Transmissive/Negative/Blue
- White /side-light (LED)
- Operating Temp.: -20°C ~ +70°C
- 1/64 duty cycle, 1/9 Bias
- Built-in Controller (SBN0064G or equivalent)
- Viewing angle: 6 o'clock

Absolute Maximum Rating :

Item	Symbol	Standard value			Unit
		M _{IN}	T _{YP}	M _{AX}	
Power supply for logic	V _{DD} -V _{SS}	-0.3	--	7.0	V
Input voltage	V _I	-0.3	--	V _{DD} +0.3	V

Adjusting Display Contrast :



Electrical Characteristic : (V_{SS}=0V, T_a = 25°C)

Parameter	Symbol	Condition	M _{IN}	T _{YP}	M _{AX}	Unit
Supply voltage for logic	V _{DD}	--	4.8	5.0	5.2	V
Supply current for logic	I _{DD}	--	--	4	--	mA
Operating voltage for LCD	V _{LCD}	-20°C	--	--	--	V
		+25°C	--	12.0	--	V
		+70°C	--	--	--	V
Supply voltage for Backlight	V _{BL}	--	--	5.0	--	V
Supply current for Backlight	I _{BL}	--	--	60	--	mA

Interface Pin Connections :

Pin No.	Symbol	Level	Description
1	VSS	0V	Ground output for pad option.
2	VDD	+5.0V	Supply voltage for logic operating.
3	V0	--	LCD driver supplies adjusting voltages.
4	RS	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).
5	R/W	H/L	Read/Write(R/W) control signal from the host microcontroller. This pin should be connected to the R/W output of the host microcontroller. A HIGH level on this pin indicates that the microcontroller intends to do a READ operation. A LOW level on this pin indicates that the microcontroller intends to do a WRITE operation.
6	E	H/L	Enable signal (E) from the host microcontroller.
7-14	DB0-DB7	H/L	Bi-direction, tri-state 8-bit parallel data bus for interface with a host microcontroller. This data bus is for data transfer between the host microcontroller and the SBN0064G.
15	CS1	H/L	When CS1 = "0"&CS2 = "1"&CS3 = "1", the left panel of LCM is active.
16	RES	H/L	When /RES is set to "L," the settings are initialized.
17	CS2	H/L	When CS1 = "1"&CS2 = "0"&CS3 = "1", the middle panel of LCM is active. When CS1 = "1"&CS2 = "1"&CS3 = "0", the right panel of LCM is active.
18	CS3	H/L	
19	VEE	--	DC/DC voltage converter output.
20	LED+	+5.0V	Power supply for backlight.