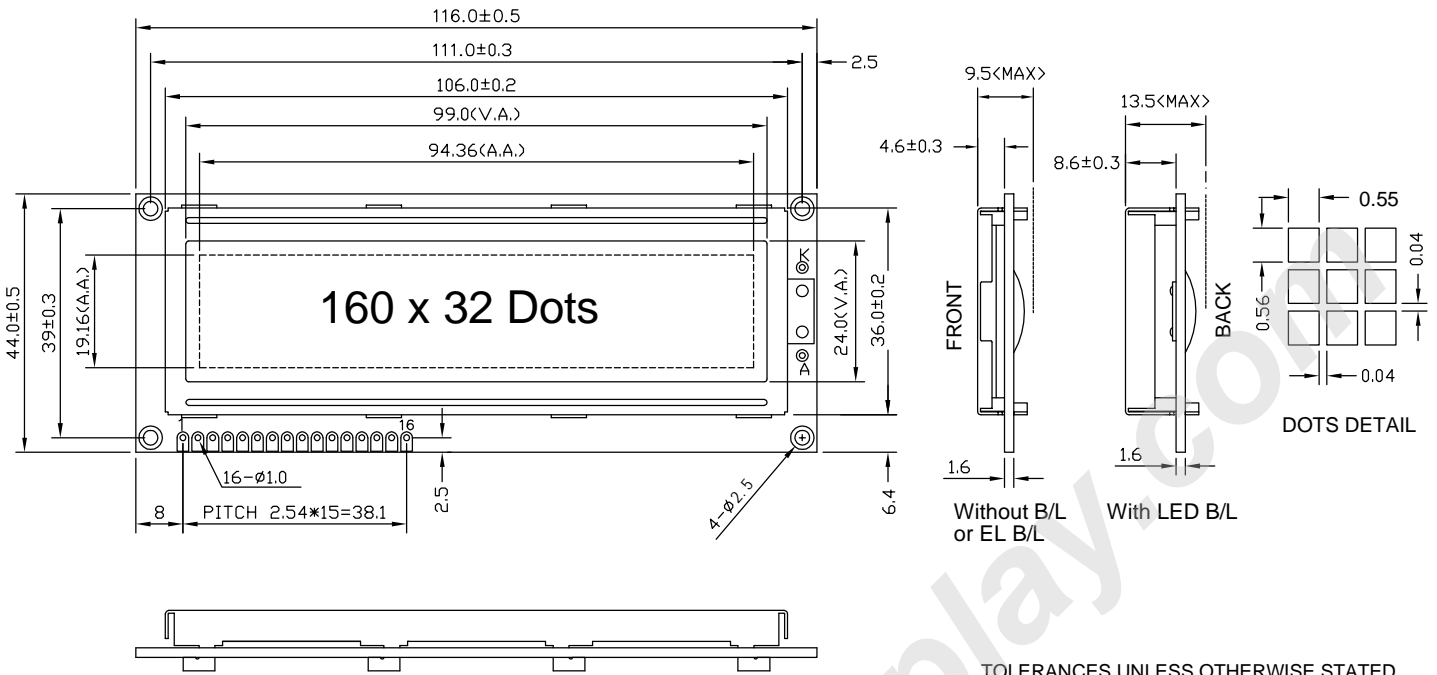


## Dimension Drawing



TOLERANCES UNLESS OTHERWISE STATED  
 X.X ±0.20    X.XX ±0.10    UNIT: mm

### Feature:

1. 160 x 32 dots graphic display
2. Built-in controller(SBN1661G or equivalent)
3. +5V power supply(also available for +3.3V)
4. 1/32 Duty cycle
5. STN or FSTN Mode
6. Match all kind colors of LED back light
7. ROHS compliant

### Interface Pin Connections

PIN NO.	Symbol	Function
1	E2	Enable signal
2	E3	Enable signal
3	A0	H → Data    L → Instruction
4	R/W	H :Read data    L :Write data
5	VDD	+5V or +3.3V
6	VSS	GND
7	DB0	H/L Data bus line
8	DB1	H/L Data bus line
9	DB2	H/L Data bus line
10	DB3	H/L Data bus line
11	DB4	H/L Data bus line
12	DB5	H/L Data bus line
13	DB6	H/L Data bus line
14	DB7	H/L Data bus line
15	NC	No connection
16	E3	Enable signal

### Mechanical Data

Item	Standard	Unit
Module dimension	116.0 x 44.0	mm
Viewing area	99.0 x 24.0	mm
Mounting hole	115.0 x 37.0	mm
Dots size	0.55 x 0.56	mm

### Absolute Maximum Rating

Item	Symbol	Standard			Unit
		Min	Typ	Max	
Power supply	VDD-VSS	-0.3	---	5.5	V
Input voltage	VI	-0.3	---	VDD+0.3	

### Electronical Characteristics

Item	Symbol	Condition	Standard			Unit	
			Min	Typ	Max		
Input voltage	VDD	+5.0V	4.5	5.0	5.5	V	
		+3.3V	2.7	3.3	4.5		
Supply current	I <sub>DD</sub>	VDD=5V	----	----	0.5	mA	
Recommended LCD driving voltage for normal temp version module	VDD-V0 (VDD=5V)	-20 °C	6.8	7.0	7.3		V
		0 °C	6.5	6.8	7.1		
		25 °C	6.2	6.5	6.8		
		50 °C	6.0	6.2	6.4		
LED forward voltage	V <sub>F</sub>	25 °C	----	3.0	3.3	V	
LED forward current	I <sub>F</sub>	25 °C	Array	----	300		----
			Edge	----	30	45	
EL power supply	I <sub>EL</sub>	V <sub>EL</sub> =110V AC 400Hz	----	----	5.0	mA	