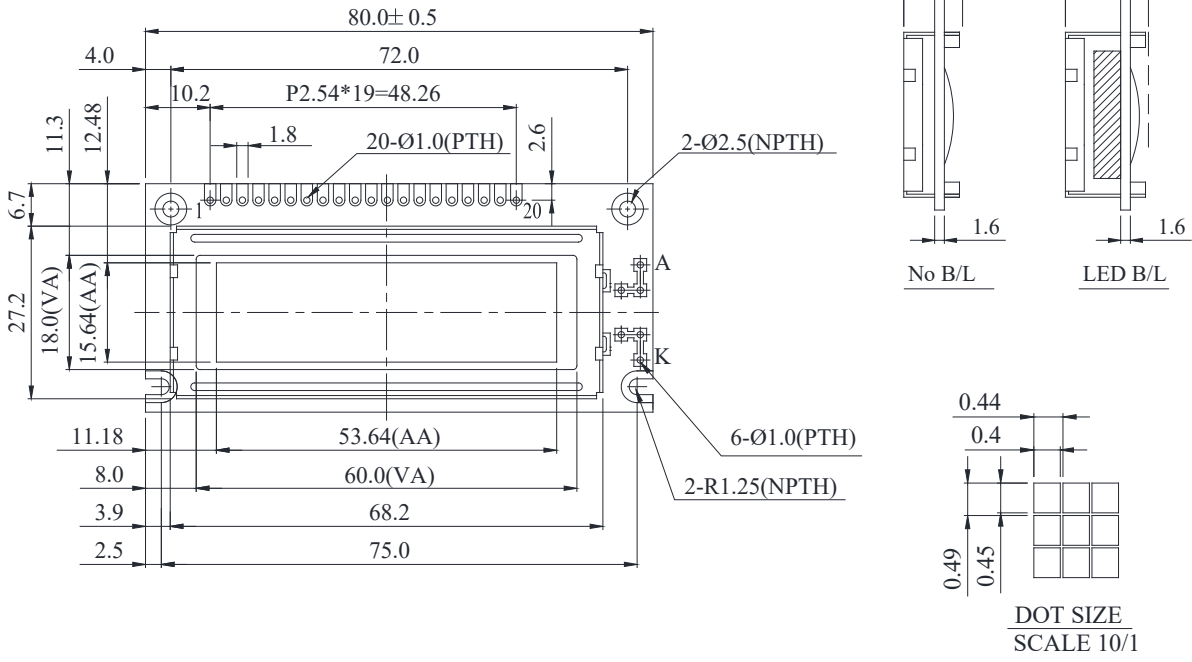


# NTG12232E/J Graphic 122x32 dots



## Feature

1. Available for external oscillation (E Type), internal oscillation (J Type) 2KHz
2. Built-in controller Avant (SBN1661G or equivalent)
3. 1/32 duty cycle
4. Negative voltage optional for +3V power supply
5. Interface: 6800

Pin No.	Symbol	Description
1	V <sub>SS</sub>	Ground
2	V <sub>DD</sub>	Power supply for logic
3	V <sub>O</sub>	Contrast Adjustment
4	A0	Data/ Instruction select signal
5	CS1	Chip select signal for IC1
6	CS2	Chip select signal for IC2
7	CL/NC	External clock 2KHZ
8	E/NC	Enable signal
9	R/ W	Read/Write select signal
10	DB0	Data bus line
11	DB1	Data bus line
12	DB2	Data bus line
13	DB3	Data bus line
14	DB4	Data bus line
15	DB5	Data bus line
16	DB6	Data bus line
17	DB7	Data bus line
18	/RES	Controller reset signal, Active Low
19	A	Power supply for B/L +
20	K	Power supply for B/L -

## Mechanical Data

Item	Standard Value	Unit
Module Dimension	80.0 x 27.2	mm
Viewing Area	60.0 x 18.0	mm
Mounting Hole	75.0 x 28.0	mm
Dot Pitch	0.44 x 0.49	mm
Dot Size	0.40 x 0.45	mm

## Electrical Characteristics

Item	Symbol	Standard Value	Unit
		typ.	
Input Voltage	V <sub>DD</sub>	3/5	V
Recommended LCD Driving Voltage for Normal Temp. Version module @25°C	V <sub>DD-VO</sub>	4.35	V