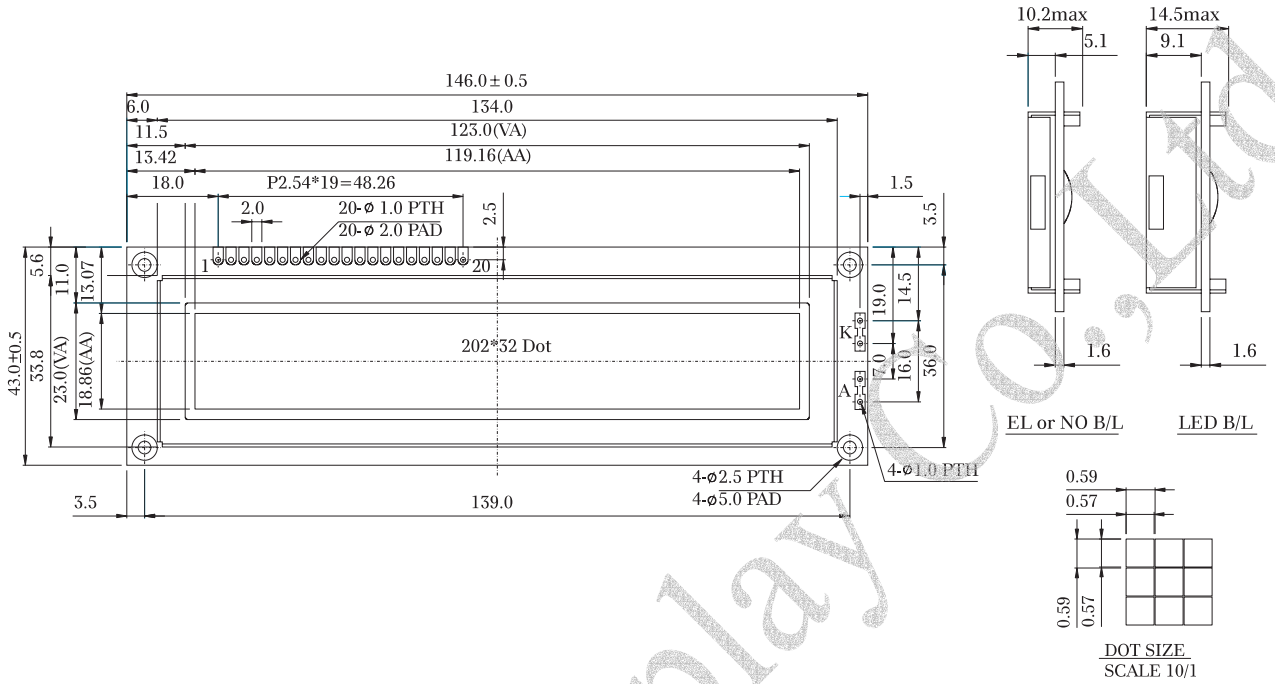# WG20232A Graphic 202x32 dots

Dimension drawing

DOT SIZE
SCALE 10/1

Feature

1. Built-in oscilation.
2. Built-in controller Epson- (SED1520 or Equivalent)
3. 1/32 duty cycle
4. 2.85 ~ 5V power supply

Pin NO.	Symbol	Function
1	Vss	GND
2	Vdd	Power Supply(+3V,5V)
3	Vo	Contrast Adjustment
4	A0	H:$D_0 \sim D_7$ are display data L:$D_0 \sim D_7$ are display control data
5	R/$\overline{W}$	WR for 80 serial R/W for 68 serial
6	Cs1	Enable chip1
7	DB0	Data bus line
8	DB1	Data bus line
9	DB2	Data bus line
10	DB3	Data bus line
11	DB4	Data bus line
12	DB5	Data bus line
13	DB6	Data bus line
14	DB7	Data bus line
15	Vee	Negative Voltage output
16	$\overline{Reset}$	Reset signal
17	A	+4.2V for LED RA=OΩ
18	K	Power supply for B/L (0V)
19	CS2	Enable chip2
20	CS3	Enable chip3

Mechanical Data

Item	Standard Value	Unit
Module Dimension	146.0x43.0	mm
Viewing Area	123.0x23.0	mm
Dot Size	0.57x0.57	mm
Dot Pitch	0.59x0.59	mm
Mounting hole	139.0x36.0	mm

Absolute Maximum Rating

Item	Symbol	min.	typ.	max.	Unit
Power Supply	VDD-VSS	-0.3	----	8.0	V
Input Voltage	VI	-0.3	----	VDD	V

Note : VSS=0 Volt, VDD=5.0 Volt.

Electronical Characteristics

Item	Symbol	Condition	min.	typ.	max.	Unit
Input Voltage	VDD	VDD=3V ± 5V	2.7	3.0	3.3	V
Supply Current	IDD	VDD=3V	---	1 0	---	mA
Recommended LC Driving Voltage for Normal Temp. Version module	VDD-V0	-20°C	5.9	6.2	6.5	V
		0°C	5.7	6.0	6.3	
		25°C	4.6	4.7	4.8	
		50°C	4.3	4.4	4.5	
		70°C	3.3	3.4	3.5	
LED Forward Voltage	VF	25°C	1.7	---	2.5	V
LED Forward Current	IF	25°C	---	---	200	mA
EL Power Supply Current	IEL	Vel=110VAC;400Hz	---	---	5.0	mA