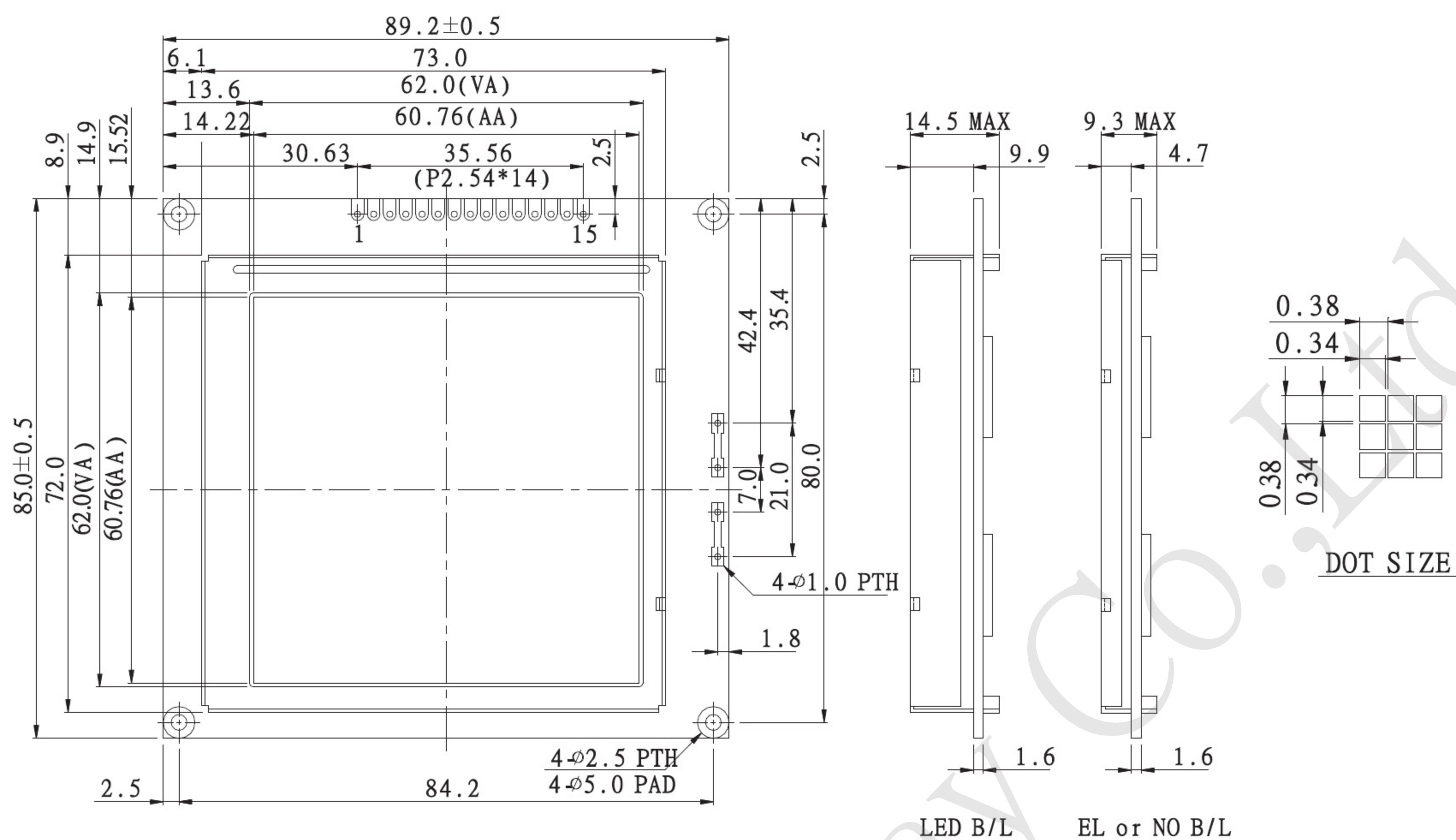


**Dimension drawing**



**Feature**

- 1. No controller
- 2. +5V power supply
- 3. 1/160 duty cycle

**Mechanical Data**

Item	Standard Value	Unit
Module Dimension	89.2x85.0	mm
Viewing Area	62.0x62.0	mm
Dot Size	0.34x0.34	mm
Dot Pitch	0.38x0.38	mm
Mounting hole	84.2x 80.0	mm

Pin NO.	Symbol	Function
1	Vss (GND)	Ground
2	M	Control Signal for A.C. Driving
3	FLM	The FLM signal indicates the beginning of each display cycle
4	CL1	The CL1 latches the serial data in shift register
5	CL2	Clock signal for shifting the serial data
6	DB3	Data bus line
7	DB2	Data bus line
8	DB1	Data bus line
9	DB0	Data bus line
10	Vee	Power supply for LCD driving
11	Vdd	Power supply (+5V)
12	Vo	Contrast Adjustment
13	DISPOFF	Controls display off, 0: off, 1: on
14	A	Power supply for
15	K	Power supply for

**Absolute Maximum Rating**

Item	Symbol	Standard Value			Unit
		min.	typ.	max.	
Power Supply	VDD-VSS	4.75	5.0	5.52	V
Input Voltage	VI	-0.3	---	VDD	V

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

**Electronical Characteristics**

Item	Symbol	Condition	Standard Value			Unit
			min.	typ.	max.	
Input Voltage	VDD	L level	0.7V <sub>DD</sub>	---	V <sub>DD</sub>	V
	VIO	H level	---	---	0.3V <sub>DD</sub>	V
Supply Current	IDD	VDD=5V	---	1.5	3	mA
Recommended LC Driving Voltage for Normal Temp. Version module	VDD-V0	-20°C	16.5	18.0	19.5	V
		0°C	16.3	17.8	19.3	
		25°C	15.5	17.0	18.5	
		50°C	14.5	16.0	17.5	
		70°C	14.3	15.8	17.3	
LED Forward Voltage	VF	25°C	---	4.2	4.6	V
LED Forward Current	IF	25°C	---	500	1000	mA
EL	IEL	Vel=110VAC;400Hz	---	---	5.0	mA