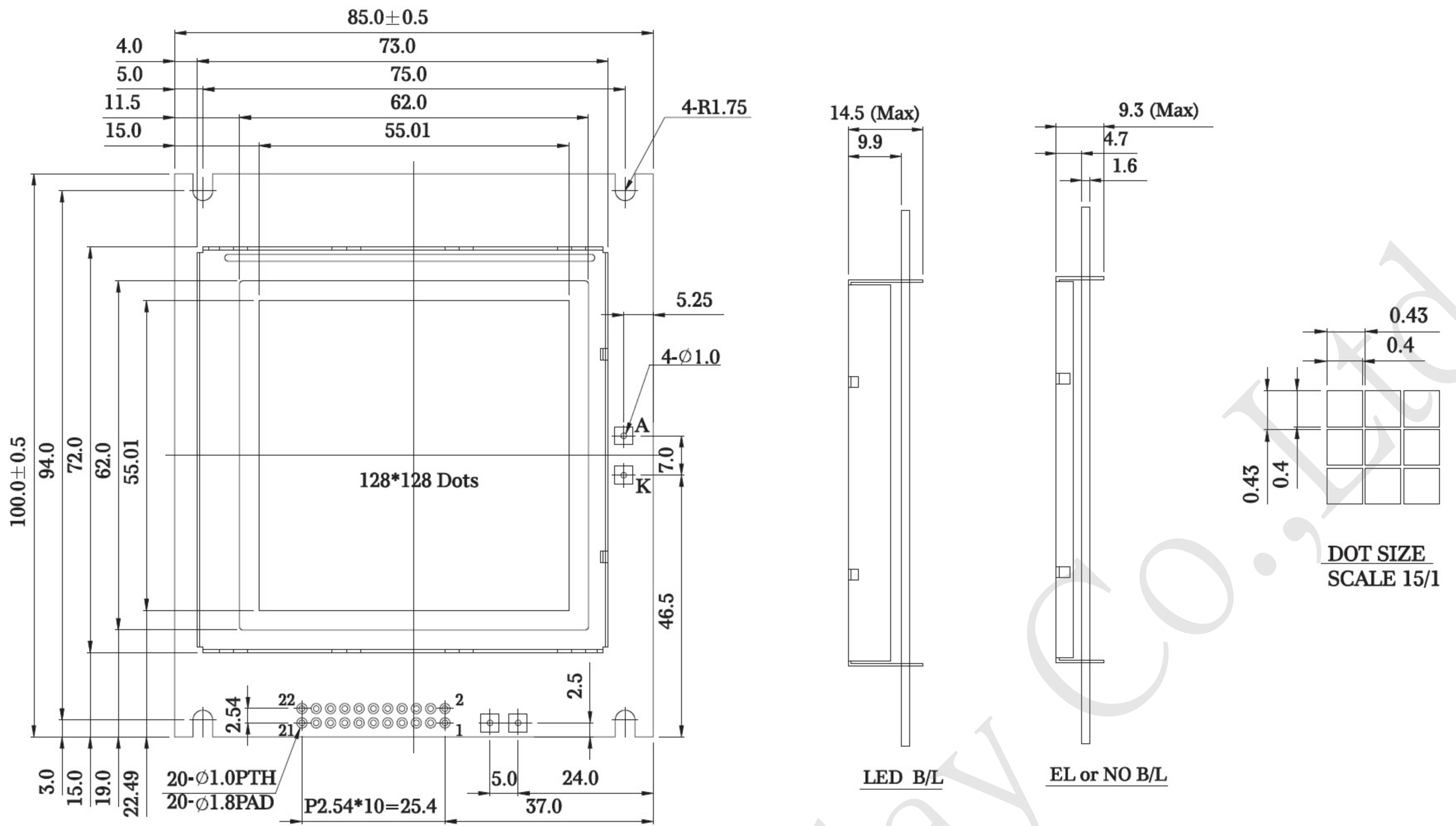


**Dimension drawing**



**Feature**

1. Built-in controller TOSHIBA- (T6963C)
2. 1/128 duty cycle
3. N.V. optional
4. +5V power supply

**Mechanical Data**

Item	Standard Value	Unit
Module Dimension	85.0x100.0	mm
Viewing Area	62.0x62.0	mm
Mounting hole	75.0x94.0	mm
Dot Pitch	0.43x0.43	mm

**Absolute Maximum Rating**

Item	Symbol	Standard Value			Unit
		min.	typ.	max.	
Power Supply	VDD-VSS	4.75	5.0	5.25	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	---	mA
Recommended LC Driving Voltage for Normal Temp. Version module	VDD-V0	-20°C	---	18.0	---	V
		0°C	---	17.5	---	
		25°C	---	17.0	---	
		50°C	---	16.0	---	
LED Forward Voltage	VF	25°C	---	4.2	4.6	V
			---	500	---	
LED Forward Current	IF	25°C	---	500	---	mA
EL Power Supply Current	IEL	Vel=110VAC;400Hz	---	---	5.0	mA

Pin NO.	Symbol	Function
1	FGND	Frame Ground
2	GND	Power Supply(GND)
3	Vdd	Power supply (+5V)
4	Vo	Contrast Adjustment
5	WR	Data write
6	RD	Data read
7	CE	Chip enable
8	C/D	Command/ Data Select
9	NC	No connection
10	RST	Reset signal
11	DB0	Data bus line
12	DB1	Data bus line
13	DB2	Data bus line
14	DB3	Data bus line
15	DB4	Data bus line
16	DB5	Data bus line
17	DB6	Data bus line
18	DB7	Data bus line
19	FS	Font Selection
20	NC/ Vee	NC/Negative Voltage output
21	A	Power supply for LED B/L(+4.2V)
22	K	Power supply for LED B/L(0V)