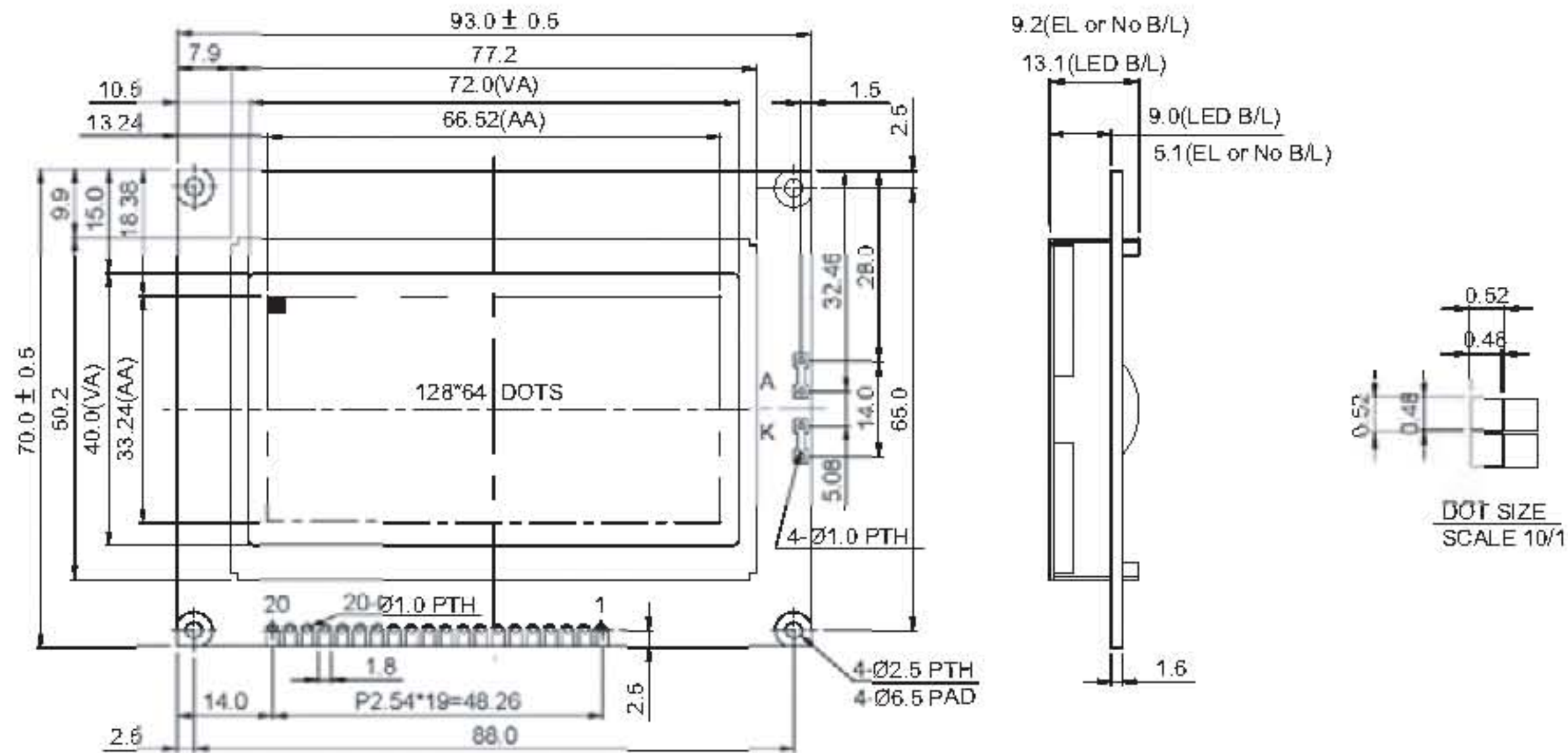


**PACKAGE DIMENSIONS:**

**Feature**

1. COB with metal frame
2. Built-in controller KS107/108
3. +5V single power supply, with built-in negative voltage
4. 1/64 duty cycle
5. Option: Temperature compensation circuit
6. LED B/L Pins: 19/20, or A/K, or 1/2
7. Option: LED array/edge B/L, EL B/L
8. Option: +3V single power supply
9. Option: negative voltage (built-in, external)

**Mechanical Data**

Item	Standard Value	Unit
Module Dimension	93.0 x 70.0	mm
Viewing Area	72.0 x 40.0	mm
Dot Size	0.48 x 0.48	mm
Dot Pitch	0.52 x 0.52	mm

**Pin Assignment**

Pin	Symbol	Function
1	Vss	GND
2	Vdd	+ 5V(+3V option)
3	Vo	Contrast adjustment
4	D/I	Data/instruction
5	R/W	Data read/write
6	E	H -> L Enable signal
7~14	DB0~7	Data bus line
15	CS1	Chip select for IC1
16	CS2	Chip select for IC2
17	/RST	Reset
18	Vee	Negative voltage output
19	A	Power supply for B/L (+)
20	K	Power supply for B/L (GND)

**Electronic Characteristics**

Item	Symbol	Condition	Typical Value	Unit
Input Voltage	Vdd	Vdd = +5V	5.0	V
Supply Current	Idd	Vdd = +5V	9.7	mA
LCD Driving Voltage	Vdd-Vo	25°C	9	V
LED Forward Voltage	Vf	25°C	4.2	V
LED Forward Current	If	25°C	330	mA
EL Power Voltage	Vel	Vel=110Vac/400Hz		V