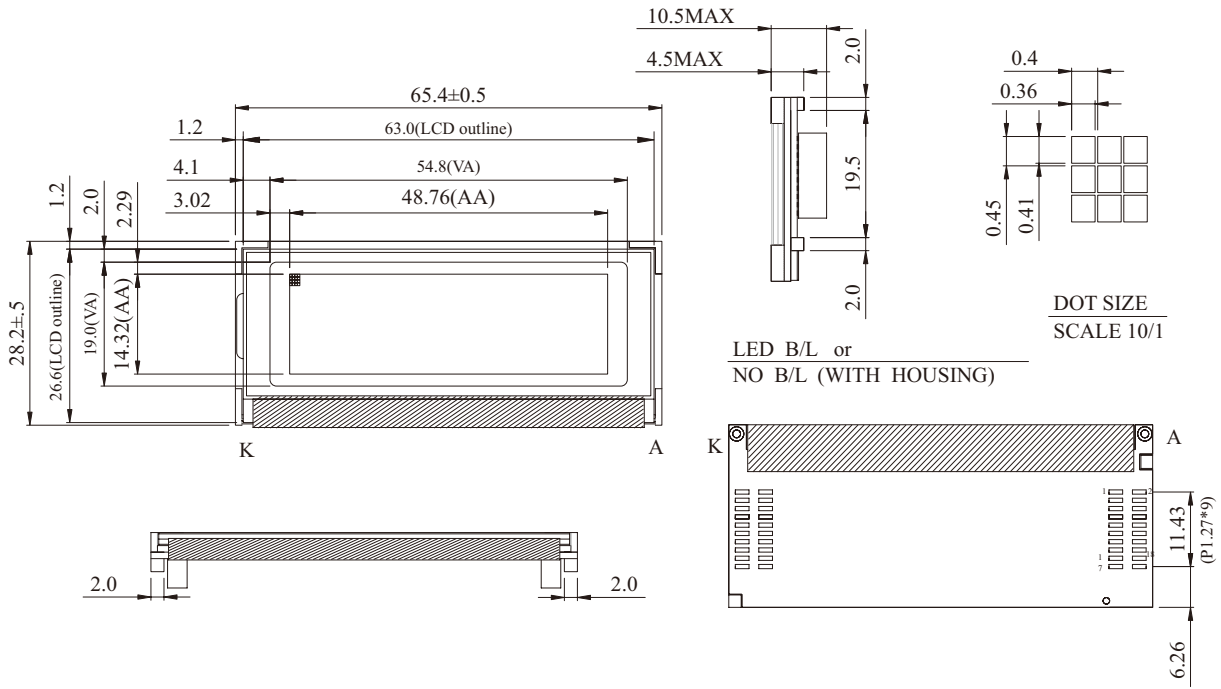


# IG12232BP1 Graphic 122x32 dots

## Dimension drawing



### Feature

1. Available for internal oscillation 2KHz
2. Built-in controller Avant(SBN1661G) or equivalent
3. 1/32 duty cycle
4. 2.85~5V power supply

### Mechanical Data

Item	Standard Value	Unit
Module Dimension	65.4x28.2x10.5	mm
Viewing Area	54.8x19.0	mm
Dot Size	0.36x0.41	mm
Dot Pitch	0.40x0.45	mm

Graphic type

Pin NO.	Symbol	Function
1	Vdd	Supply voltage for logic
2	Vss	Ground
3	Vo	Operating voltage for LCD
4	RES	L: reset the LCM
5	E1	Enable chip1
6	E2	Enable chip2
7	R/W	H: read data L:write data
8	A0	H: Data L:Instruction
9	DB0	Data bus line
10	DB1	Data bus line
11	DB2	Data bus line
12	DB3	Data bus line
13	DB4	Data bus line
14	DB5	Data bus line
15	DB6	Data bus line
16	DB7	Data bus line
17	A	+2.1V for LED
18	K	Power supply for B/L(-)

### 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		VDD	V

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

### Electronical Characteristics

Item	Symbol	Condition	Standard Value			Unit
			min.	typ.	max.	
Input Voltage	VDD	VDD=5V±1V	4.5	5.0	5.5	V
Supply Current	IDD	VDD=5V	---	1.0	1.4	mA
Recommended LC Driving Voltage for Normal Temp. Version module	VDD-VO	-20°C	4.7	4.9	5.5	V
		0°C	4.5	4.7	4.9	
		25°C	4.3	4.5	4.7	
		50°C	4.2	4.3	4.5	
		70°C	4.0	4.1	4.3	
LED Forward Voltage	VF	25°C	1.7	2.1	2.5	V
LED Forward Current	IF	25°C	---	100	200	mA
EL Power Supply Current	IEF	Ve=110VAC;400Hz	---	---	5.0	mA