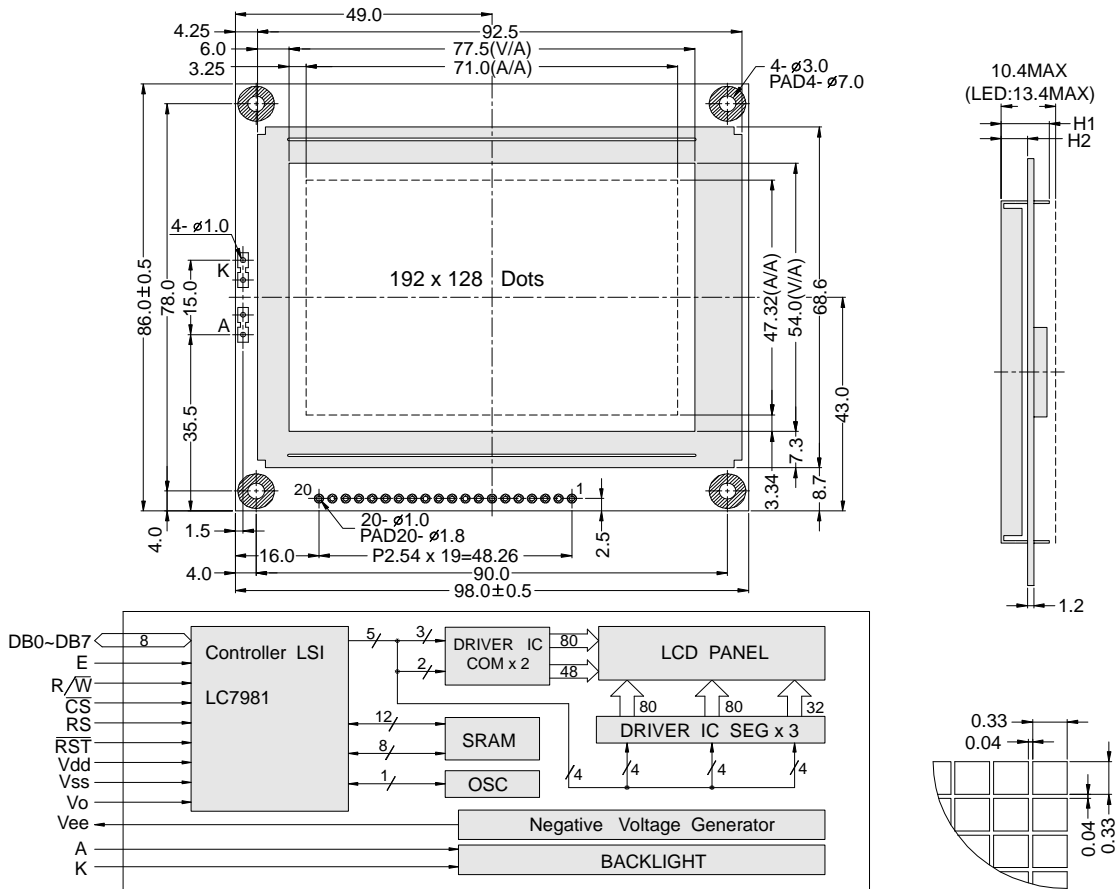




**OUTLINE DIMENSION & BLOCK DIAGRAM**



The tolerance unless classified  $\pm 0.3\text{mm}$

MECHANICAL SPECIFICATION			
Overall Size	98.0 x 86.0	Module	H2 / H1
View Area	77.5 x 54.0	W / O B/L	5.0 / 9.2
Dot Size	0.33 x 0.33	EL B/L	5.0 / 9.2
Dot Pitch	0.37 x 0.37	LED B/L	8.0 / 12.2

PIN ASSIGNMENT		
Pin no.	Symbol	Function
1	Vss	Power supply (GND)
2	Vdd	Power supply (+)
3	Vo	Contrast adjust
4	RS	Common / Data select
5	R/W	data read / write
6	E	enable signal
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	CS	Chip select
16	RST	Reset
17	Vee	Negative voltage output
18	N/C	No connection
19	A	Power supply for LED B/L (+)
20	K	Power supply for LED B/L (-)

ABSOLUTE MAXIMUM RATING									
Item	Symbol	Condition	Min.	Max.	Units				
Supply for logic voltage	Vdd-Vss	25°C	-0.3	7.0	V				
LCD driving supply voltage	Vdd-Vee	25°C	0	30.0	V				
Input voltage	Vin	25°C	-0.3	Vdd+0.3	V				
ELECTRICAL CHARACTERISTICS									
Item	Symbol	Condition	Min.	Typical	Max.	Units			
Power supply voltage	Vdd-Vss	25°C	4.75	-	5.25	V			
LCD operation voltage	Vop	Top	N	W	N	W	V		
		-20°C	-	19.5	-	20.6	-	V	
		0°C	19.4	-	20.4	-	21.4	-	V
		25°C	18.0	17.0	18.9	17.9	19.8	18.8	V
		50°C	16.1	-	16.9	-	17.7	-	V
70°C	-	15.4	-	16.3	-	17.2	V		
LCM current consumption (No B/L)	Idd	Vdd=5V	-	20	25	mA			
Backlight current consumption	LED/edge	VB/L=4.2V	-	85	-	mA			
	LED/array	VB/L=4.2V	-	-	-	mA			

**REMARK**

LCD option: STN, TN, FSTN

Backlight Option: LED, EL Backlight feature, other Specs not available on catalog is under request.

