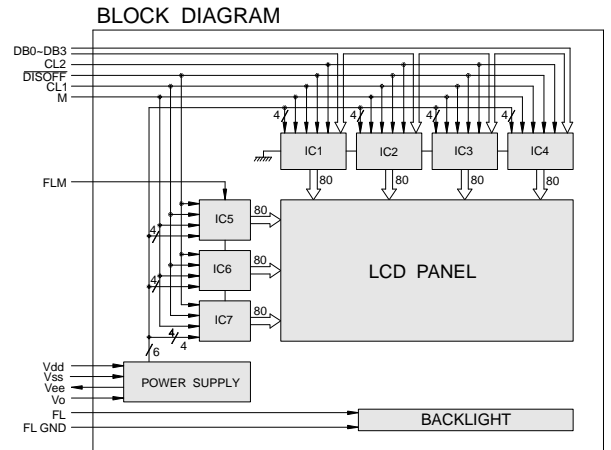
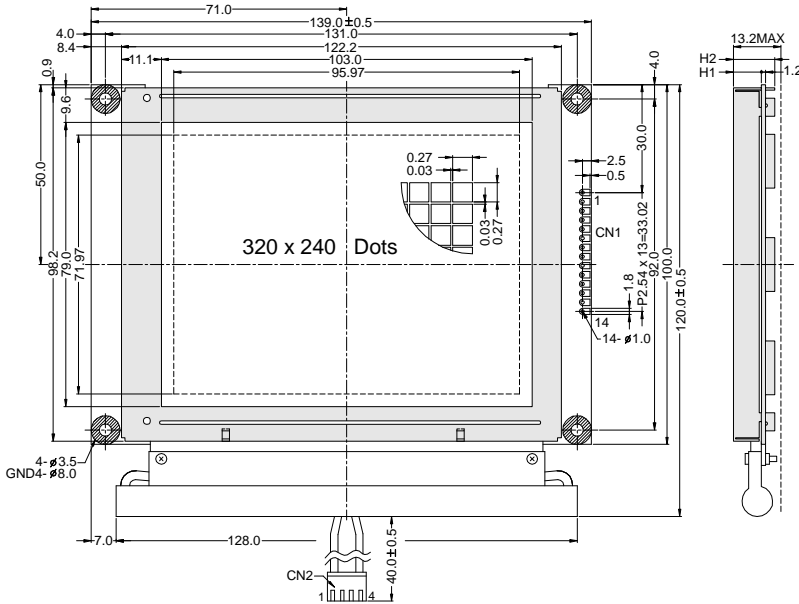


**OUTLINE DIMENSION & BLOCK DIAGRAM**



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

MECHANICAL SPECIFICATION			
Overall Size	139.0 x 120.0	Module	H2 / H1
View Area	103.0 x 79.0	W/O B/L	- / -
Dot Size	0.27 x 0.27	EL B/L	- / -
Dot Pitch	0.30 x 0.30	CCFL B/L	7.8 / 11.5

PIN ASSIGNMENT		
Pin no.	Symbol	Function
1	FLM	Shift direction select
2	CL1	Colck signal input
3	CL2	Colck signal input
4	M	Command / Data select
5	Vo	Contrast adjust
6	Vdd	Power supply (+)
7	Vss	Power supply (GND)
8	Vee	Negative voltage output
9	DB0	Data bus line
10	DB1	Data bus line
11	DB2	Data bus line
12	DB3	Data bus line
13	DISPOFF	Clumn output control
14	N.C.	No connection

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	35.0	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	4.5	-	5.5	V		
LCD operation voltage	Vop	Top	N	W	N	W	V	
		-20°C	-	-	-	-	V	
		0°C	-	-	30	-	31.2	V
		25°C	22.8	-	24	-	25.2	V
		50°C	18.8	-	20	-	-	V
70°C	-	-	-	-	-	V		
LCM current consumption (No B/L)	Idd	Vdd=5V	-	3.5	7	mA		
Backlight current consumption	LED/edge	VB/L=4.2V	-	-	-	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.

