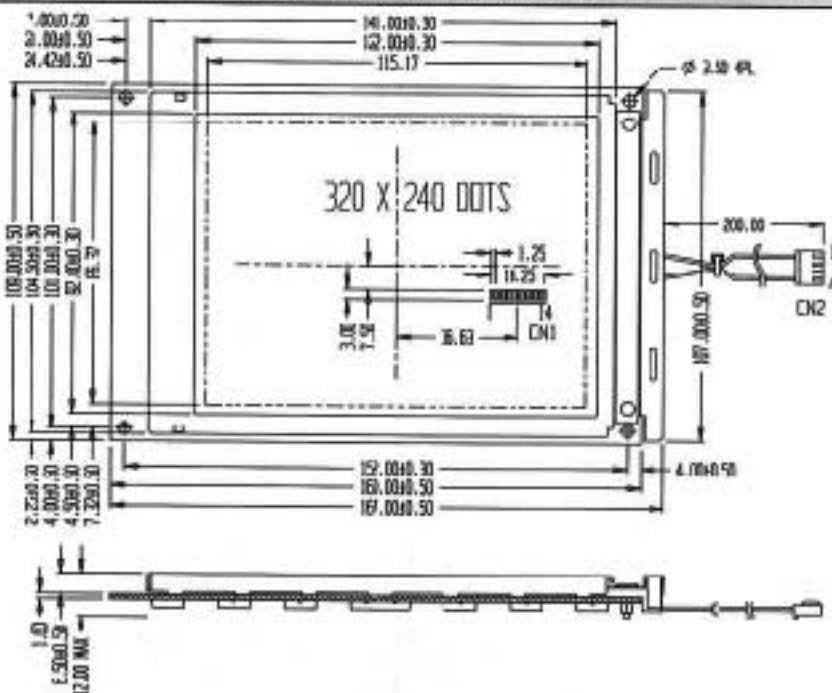
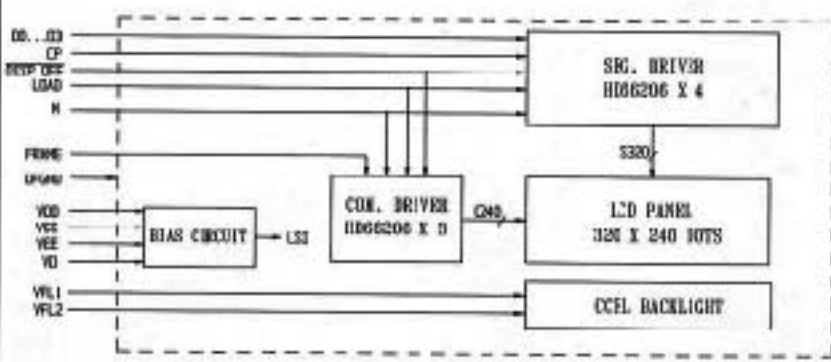


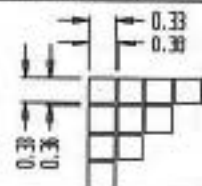
OUTLINE DIMENSION



BLOCK DIAGRAM



DISPLAY PATTERN



MECHANICAL SPECIFICATION

Item	Dimensions (W X H)	Unit
Overall Size	167 X 109	MM
View Area	122 X 92.0	MM
Dot Size	0.33 X 0.33	MM
Dot Pitch	0.36 X 0.36	MM

PIN ASSIGNMENT

Pin	Signal	Description
CN1		
1-4	D0-D3	Data bit 0-3
5	DCP/STMP	Display on/off
6	FRAME	Frame signal
7	M	Alternater for LCD drive
8	LOAD	Data latch signal
9	CP	Clock signal for shifting serial data
10	VDD	Supply voltage for logic
11	YSS	Ground
12	VCC	Supply voltage for LCD
13	VO	Variable voltage for LCD
14	F3ND	Frame ground
CN2		
1	VL1	Supply voltage for CCFL
2	NC	No connection
3	NC	No connection
4	VL2	Supply voltage for CCFL

ABSOLUTE MAXIMUM RATING

Item	Symbol	Condition	Min.	Max.	Unit
Supply for logic voltage	V _{DD}	25°C	-0.3	7.0	V
LCD driving supply voltage	V _{DD-V_O}	25°C	-0.3	30	V
Input voltage	V _I	25°C	-0.3	V _{DD} +0.3	V

ELECTRICAL CHARACTERISTICS

Item	Symbol	Condition	Min.	Typical	Max.	Unit
Supply voltage for logic	V _{DD}	—	4.5	5.0	5.5	V
Supply current for logic	I _{DD}	—	—	10	16	mA
Operation voltage for LCD	V _{CC-V_O}	0°C	22.1	23.3	24.5	V
		25°C	21.2	22.4	23.6	V
		50°C	20.2	21.4	22.6	V
Input voltage "H" level	V _{IH}	—	0.7V _{DD}	—	V _{DD}	V
Input voltage "L" level	V _{IL}	—	0	—	0.3V _{DD}	V
Supply voltage for CCFL	V _F	—	—	220	—	V _{rms}
Supply current for CCFL	F	V _F =220 V _{rms}	—	5m	—	Arms

REMARKS:

- LCD options: STN, FSTN.
- Back light Options: CL Back light feature, other Specs not available on catalog is under request.