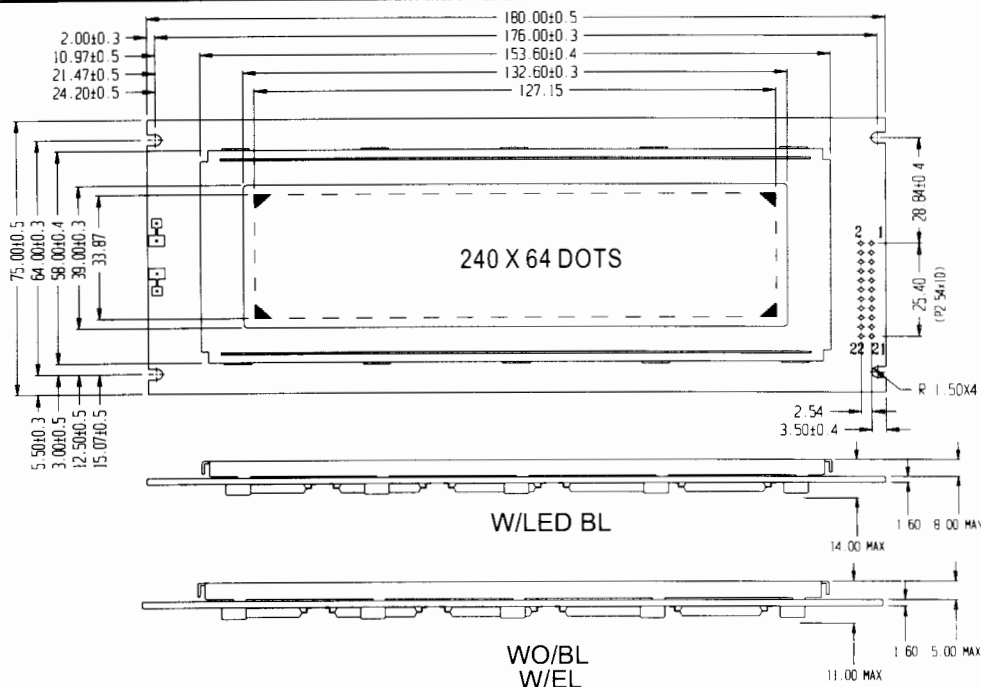
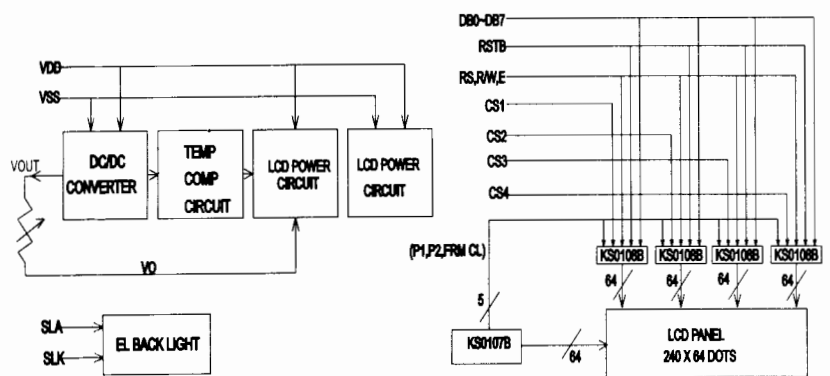


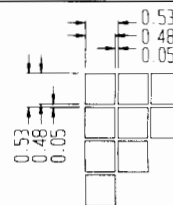
OUTLINE DIMENSION



BLOCK DIAGRAM



DISPLAY PATTERN



MECHANICAL SPECIFICATION

Item	Dimensions (w) X (H)	Unit
Overall Size	180 X 75.0	MM
View Area	132.6 X 39.0	MM
Dot Size	0.48 X 0.48	MM
Dot Pitch	0.53 x 0.53	MM

PIN ASSIGNMENT

Pin no.	Symbol	Function
1	VSS	Ground
2	VDD	Power supply (+)
3	V0	Contrast Adjust
4	VEE	Output voltage for LCD
5	RS	Data signal/Instruction signal
6	R/W	Read/Write
7	E	Chip enable signal
8~15	DB0~DB7	Data bus
16~19	CS1~CS4	Chip select signal for IC
20	RES	Reset signal
21	BL+	Back light anode
22	BL-	Back light cathode

ABSOLUTE MAXIMUM RATING

Item	Symbol	Condition	Min.	Max.	Unit
Supply for logic voltage	VDD	25°C	-0.3	7.0	V
LCD driving supply voltage	VDD-V0	25°C	-0.3	VDD+0.3	V
Input voltage	VI	25°C	-0.3	VDD+0.3	V

ELECTRICAL CHARACTERISTICS

Item	Symbol	Condition	Min.	Typical	Max.	Unit
Supply voltage for logic	VDD	---	4.5	5.0	5.5	V
Supply current for logic	IDD	---	---	5.26	10	mA
Operation voltage for LCD	VDD - V0	0°C	12.2	12.9	13.6	V
		25°C	11.9	12.6	13.3	V
		50°C	11.5	12.2	12.9	V
Input voltage "H" level	V _{IH}	---	0.7VDD	---	VDD	V
Input voltage "L" level	V _{IL}	---	0	---	0.3VDD	V
Supply voltage for back light	VF	---	---	4.2	4.6	V
Supply current for back light	IF	VF=4.2V	---	300	500	mA

REMARKS:

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