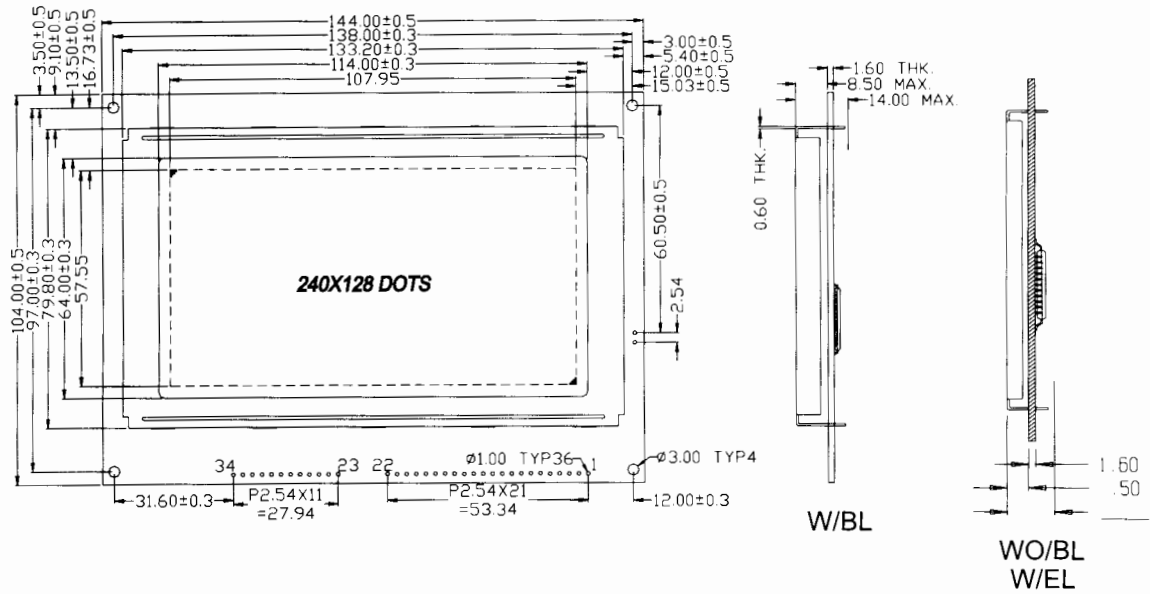
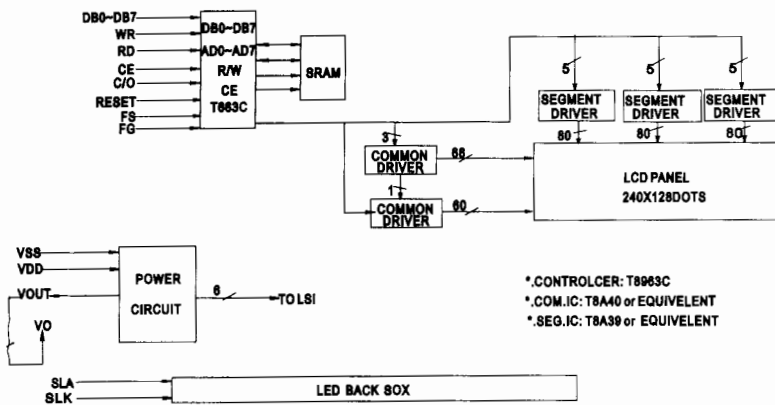


OUTLINE DIMENSION

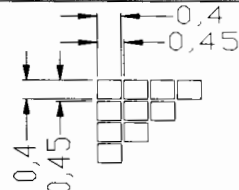


Graphic Type

BLOCK DIAGRAM



DISPLAY PATTERN



MECHANICAL SPECIFICATION

Item	Dimensions (w) X (H)	Unit
Overall Size	144 x 104	MM
View Area	114 x 64.0	MM
Dot Size	0.40 x 0.40	MM
Dot Pitch	0.45 x 0.45	MM

PIN ASSIGNMENT

Pin no.	Symbol	Function	Pin no.	Symbol	Function
			21	FS	Font select signal
1	FG	Frame ground	22	Vout	Out voltage for LCD
2	Vss	Ground	23	SLA	Side light anode
3	VDD	Supply voltage for logic	24	SLK	Side light cathode
4	VO	Input voltage for LCD	25	ED	Serial date
5	WR	Write signal	26	CDATA	Synchronous signal for row driver
6	RD	Read signal	27	FR	Frame signal
7	CE	Chip enable signal	28	LP	Latch pulse for column driver
8	C/D	Instruction code/Data	29	HSCP	Shift clock pulse for column driver
9	NC	No connection	30	NC	No connection
10	RST	Reset signal	31	VDD	Supply voltage for logic
11-18	DB0-DB7	Data bus	32	Vss	Ground
19	SLA	Side light anode	33	Vo	Input voltage for LCD
20	SLK	Side light cathode	34	Vout	Out voltage for LCD

ABSOLUTE MAXIMUM RATING

Item	Symbol	Condition	Min.	Max.	Unit
Supply for logic voltage	VDD	25°C	0	6.7	V
LCD driving supply voltage	VDD-Vo	25°C	0	28	V
Input voltage	VI	25°C	0	VDD	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	---	---	16	22	mA
Operation voltage for LCD	VDD - Vo	0°C	17.6	18.6	19.6	V
		25°C	16.3	17.3	18.3	V
		50°C	15.2	16.2	17.2	V
Input voltage "H" level	V _{IH}	---	VDD-2.2	---	VDD	V
Input voltage "L" level	V _{IL}	---	0	---	0.8	V
Supply voltage for back light	VF	---	---	4.2	4.6	V
Supply current for back light	IF	4F=4.2V	---	260	440	mA

REMARKS:

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