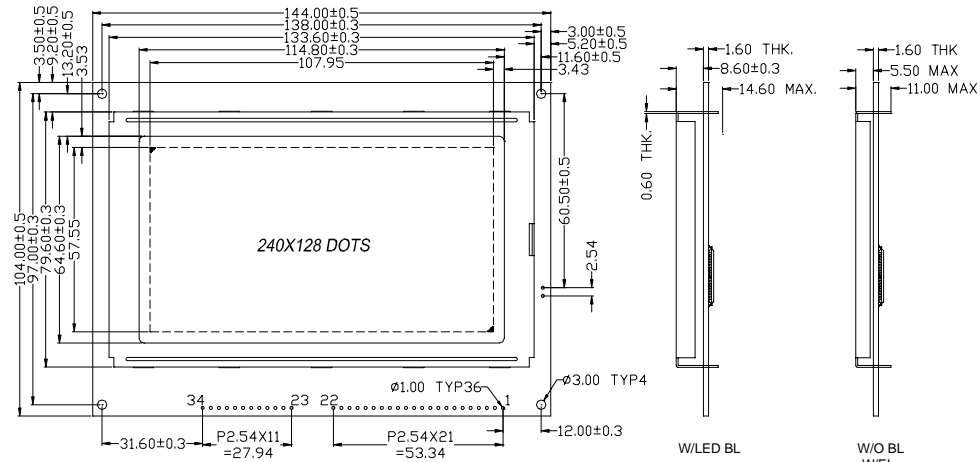
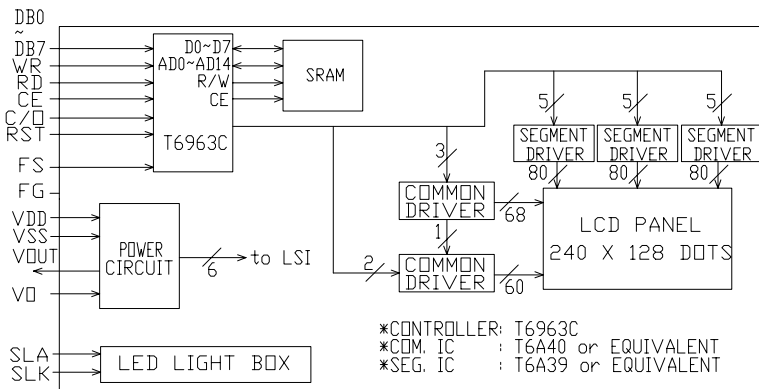


OUTLINE DIMENSION

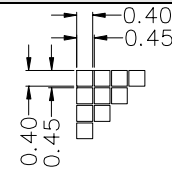


Tolerance: ±0.20mm, unless otherwise specified.

BLOCK DIAGRAM



DISPLAY PATTERN



MECHANICAL SPECIFICATION

Item	Dimensions(W)X(H)	Unit
Overall Size	144.0x104.0	MM
View Area	114.8x64.6	MM
Dot Size	0.40x0.40	MM
Dot Pitch	0.45x0.45	MM

PIN ASSIGNMENT

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

ABSOLUTE MAXIMUM RATING

Item	Symbol	Condition	Min	Max	Unit
Supply for logic voltage	V _{DD}	25°C	0	6.7	V
LCD driving supply voltage	V _{DD-Vo}	25°C	0	28	V
Input voltage	V _I	25°C	0	V _{DD}	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}	---	---	16.0	22.0	mA
Operation voltage for LCD	V _{DD-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}	---	V _{DD} -2.2	---	V _{DD}	V
Input voltage " L " level	V _{IL}	---	0	---	0.8	V
Supply voltage for back light	V _F	---	---	4.2	4.6	V
Supply current for back light	I _F	V _F =4.2V	---	720	1440	mA

REMARKS:

- LCD options: STN, FSTN.
- Back light Options: LED\EL Back light feature.