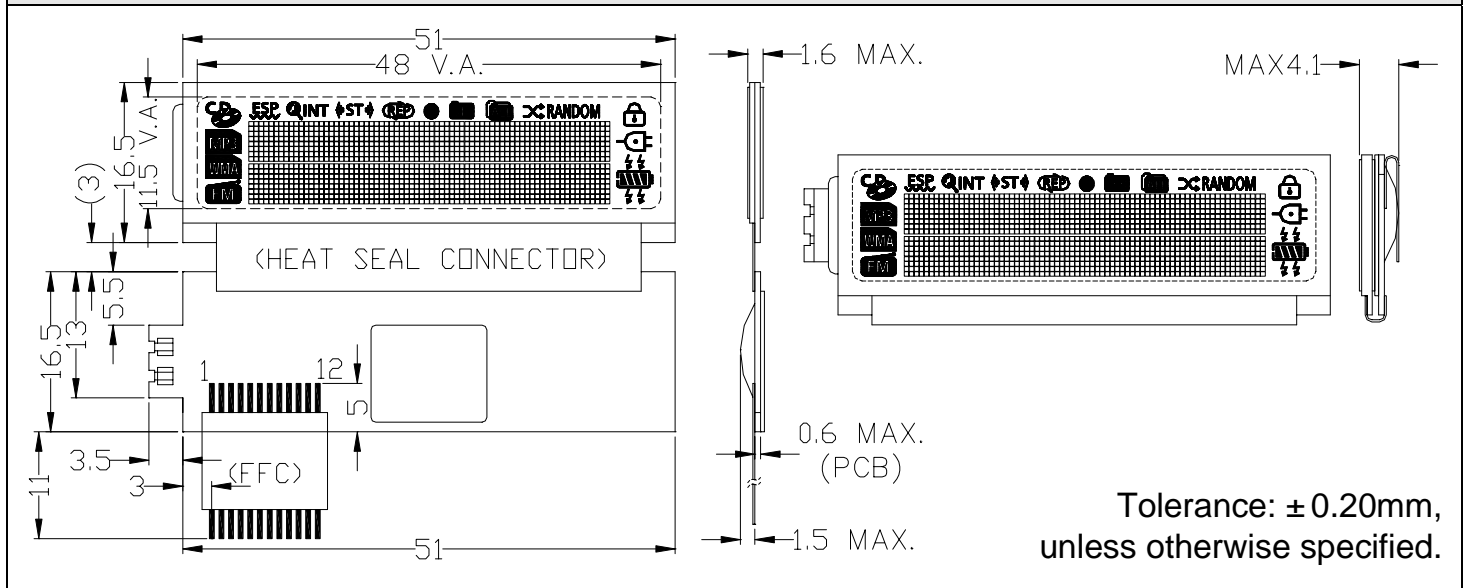
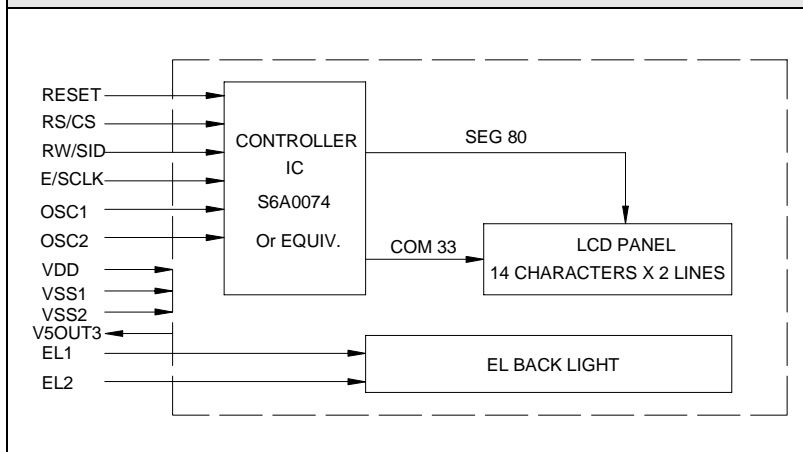


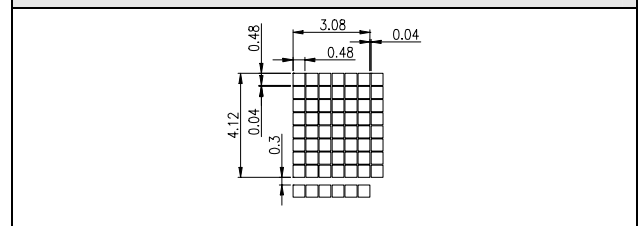
OUTLINE DIMENSION



BLOCK DIAGRAM



DISPLAY PATTERN



MECHANICAL SPECIFICATION

Item	Dimensions(W)X(H)	Unit
Overall Size	51.0x16.5	MM
View Area	48.0x11.5	MM
Dot Size	0.48x0.48	MM
Dot Pitch	0.52x0.52	MM

PIN ASSIGNMENT

Pin no	Symbol	Function
1	EL1	Back light anode
2	EL2	Back light cathode
3	VDD	Power supply for logical circuit
4	OSC1	When use internal oscillator, connect external Rf resistor
5	OSC2	If external clock is used, connect it to OSC1
6	RESET	Reset pin initialized to low
7	VSS1	Power supply 0V
8	RS/CS	Register select/chip select
9	RW/SID	When bus mode, used as read/write selection input
10	E/SCLK	When bus mode, used as read/write enable signal, when serial mode, used as serial clock input pin
11	VSS2	Power supply GND
12	V5OUT3	Voltage booster output(3X)

ABSOLUTE MAXIMUM RATING

Item	Symbol	Condition	Min	Max	Unit
Supply for logic voltage	V _{DD}	---	-0.3	+0.7	V
LCD driving supply voltage	V _{LCD}	---	V _{DD} -15	V _{DD} +0.3	V
Input voltage	V _I	---	-0.3	V _{DD} +0.3	V

ELECTRICAL CHARACTERISTICS

Item	Symbol	Condition	Min	Typical	Max	Unit
Supply voltage for logic	V _{DD}	---	2.7	3.0	5.5	V
Supply current for logic	I _{DD}	---	---	0.15	0.3	V
Input voltage "H" level	V _{IH}	---	0.7V _{DD}	---	V _{DD}	V
Input voltage "L" level	V _{IL}	---	-0.3	---	0.2V _{DD}	V
Supply voltage for EL	V _F	---	---	80	100	V
Supply Frequency EL	Freq	---	---	600	1000	Hz

REMARKS:

1. LCD type: TN.
2. Back light type: EL Back light