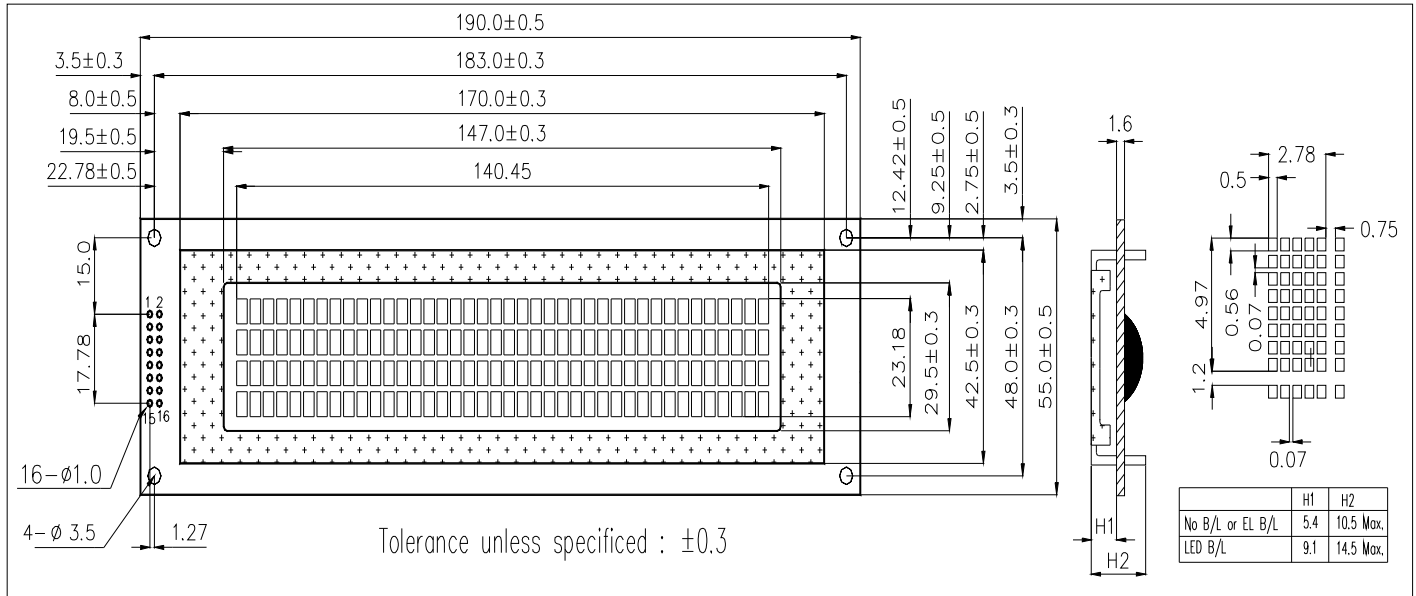
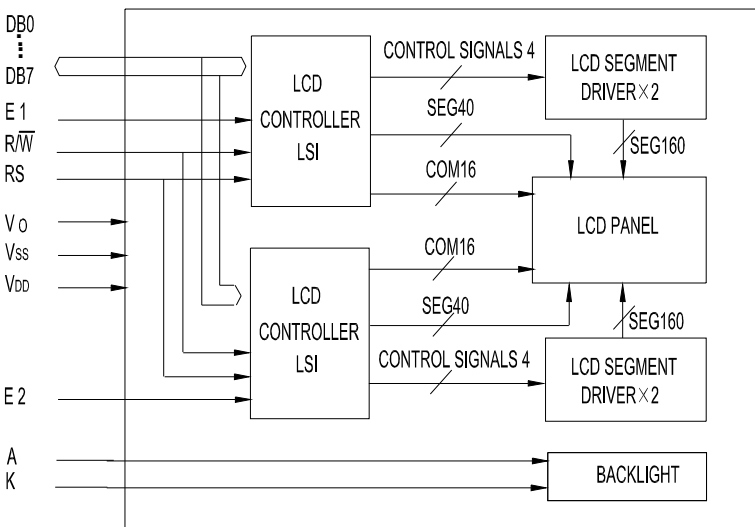


### 1.0 DIMENSIONAL DRAWING



### 2.0 BLOCK DIAGRAM



### 3.0 PIN ASSIGNMENT

Pin no.	Symbol	Function	
1	DB0	Data bus line	
:	:		
8	DB7		
9	E1		Enable signal 2
10	R / $\overline{W}$		Data read / write
11	RS		Register select signal
12	V <sub>O</sub>		Contrast adjust
13	V <sub>SS</sub>		Power supply (GND)
14	V <sub>DD</sub>	Power supply(+)	
15	E2	Enable signal 2	
16	NC	NO CONNECTION	

### 4.0 ELECTRICAL CHARACTERISTICS Ta=25 °C V<sub>DD</sub>=5.0V±0.25V

Item	Symbol	Test Condition	Standard Value			
			Min.	Typ.	Max.	Unit
Power Supply Voltage	V <sub>DD</sub> -V <sub>SS</sub>	25°C	2.2	5.0	5.25	V
LCD Operation Voltage	V <sub>OP</sub>	25°C	TN	-	-	V
			STN	-	5.0	-
LCM Current Consumption	I <sub>DD</sub>	25°C	-	3.5	5.0	mA
Backlight Forward Voltage	V <sub>F</sub>		-	4.2	4.6	V

### 5.0 ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Test Condition	Standard Value		
			Min.	Max.	Unit
Supply Voltage (Logic)	V <sub>DD</sub> -V <sub>SS</sub>	25°C	-0.3	7	V
Supply Voltage (LCD)	V <sub>DD</sub> -V <sub>O</sub>		V <sub>DD</sub> -13.5	V <sub>DD</sub> +0.3	V
Input Voltage	V <sub>IN</sub>		-0.3	V <sub>DD</sub> +0.3	V
Operating Temp.	T <sub>OPR</sub>	-	0	50	°C
Storage Temp.	T <sub>STG</sub>	-	-20	70	°C

#### Remark

- LCD option: TN,STN,FSTN.
- Standard module.
- Backlight option: LED,EL backlight feature, other specs not available on catalog is under request.