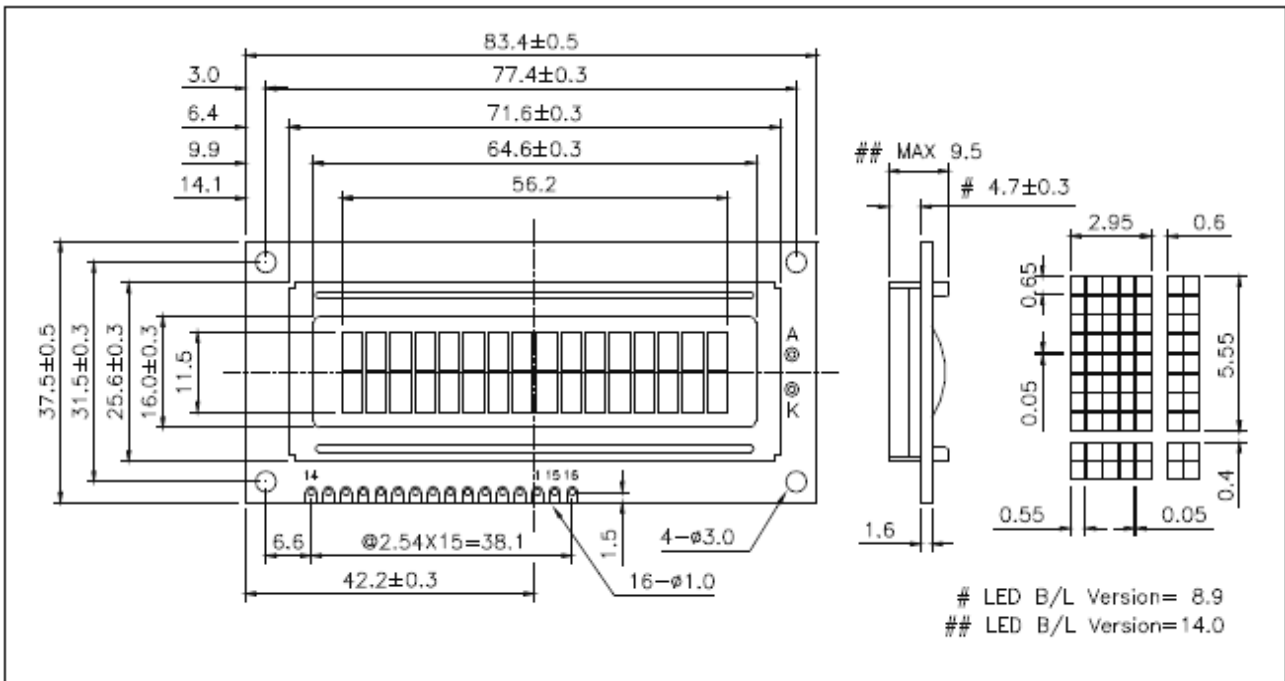
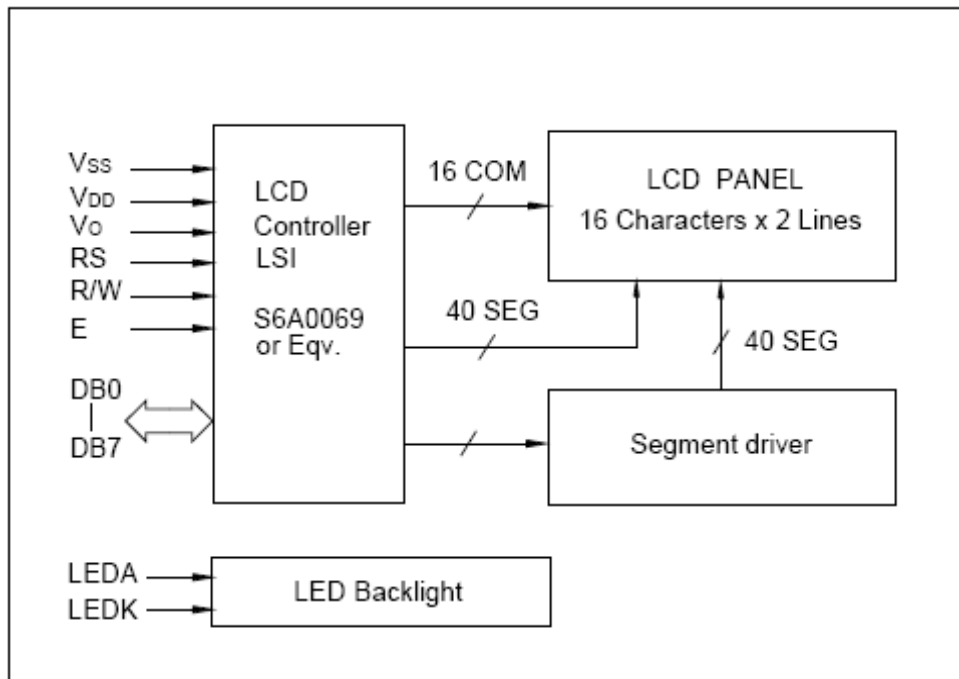


1.0 DIMENSIONAL DRAWING



2.0 BLOCK DIAGRAM



3.0 ELECTRICAL CHARACTERISTICS Ta=25 °C VDD=3.0V±0.25V

Item	Symbol	Test Condition	Standard Value			Unit
			Min.	Typ.	Max.	
Input High Voltage	V _{IH}	-	2.2	-	V _{DD}	V
Input Low Voltage	V _{IL}	-	- 0.3	-	0.6	V
Output High Voltage	V _{OH}	I _{OH} = - 0.2mA	2.4	-	V _{DD}	V
Output Low Voltage	V _{OL}	I _{OL} =1.2mA	0	-	0.4	V
Supply Current	I _{DD}	V _{DD} =5V	-	1.5	3.0	mA
LCD Driving Voltage	V _{DD} - V _O	Ta=25° C	-	4.6	-	V

4.0 ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Standard Value		
		Min.	Max.	Unit
Power Supply for Logic	$V_{DD} - V_{SS}$	- 0.3	7.0	V
LCD Operation Voltage	$V_{DD} - V_O$	- 0.3	13.0	V
Input Voltage	V_I	- 0.3	$V_{DD}+0.3$	V
Operating Temp	T_{opr}	- 20	70	°C
Storage Temp	T_{stg}	- 30	80	°C

5.0 PIN ASSIGNMENT

PIN NO.	Symbol	Level	Function
1	V_{SS}	0V	GND
2	V_{DD}	+5V	Power supply for logic
3	V_O	-	Operating voltage for LCD
4	RS	H/L	H: Data L: Instruction code
5	R/W	H/L	H: Read L: Write
6	E	H, H→L	Enable signal
7	DB0	H/L	In 8 - bit bus mode, used as low order bi-directional data bus. In 4 - bit bus mode, open these pins.
8	DB1	H/L	
9	DB2	H/L	
10	DB3	H/L	
11	DB4	H/L	In 8 - bit bus mode, used as high order bi-directional data bus. In 4 - bit bus mode, used as both high and low order data bus.
12	DB5	H/L	
13	DB6	H/L	
14	DB7	H/L	
15	LEDA	+5V	Power supply for LED backlight
16	LEDK	0V	

6.0 LED BACKLIGHT SPECIFICATIONS $T_a=25\text{ }^\circ\text{C}$

Item	Symbol	Typ.	Max.	Unit
Forward Voltage	V_f	4.1	4.3	V
Forward Current	I_f	120	-	mA
Emission Wave Length	λ_p	568	-	nm

Remark

1. LCD option: STN, FSTN.
2. Customized module.
3. Backlight option: EL backlight feature, other specs not available on catalog are under request.