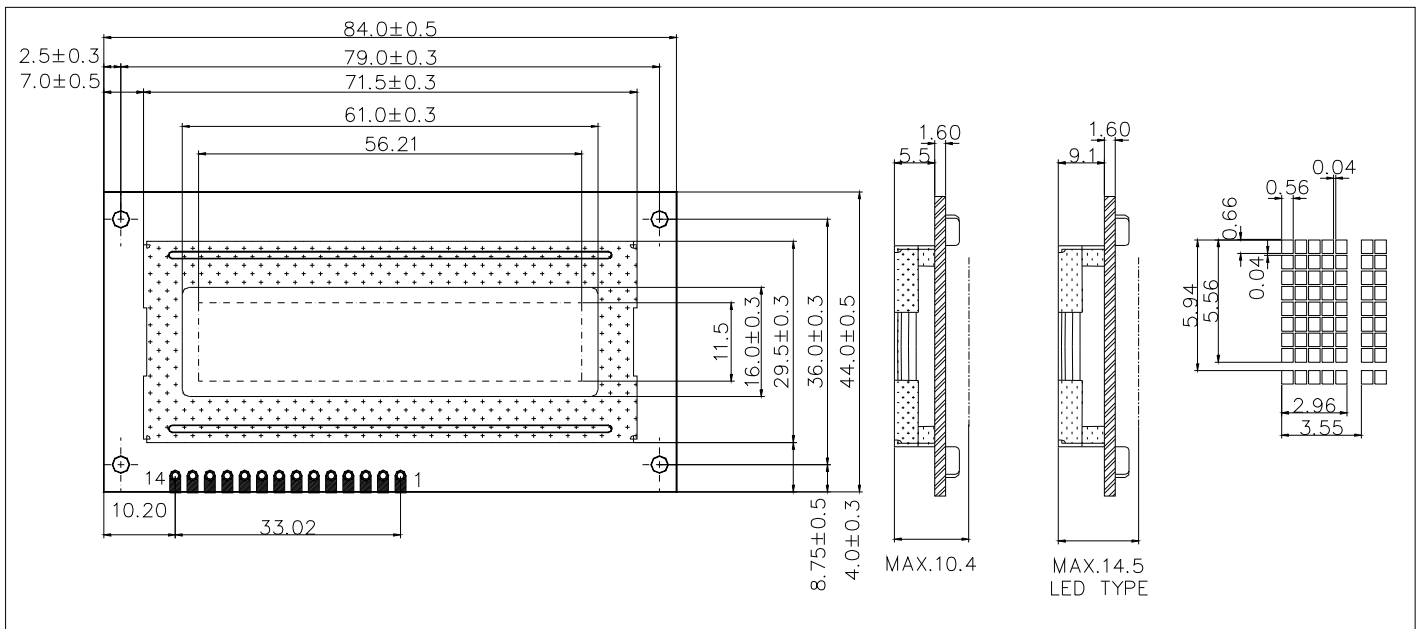
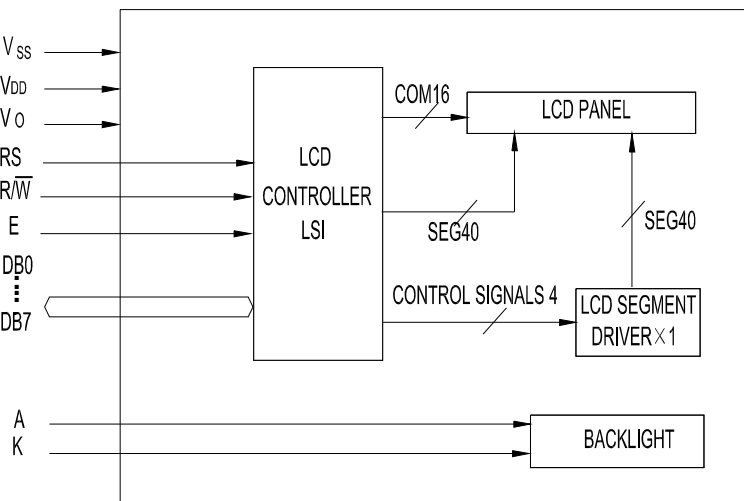


1.0 DIMENSIONAL DRAWING



2.0 BLOCK DIAGRAM



3.0 PIN ASSIGNMENT

Pin no.	Symbol	Function
1	V _{SS}	Power supply (GND)
2	V _{DD}	Power supply(+)
3	V _O	Contrast adjust
4	R _s	Register select signal
5	$\overline{R/W}$	Data read / write
6	E	Enable signal
7	DB0	Data bus line
8	DB1	
9	DB2	
10	DB3	
11	DB4	
12	DB5	
13	DB6	
14	DB7	

4.0 ELECTRICAL CHARACTERISTICS Ta=25°C V_{DD}=5.0V±0.25V

Item	Symbol	Test Condition	Standard Value				
			Min.	Typ.	Max.	Unit	
Power Supply Voltage	V _{DD} -V _{SS}	25°C	4.75	5.0	5.25	V	
LCD Operation Voltage	V _{OP}	25°C	(STN)	-	5.0	-	V
			(TN)	-	5.0	-	V
LCM Current Consumption	I _{DD}	25°C	-	2.0	3.0	mA	
Backlight Forward Voltage	V _F	25°C	-	4.2	-	V	

5.0 ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Test Condition	Standard Value		
			Min.	Max.	Unit
Supply Voltage (Logic)	V _{DD} -V _{SS}	25°C	-0.3	7	V
Supply Voltage (LCD)	V _{DD} -V _O		V _{DD} -13.5	V _{DD} +0.3	V
Input Voltage	V _{IN}		-0.3	V _{DD} +0.3	V
Operating Temp.	T _{OPR}		0	50	°C
Storage Temp.	T _{STG}		-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.