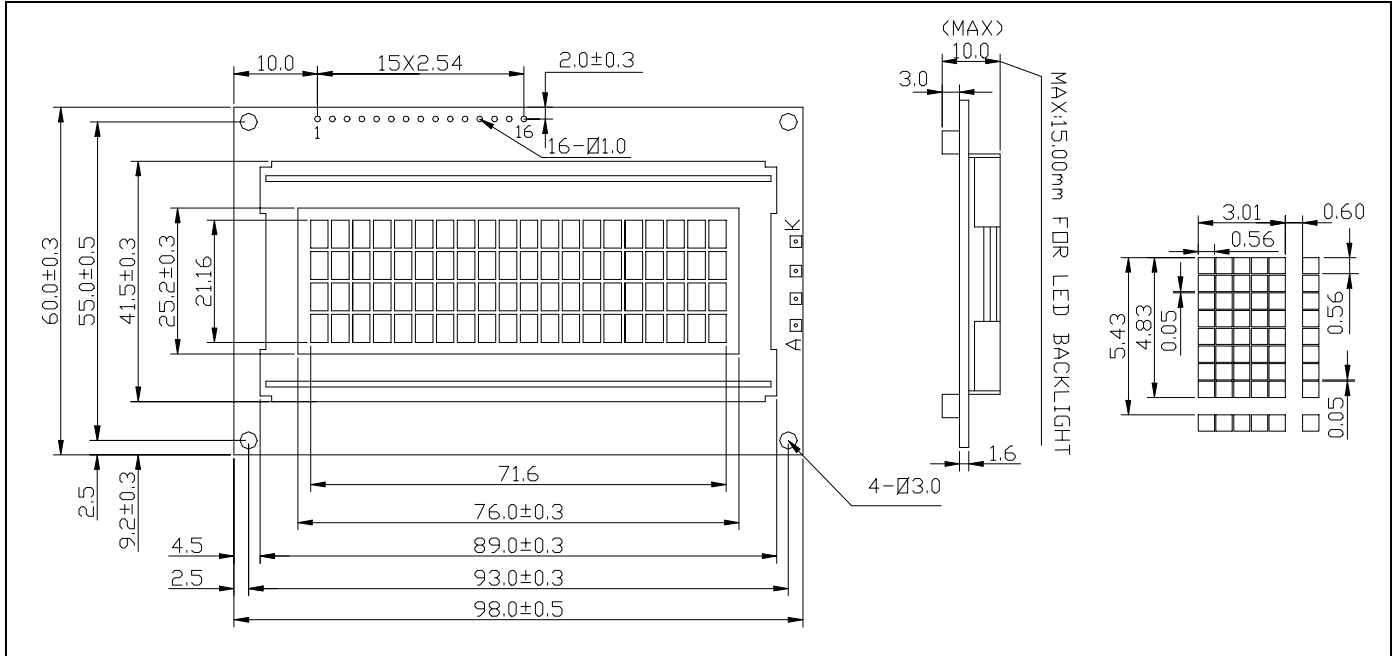




JM204A

20 CHAR×4LINE
1/16 DUTY,1/5 BIAS

1 EXTERNAL DIMENSION



2 MECHANICAL DATA

ITEM	SPECIFICATION	UNIT
Module Size (W×H×T)	98.0×60.0×10.0(LED:15.0)	mm
Viewing Area (W×H)	76.0×25.2	mm
Character Font(W×H)	5×7+cursor	dots
Character Size (W×H)	3.01×4.83	mm
Character Pitch(W×H)	3.61×5.43	mm
Dot Size(W×H)	0.56×0.56	mm

5 ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	MIN.	MAX.	UNIT
Supply Voltage	V _{dd}	-0.3	7	V
LCD Supply Voltage	V _S	V _{dd} -13.5	0	V
Input Voltage	V _i	-0.3	V _{dd} +0.3	V
Operating Temperature	T _{op}	0	50	°C
Storage Temperature	T _{stg}	-20	70	°C

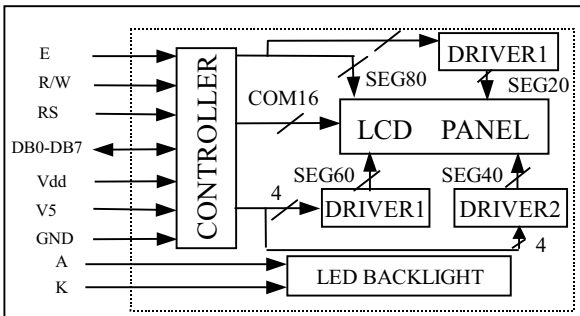
3 PIN CONNECTIONS

PIN	SYMBOL	SIGNAL DESCRIPTION
1	GND	Power Supply: 0V
2	V _{dd}	Power Supply: +5V
3	V _S	Power Supply for LCD
4	RS	Register Select(H=DATA,L=Instruction)
5	R/W	Read/Write L=MPU to LCM,H=LCM to MPU
6	E	Enable
7 to 14	DB0 to DB7	Data Bus for 4 bit or 8 bit Mode
15	A	Anode of LED Unit
16	K	Cathode of LED Unit

6 ELECTRICAL CHARACTERISTICS(Ta=25°C)

ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Voltage(logic)	V _{dd} -GND	-	4.5	5.0	5.5	V
Supply Current(logic)	I _{dd}	V _{dd} =5.0V	-	1.5	3.0	mA
Driving Current(LCD)	I _{ee}		-	0.4	1.0	mA
Driving Voltage(LCD)	V _{dd} -V _S		3.8	4.5	4.9	V
Input Voltage "H"	V _{ih}		2.2	-	V _{dd}	V
Input Voltage "L"	V _{il}		-0.3	-	0.6	V
Output Voltage "H"	V _{oh}	I _{oh} =-0.205mA	2.4	-	-	V
Output Voltage "L"	V _{ol}	I _{ol} =1.2mA	-	-	0.4	V

4 BLOCK DIAGRAM



7 BOTTOM BACKLIGHT CHARACTERS(Ta=25°C)

PARAMETER	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Voltage	V _{LED}	-	-	4.1	-	V
LED Forward Consumption Current	I _f	Ta=25°C V _f =4.1V	-	200	-	mA
LED Allowable Dissipation	P _d	-	-	850	-	mW