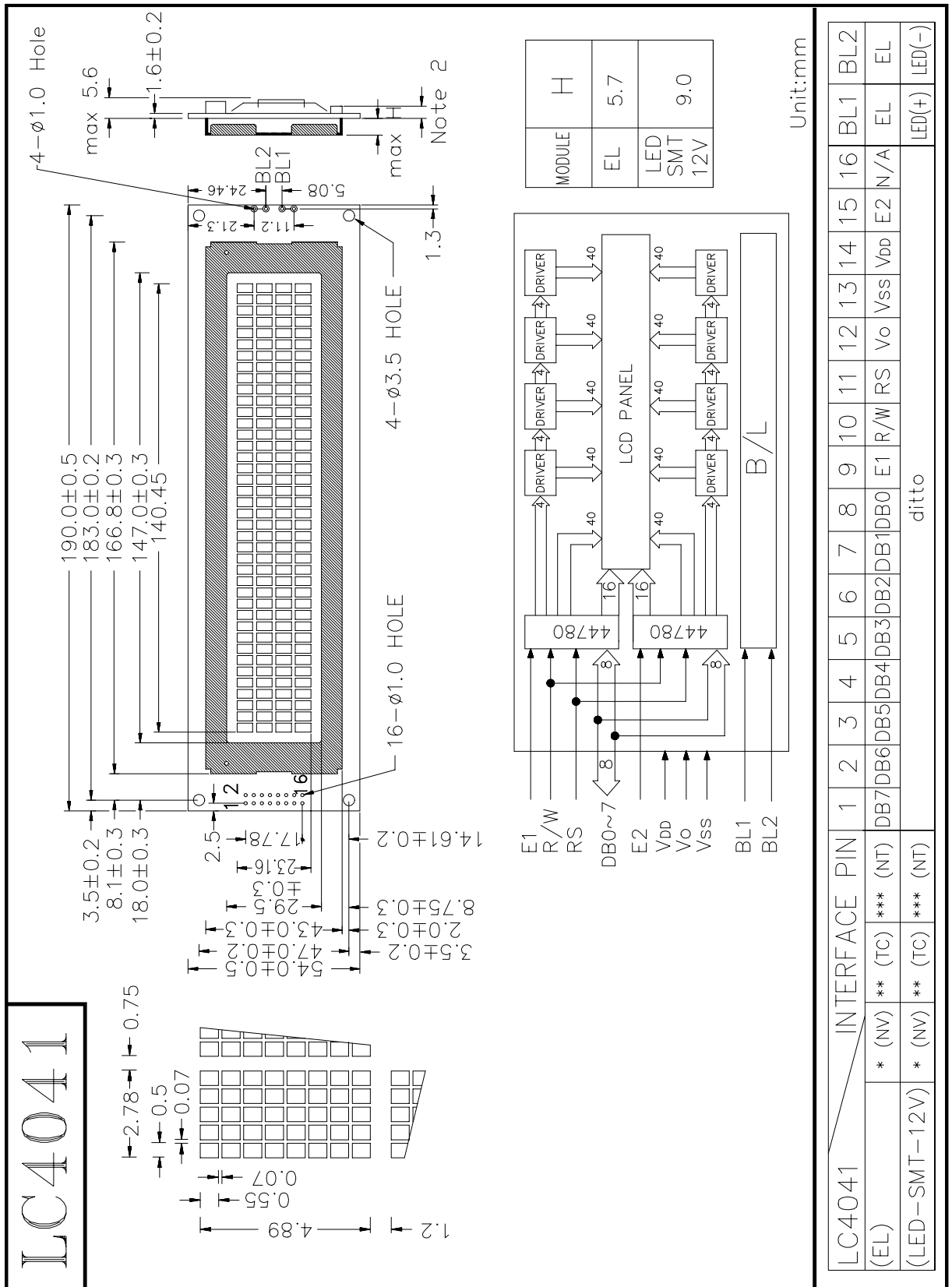


1. LCM Drawing



2. Electrical spec

LC4041

40 Characters X 4 Lines
1/16 DUTY 5x8Font

ELECTRICAL CHARACTERISTICS

$T_a = 25^{\circ}\text{C}$ $V_{DD} = 5.0 \pm 0.25 \text{ v}$

Input "High" Voltage (V_{IH}) 2.2 V min

Input "Low " Voltage (V_{IL}) 0.6 V max

APPLICABLE FOR -LOP

	<u>TN</u>		<u>STN</u>	
	<u>TEMPERATURE</u>		<u>TEMPERATURE</u>	
	<u>NORMAL</u>	<u>WIDE</u>	<u>NORMAL</u>	<u>WIDE</u>
Supply Current, (I_{DD})Typ.,mA	5	5	5	5
Recommend LCD drive Voltage: ($V_{DD}-V_O$)at $T_a = -20^{\circ}\text{C}$,Volts	N/A	9.6	N/A	8.6
$T_a = 0^{\circ}\text{C}$	4.8	8.6	4.8	8.1
$T_a = 25^{\circ}\text{C}$	4.5	8.4	4.5	7.7
$T_a = 50^{\circ}\text{C}$	4.2	8.0	4.2	7.3
$T_a = 70^{\circ}\text{C}$	N/A	7.6	N/A	6.9

ABSOLUTE MAXIMUM RATINGS

	<u>NORMAL</u>		<u>WIDE</u>	
	<u>TEMPERATURE</u>		<u>TEMPERATURE</u>	
	<u>MIN</u>	<u>MAX</u>	<u>MIN</u>	<u>MAX</u>
Input Voltage (V_I) V	0	V_{DD}	0	V_{DD}
Supply for Logic ($V_{DD}-V_{SS}$) V	0	7	0	7
Supply for LCD ($V_{DD}-V_O$) V	0	10	0	10
Operating Temperature T_{OP} , $^{\circ}\text{C}$	0	+50	-20	+70
Storage Temperature T_{ST} , $^{\circ}\text{C}$	-20	+70	-30	+80

OPTION

BACKLIGHT

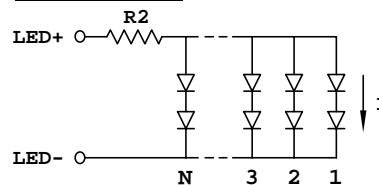
-BEXX -- EL
 -BLSXX -- LED SMT(12V)

INPUT VOLTAGE & CURRENT

100 V_{RMS} (400-800) Hz; 7.4mA
 + 12V DC; 600 mA $R_2 = 3.6 \text{ Ohm}$ 3 W

* R_2 : Suggest BL current limit resistor on customer board

SMT LED



$N = 60, I = 10 \text{ mA}$

----- Single +5V for wide temperature operation -----

SINGLE +5V OPERATION only

-- not available --

TEMPERATURE COMPENSATION

-- not available --

LC4041

40 Characters X 4 Lines
1/16 DUTY 5x8Font

ELECTRICAL CHARACTERISTICS

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Input "High" Voltage (V_{IH}) 2.2 V min

Input "Low " Voltage (V_{IL}) 0.6 V max

APPLICABLE FOR -LEP

	<u>TN</u>		<u>STN</u>		<u>FSTN</u>	
	<u>TEMPERATURE</u>		<u>TEMPERATURE</u>		<u>TEMPERATURE</u>	
	<u>NORMAL</u>	<u>WIDE</u>	<u>NORMAL</u>	<u>WIDE</u>	<u>NORMAL</u>	<u>WIDE</u>
Supply Current, (I_{DD})Typ.,mA	5	N/A	5	5	5	N/A
Recommend LCD drive Voltage: ($V_{DD}-V_O$)at $T_a =$	N/A	N/A	N/A	7.7	N/A	N/A
-20°C,Volts						
$T_a = 0^{\circ}\text{C}$	5.0	N/A	4.7	7.3	N/A	N/A
$T_a = 25^{\circ}\text{C}$	4.7	N/A	4.5	6.8	3.8	N/A
$T_a = 50^{\circ}\text{C}$	4.5	N/A	4.3	6.4	N/A	N/A
$T_a = 70^{\circ}\text{C}$	N/A	N/A	N/A	5.9	N/A	N/A

ABSOLUTE MAXIMUM RATINGS

	<u>NORMAL</u>		<u>WIDE</u>	
	<u>TEMPERATURE</u>		<u>TEMPERATURE</u>	
	<u>MIN</u>	<u>MAX</u>	<u>MIN</u>	<u>MAX</u>
Input Voltage (V_I) V	0	V_{DD}	0	V_{DD}
Supply for Logic ($V_{DD}-V_{SS}$) V	0	7	0	7
Supply for LCD ($V_{DD}-V_O$) V	0	10	0	10
Operating Temperature T_{OP} , °C	0	+50	-20	+70
Storage Temperature T_{ST} , °C	-20	+70	-30	+80

OPTION

BACKLIGHT

-BEXX -- EL

-BLSXX -- LED SMT(12V)

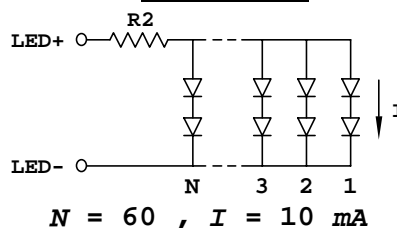
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+ 12V DC; 600 mA $R_2 = 3.6 \text{ Ohm}$ 3 W

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SMT LED



$N = 60, I = 10 \text{ mA}$

----- Single +5V for wide temperature operation -----

SINGLE +5V OPERATION only

-- not available --

TEMPERATURE COMPENSATION

-- not available --