

2. Electrical spec

LC1625

16 Characters X 2 Lines
1/16 DUTY 5x8 Font

ELECTRICAL CHARACTERISTICS

T_a = 25°C V_{DD} = 5.0 ± 0.25 v

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

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

APPLICABLE FOR -LNY

	<u>TN</u>		<u>STN</u>	
	<u>TEMPERATURE</u>		<u>TEMPERATURE</u>	
	<u>NORMA</u>	<u>WIDE</u>	<u>NORMA</u>	<u>WIDE</u>
Supply Current, (I _{DD})Typ., mA	N/A	N/A	1	1
Recommend LCD drive Voltage: (V _{DD} -V _O) at T _a = -20°C, Volts	N/A	N/A	N/A	7.7
T _a = 0°C	N/A	N/A	4.8	7.3
T _a = 25°C	N/A	N/A	4.5	6.9
T _a = 50°C	N/A	N/A	4.3	6.4
T _a = 70°C	N/A	N/A	N/A	6.1

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

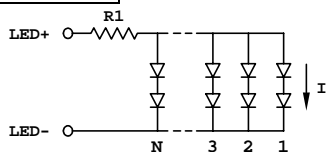
- BEXX -- EL
- BLEXX -- LED EDGE
- BLEWH -- LED EDGE(WHIT)
- BLSXX -- LED SMT

INPUT VOLTAGE & CURRENT

- 100 V_{RMS} (400-800) Hz; 1.7mA
- + 5V DC; 30 mA R1= 27 Ohm 1/4 W
- + 5V DC; 20 mA R1= 80 OHM 1/4 W
- + 5V DC; 120 mA R1= 6.2 Ohm 1/8 W

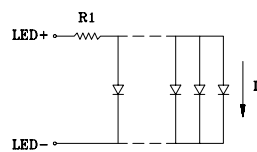
*R1: Built-in BL current limit resistor On LCDM

EDGE

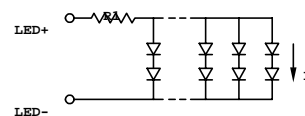


N= 2 , I= 15 mA

SMT LED



N= 1 , I= 20 mA



N= 12 , I= 10 mA

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

SINGLE +5V OPERATION only

-- not available --

TEMPERATURE COMPENSATION

-- not available --

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

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

APPLICABLE FOR -LOP

Supply Current, (I_{DD}) Typ., mA

	<u>TN</u>		<u>STN</u>	
	<u>TEMPERATURE</u>		<u>TEMPERATURE</u>	
	<u>NORMA</u>	<u>WIDE</u>	<u>NORMA</u>	<u>WIDE</u>
Supply Current, (I_{DD}) Typ., mA	1	1	1	1

Recommend LCD drive Voltage:

$(V_{DD} - V_O)$ at $T_a = -20^\circ\text{C}$, Volts	<u>TN</u>		<u>STN</u>	
	<u>NORMA</u>	<u>WIDE</u>	<u>NORMA</u>	<u>WIDE</u>
$T_a = -20^\circ\text{C}$	N/A	9.7	N/A	7.8
$T_a = 0^\circ\text{C}$	4.7	9.2	4.8	7.3
$T_a = 25^\circ\text{C}$	4.4	8.7	4.2	7.0
$T_a = 50^\circ\text{C}$	4.1	8.3	3.9	6.5
$T_a = 70^\circ\text{C}$	N/A	7.9	N/A	6.1

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

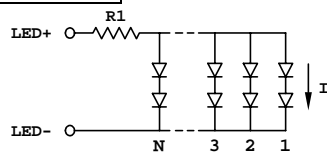
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INPUT VOLTAGE & CURRENT

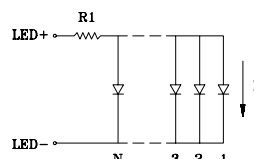
100 V_{RMS} (400-800) Hz; 1.7mA
 + 5V DC; 30 mA $R_1 = 27 \text{ Ohm } 1/4 \text{ W}$
 + 5V DC; 20 mA $R_1 = 80 \text{ OHM } 1/4 \text{ W}$
 + 5V DC; 120 mA $R_1 = 6.2 \text{ Ohm } 1/8 \text{ W}$

* R_1 : Built-in BL current limit resistor On LCDM

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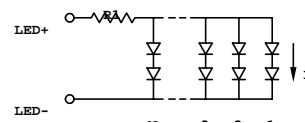


$N = 2, I = 15 \text{ mA}$



$N = 1, I = 20 \text{ mA}$

SMT LED



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<u>TEMPERATURE</u>		<u>TEMPERATURE</u>	
<u>NORMA</u>	<u>WIDE</u>	<u>NORMA</u>	<u>WIDE</u>
N/A	N/A	1	1

Recommend LCD drive Voltage:

($V_{DD} - V_O$) at $T_a = -20^{\circ}\text{C}$, Volts

$T_a = 0^{\circ}\text{C}$	N/A	N/A	N/A	7.7
$T_a = 25^{\circ}\text{C}$	N/A	N/A	4.7	7.3
$T_a = 50^{\circ}\text{C}$	N/A	N/A	4.5	6.8
$T_a = 70^{\circ}\text{C}$	N/A	N/A	4.2	6.3
	N/A	N/A	N/A	6.1

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	<u>NORMAL</u>		<u>WIDE</u>	
	<u>TEMPERATURE</u>	<u>TEMPERATURE</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
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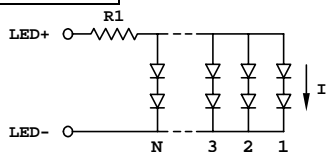
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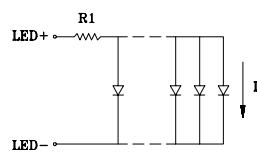
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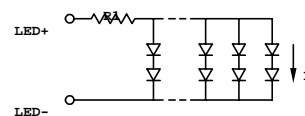


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