



2. Electrical spec

**LC1622**

**16 Characters X 2 Lines  
1/16 DUTY 5 x 8 Font**

**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>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	N/A	9.7	N/A	7.8
$T_a = 0^\circ\text{C}$	4.7	9.2	4.5	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**

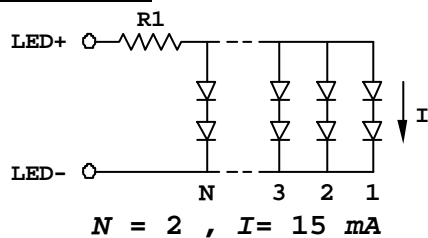
- BEXX -- EL
- BLEXX -- LED EDGE
- BLSXX -- LED SMT

**INPUT VOLTAGE & CURRENT**

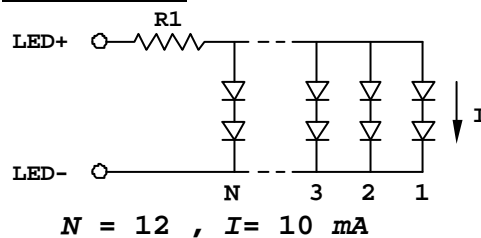
100  $V_{RMS}$  (400-800) Hz; 1.7mA  
 + 5V DC; 30 mA  $R_1 = 27 \text{ Ohm } 1/4 \text{ W}$   
 + 5V DC; 120 mA  $R_1 = 6.2 \text{ Ohm } 1/8 \text{ W}$

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

**EDGE**



**SMT LED**



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

**SINGLE +5V OPERATION** only

-- not available --

**TEMPERATURE COMPENSATION**

-- not available --

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16 Characters X 2 Lines  
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## ELECTRICAL CHARACTERISTICS

$T_a = 25^\circ\text{C}$   $V_{DD} = 5.0 \pm 0.25$  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>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 $T_a = -20^\circ\text{C}$ , Volts	N/A	N/A	N/A	7.7
$T_a = 0^\circ\text{C}$	N/A	N/A	4.8	7.3
$T_a = 25^\circ\text{C}$	N/A	N/A	4.5	6.9
$T_a = 50^\circ\text{C}$	N/A	N/A	4.3	6.4
$T_a = 70^\circ\text{C}$	N/A	N/A	N/A	6.1

## ABSOLUTE MAXIMUM RATINGS

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

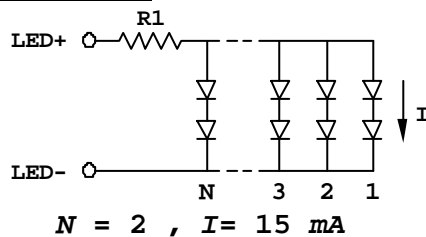
- BEXX -- EL
- BLEXX -- LED EDGE
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### INPUT VOLTAGE & CURRENT

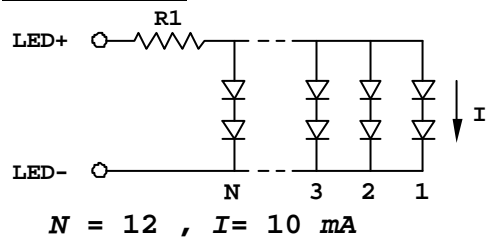
100  $V_{RMS}$  (400-800) Hz; 1.7mA  
 + 5V DC; 30 mA  $R_1 = 27$  Ohm 1/4 W  
 + 5V DC; 120 mA  $R_1 = 6.2$  Ohm 1/8 W

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

#### EDGE



#### SMT LED



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

**SINGLE +5V OPERATION** only

-- not available --

**TEMPERATURE COMPENSATION**

-- not available --

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16 Characters X 2 Lines  
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## ELECTRICAL CHARACTERISTICS

T<sub>a</sub> = 25°C V<sub>DD</sub> = 5.0 ± 0.25 v

Input "High" Voltage (V<sub>IH</sub>) 2.2 V min

Input "Low" Voltage (V<sub>IL</sub>) 0.6 V max

### APPLICABLE FOR -LNA

Supply Current, (I<sub>DD</sub>) Typ., mA

	<u>TN</u>		<u>STN</u>	
	<u>TEMPERATURE</u>	<u>TEMPERATURE</u>	<u>TEMPERATURE</u>	<u>TEMPERATURE</u>
	<u>NORMA</u>	<u>WIDE</u>	<u>NORMA</u>	<u>WIDE</u>
Supply Current, (I <sub>DD</sub> ) Typ., mA	N/A	N/A	1	1

Recommend LCD drive Voltage:

(V<sub>DD</sub>-V<sub>O</sub>) at T<sub>a</sub> = -20°C, Volts

T<sub>a</sub> = 0°C

T<sub>a</sub> = 25°C

T<sub>a</sub> = 50°C

T<sub>a</sub> = 70°C

N/A	N/A	N/A	7.2
N/A	N/A	4.4	6.8
N/A	N/A	4.3	6.8
N/A	N/A	4.0	6.8
N/A	N/A	N/A	6.8

## ABSOLUTE MAXIMUM RATINGS

Input Voltage (V<sub>I</sub>) V

Supply for Logic (V<sub>DD</sub>-V<sub>SS</sub>) V

Supply for LCD (V<sub>DD</sub>-V<sub>O</sub>) V

Operating Temperature T<sub>OP</sub>, °C

Storage Temperature T<sub>ST</sub>, °C

	<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 <sub>I</sub> ) V	0	V <sub>DD</sub>	0	V <sub>DD</sub>
Supply for Logic (V <sub>DD</sub> -V <sub>SS</sub> ) V	0	7	0	7
Supply for LCD (V <sub>DD</sub> -V <sub>O</sub> ) V	0	10	0	10
Operating Temperature T <sub>OP</sub> , °C	0	+50	-20	+70
Storage Temperature T <sub>ST</sub> , °C	-20	+70	-30	+80

## OPTION

### BACKLIGHT

- BEXX -- EL
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### INPUT VOLTAGE & CURRENT

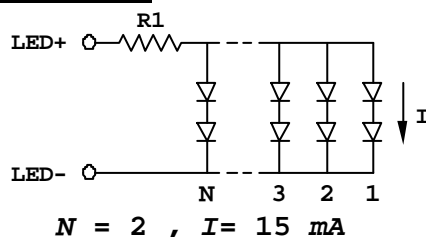
100 V<sub>RMS</sub> (400-800) Hz; 1.7mA

+ 5V DC; 30 mA R<sub>1</sub> = 27 Ohm 1/4 W

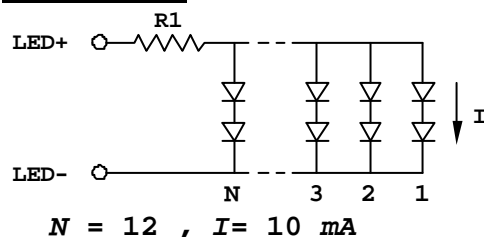
+ 5V DC; 120 mA R<sub>1</sub> = 6.2 Ohm 1/8 W

\*R<sub>1</sub>: Built-in BL current limit resistor On LCDM

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