# LITEON

# LITE-ON TECHNOLOGY CORPORATION

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#### **FEATURES**

- \*RECTANGULAR LIGHT BAR.
- \*LARGE, BRIGHT, UNIFORM LIGHT EMITTING AREAS.
- \*LOW POWER REQUIREMENT.
- \*HIGH BRIGHTNESS & HIGH CONTRAST.
- \*SOLID STATE RELIABILITY.
- \*CATEGORIZED FOR LUMINOUS INTENSITY.

### **DESCRIPTION**

The LTA-1000P is a ten rectangular light sources array display designed for a variety of applications where a continuously large, bright source of light is required. This device utilizes bright red LED chips, which are made from GaP on a transparent GaP substrate, and has a gray face and white segments.

### **DEVICE**

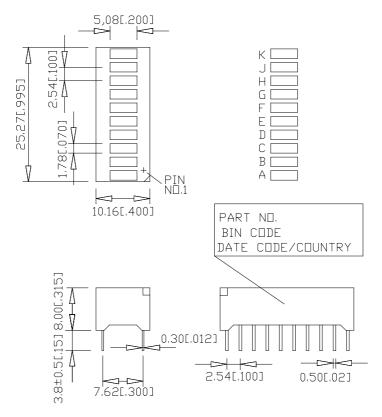
PART NO.	DESCRIPTION			
Bright Red	Universal			
LTA-1000P	Ten Rectangular Bar			

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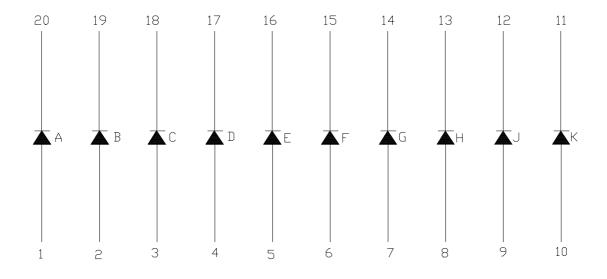
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## PACKAGE DIMENSIONS



NOTES: All dimensions are in millimeters. Tolerances are ± 0.25 mm (0.01") unless otherwise noted.

#### INTERNAL CIRCUIT DIAGRAM



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## PIN CONNECTION

No.	CONNECTION			
1	ANODE A			
2	ANODE B			
3	ANODE C			
4	ANODE D			
5	ANODE E			
6	ANODE F			
7	ANODE G			
8	ANODE H			
9	ANODE J			
10	ANODE K			
11	CATHODE K			
12	CATHODE J			
13	CATHODE H			
14	CATHODE G			
15	CATHODE F			
16	CATHODE E			
17	CATHODE D			
18	CATHODE C			
19	CATHODE B			
20	CATHODE A			

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## ABSOLUTE MAXIMUM RATING AT Ta=25°C

PARAMETER	MAXIMUM RATING	UNIT			
Power Dissipation Per Segment	40	mW			
Peak Forward Current Per Segment (1/10 Duty Cycle, 0.1ms Pulse Width)	60	mA			
Continuous Forward Current Per Segment	15	mA			
Derating Linear From 25°C Per Segment	0.2	mA/°C			
Reverse Voltage Per Segment	5	V			
Operating Temperature Range	Range $-35^{\circ}\text{C}$ to $+85^{\circ}\text{C}$				
Storage Temperature Range	orage Temperature Range -35°C to +85°C				
Solder Temperature: max 260°C for max 3sec at 1.6mm below seating plane.					

## ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C

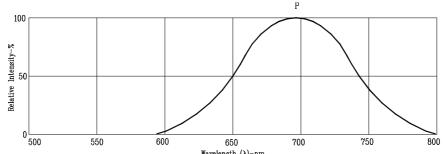
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	Iv	210	700		μcd	I <sub>F</sub> =10mA
Peak Emission Wavelength	λр		697		nm	I <sub>F</sub> =20mA
Spectral Line Half-Width	Δλ		90		nm	I <sub>F</sub> =20mA
Dominant Wavelength	λd		657		nm	I <sub>F</sub> =20mA
Forward Voltage Per Segment	$V_{\mathrm{F}}$		2.1	2.6	V	I <sub>F</sub> =20mA
Reverse Current Per Segment	Ir			100	μΑ	V <sub>R</sub> =5V
Luminous Intensity Matching Ratio	Iv-m			2:1		I <sub>F</sub> =10mA

Note: Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commision Internationale De L'Eclairage) eye-response curve.

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## TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)



 $\label{eq:wavelength} \begin{tabular}{lll} Wavelength & (\lambda)-nm. \\ Fig1. & RELATIVE & INTENSITY & VS. & WAVELENGTH \\ \end{tabular}$ 

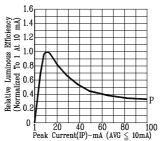
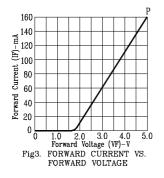
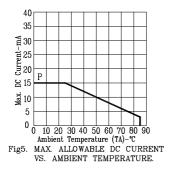
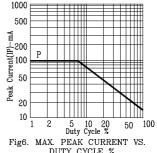


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT (REFRESH RATE 1KHz)







DUTY CYCLE %
(REFRESH RATE 1KHz)

NOTE: P=BRIGHT RED

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HLMP-2655-EF000 HLMP-2820-FG000 KB-2600ID L-1043GDT L-875/4IDT L-875/4SRDT DC10EGWA LF1B-NC3P-2THWW2-3M

LTL-2500G LTL-2685HR SSA-LXB10GW LTA-1000HR HLMP-2685 HLMP-2400 HLMP-2300 L-875/4YDT SSB-LXH100SRW SSB
LX2620IW SSB-LX2400YW LPB-S01110101S DC10SURKWA DF3CGKD LF1B-NA4P-2THWW2-3M LF1B-NB3P-2THWW2-3M

KB2450SYKW KB2835CGKD L-1043IDT L-1043YDT L-835/2GDT LF1B-NF3P-2THWW2-3M HLCP-B100 HLMP-2450 HLMP-2800

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