### Property of Lite-On Only

#### **FEATURES**

- \*0.5 inch (12.7 mm) DIGIT HEIGHT.
- \*CONTINUOUS UNIFORM SEGMENTS.
- \*LOW POWER REQUIREMENT.
- \*EXCELLENT CHARACTERS APPEARANCE.
- \*HIGH BRIGHTNESS & HIGH CONTRAST.
- \* WIDE VIEWING ANGLE.
- \* SOLID STATE RELIABILITY.
- \*CATEGORIZED FOR LUMINOUS INTENSITY.

#### **DESCRIPTION**

The LTP-587P is a 0.5 inch (12.7 mm) height 16-segment single digit alphanumeric display. This device utilizes bright red LED chips, which are made from GaP on a transparent GaP substrate, and has a black face and white segments.

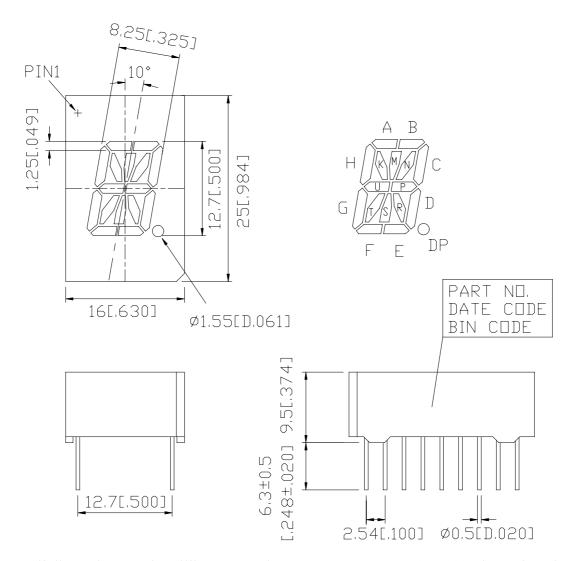
#### **DEVICE**

PART NO.	DESCRIPTION			
Bright Red	Common Anode			
LTP-587P	Rt. Hand Decimal			

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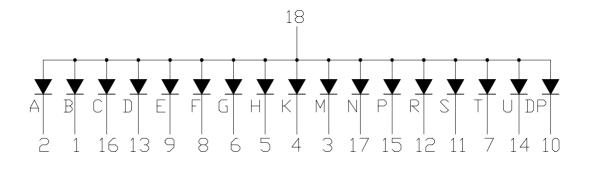
Property of Lite-On Only

#### **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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**Property of Lite-On Only** 

### **PIN CONNECTION**

No.	CONNECTION
1	CATHODE B
2	CATHODE A
3	CATHODE M
4	CATHODE K
5	CATHODE H
6	CATHODE G
7	CATHODE T
8	CATHODE F
9	CATHODE E
10	CATHODE D.P.
11	CATHODE S
12	CATHODE R
13	CATHODE D
14	CATHODE U
15	CATHODE P
16	CATHODE C
17	CATHODE N
18	COMMON ANODE

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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	-35°C to +85°C				
Storage 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

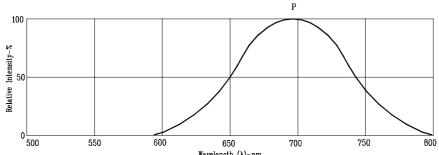
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	Iv	320	800		μcd	I <sub>F</sub> =10mA
Peak Emission Wavelength	λр		697		nm	I <sub>F</sub> =20mA
Spectral Line Half-Width	Δλ		90		nm	I <sub>F</sub> =20mA
Dominant Wavelength	λd		657		nm	I <sub>F</sub> =20mA
Forward Voltage Per Segment	VF		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

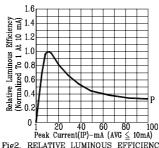
Note: Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commision Internationale De L'Eclairage) eye-response curve.

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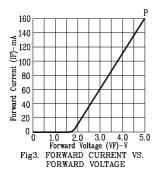
### TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

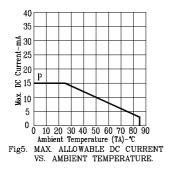
(25°C Ambient Temperature Unless Otherwise Noted)

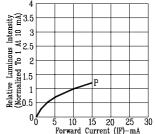




0 1 20 40 60 80 100
Peak Current(IP)-mA (AVG ≤ 10mA)
Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT (REFRESH RATE 1KHz)







00 5 10 15 20 25 30
Forward Current (IF)-mA
Fig4. RELATIVE LUMINOUS INTENSITY
VS. FORWARD CURRENT

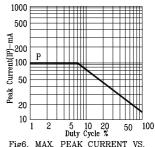


Fig6. MAX. PEAK CURRENT VS.
DUTY CYCLE %
(REFRESH RATE 1KHz)

NOTE: P=BRIGHT RED

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