

产品规格承认书

SPECIFICATION FOR APPROVAL

客户名称 (CUSTOMERS) _____

客户型号 (CUSTOMER P/N) _____

产品描述 (DESCRIPTION) 1.00 inch 1-digit, CA, yellow-green

本司型号 (LITEKEY P/N) LD10016BUG-G

送样日期 (SAMPLE DATE) _____

产品说明书 Specification ☒	检验报告 INSPECTION ☐	样品 SAMPLE ☐	其它 OTHERS ☐
核准 (APPROVED BY)	审核 (CHECKED BY)	校对 (PROOFREAD BY)	制作 (PREPARED BY)

更改履历表

版本 Version	日期 Date	描述 Description	编制 Maker
V.3.0	March 2, 2019	Version 3.0 Released	John Chou

客 户 判 定 结 果 (CUSTOMER VERDICT)

承认(OK) ☐	不承认(NG) ☐
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承认签名 (APPROVED BY):

承认时间 (APPROVED DATE):

改善意见 (IMPROVED ADVICE):

PART NO: LD10016BUG-G



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES



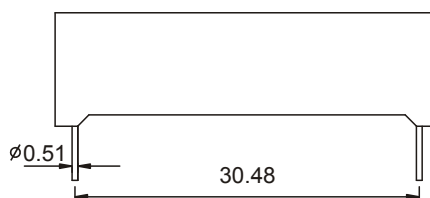
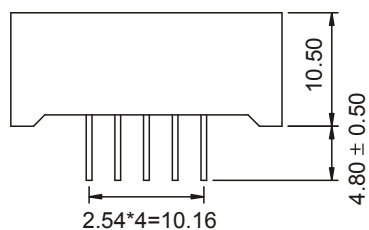
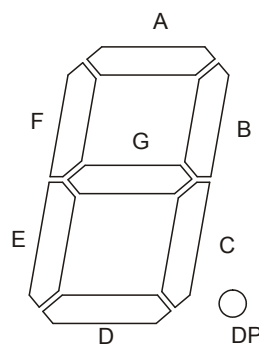
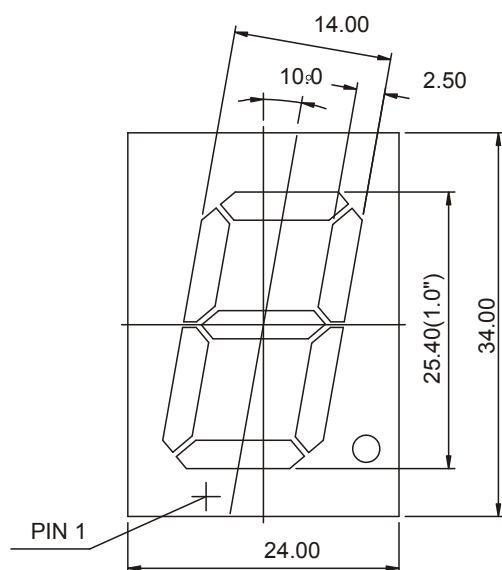
Features:

- 25.4 mm (1.00 inch) Digit High
- Excellent Digit Appearance
- Wide Viewing Angle
- I.C. Compatible
- Low Power Consumption

DESCRIPTION:

- Grey Face, White Epoxy
- Common Anode Display
- Yellow-green Display
- RoHS Compliant

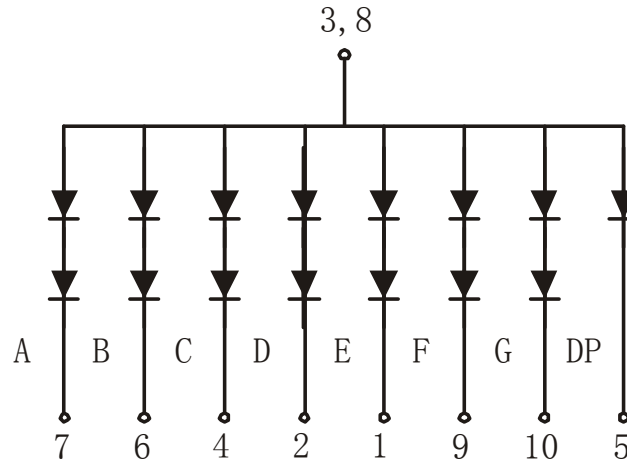
Package Dimensions:



Notes:

1. All dimensions are in millimeters (inches), Tolerance is $\pm 0.25\text{mm}$ (0.01inch) unless otherwise noted.
2. Specifications are subject to change without notice.
3. The gap between the reflector and PCB shall not exceed 0.25mm

Internal Circuit Diagram:



Selection Guide

PART NO.	EMITTING COLOR	CHIP MATERIAL
LD10016BUG-G	Yellowish Green	AlGaInP

Absolute Maximum Ratings (Ta = 25°C) :

PARAMETER	Max	UNIT
Power Dissipation Per Chip	78	mW
Peak Forward Current Per Segment(1/10duty cycle ,1KHz)	60	mA
Average Forward Current Per Chip	20	mA
Derating Linear From 25°C Per Chip	0.25	mA/°C
Reverse Voltage Per Chip	5	V
Operating Temperature Range	-35°C to + 85°C	
Storage Temperature Range	-35°C to + 100°C	
Lead Soldering Temperature 260°C at 1.6mm From Body for 3 second		

Electrical/Optical Characteristics (Ta = 25°C) :

PARAMETER PER CHIP	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Luminous Intensity Per Chip	I_v	35	-	55	mcd	$I_F=20mA$
Forward Voltage Per Chip	V_F	1.8	-	2.6	V	$I_F=20mA$
Peak Emission Wavelength	λ_p	-	573	-	nm	$I_F=20mA$
Dominant Emission Wavelength	λ_d	-	571	-	nm	$I_F=20mA$
Spectral Line Half-Width	$\Delta\lambda$	-	20	-	nm	$I_F=20mA$
Reverse Current Per Chip	I_R	-	-	10	μA	$V_R=5V$

Typical Electro-Optical Characteristic Curve ($T_a = 25^\circ\text{C}$) :

FIG. 1 Forward Current Vs. Forward Voltage

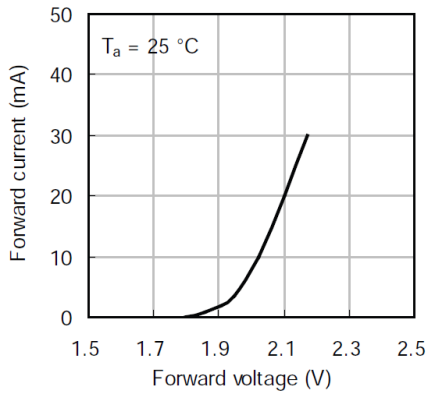


FIG. 2 Relative Intensity Vs. Forward Current

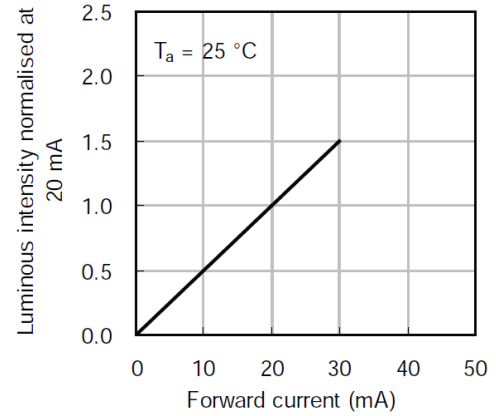


FIG. 3 Forward Current Derating Vs. Temperature

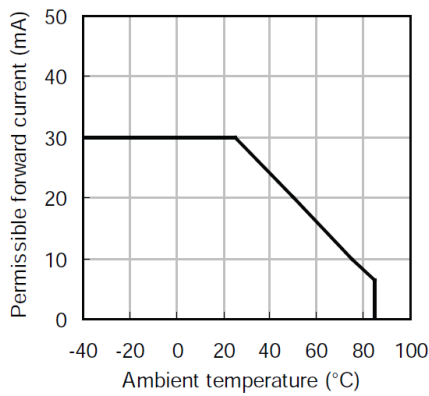
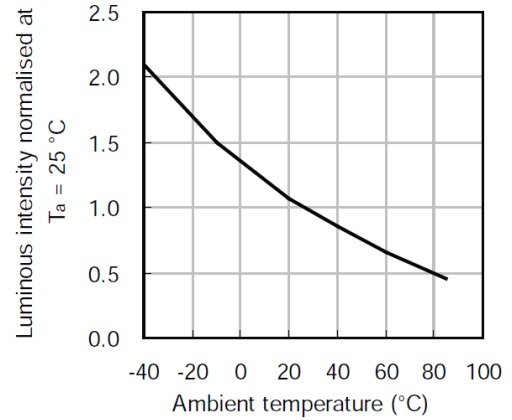
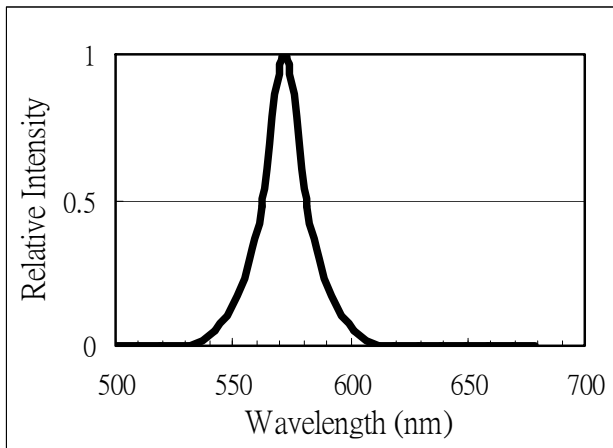


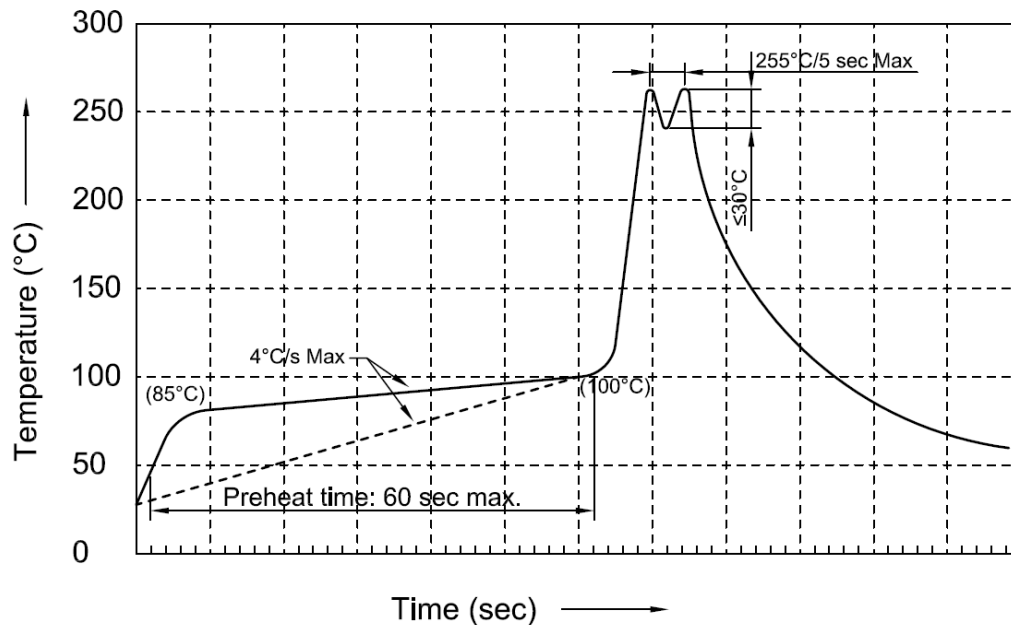
FIG. 4 Relative Intensity Vs. Temperature



IG. 5 Relative Intensity Vs. Wavelength



Recommended Wave Soldering Profiles:

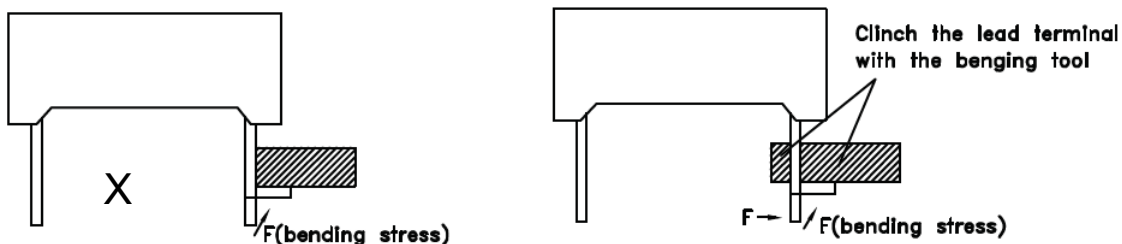


Notes:

1. Recommend pre-heat temperature of 105°C or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of 260°C.
2. Peak wave soldering temperature between 245-255°C for 3 sec (5 sec max).
3. Do not apply stress to the epoxy resin while the temperature is above 85°C.
4. Fixtures should not apply stress on the component when mounting and soldering process.
5. More than one wave soldering is not allowed.

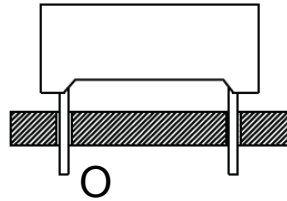
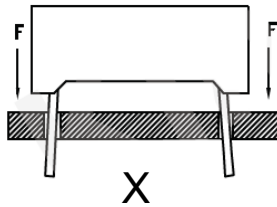
Lead Forming:

Bend the component leads by hand without proper tools is not allowed. The leads should be bent by clinching the upper part of the lead firmly such that the bending force is not exerted on the plastic body.

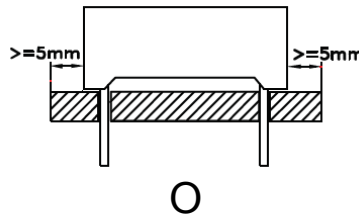
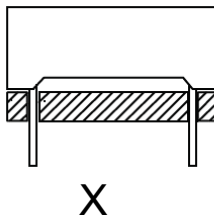


•Installation:

1. Do not apply stress to the lead terminals.
2. When inserting for assembly, ensure the terminal pitch matches the substrate board's hole pitch to prevent spreading or pinching the lead terminals.



The component shall be placed at least 5mm from edge of PCB to avoid damage caused excessive heat during wave soldering.



•Storage:

1. The LEDs should be stored at temp. $\leq 30^{\circ}\text{C}$ & RH. $\leq 70\%$ after being shipped from LITEKEY and the storage life limits are 3 months. If the LEDs are stored for 3 months or more, they can be stored for a year in a sealed container with a nitrogen atmosphere and absorbent material.
2. Please avoid rapid transitions in ambient temperature, especially in high humidity environments where condensation can occur.

•Soldering General Notes:

1. Through-hole displays are incompatible with reflow soldering.
2. If components will undergo multiple soldering processes where the components may be subjected to intense heat, please check with LITEKEY for compatibility.

•Cleaning:

1. Mild "no-clean" fluxes are recommended for use in soldering.
2. If cleaning is required, LITEKEY recommends to wash components enclosure with water only. Do not use organic solvents for cleaning, because they may damage the plastic parts. And the devices should not be washed for more than one minute.

•Electrostatic Discharge(ESD) :

1. LEDs can be damaged by electrostatic discharge or surge current (EOS).
2. An ESD wrist strap, ESD shoe strap or antistatic gloves must be worn whenever handling LEDs.
3. Grounded properly must be applied for all devices, equipment and machinery.
4. Use ion blower to neutralize the static charge which might have built up on surface of the LEDs plastic lens as a result of friction between LEDs during storage and handling.

•Other:

1. Above specification may be changed without notice. LITEKEY will reserve authority on material change for above specification.
2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. LITEKEY assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
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