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LITEON LITE-ON TECHNOLOGY CORPORATION

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LED	DISP	$\mathbf{L}\mathbf{A}\mathbf{Y}$

LTS-5825CKR-P **DATA SHEET**

<u>ITEM</u>	<u>Description</u>	By	DATE
1	New Spec	Lester Chen	2011/03/18

PAGE: PART NO.: LTS-5825CKR-P 1 of 9



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FEATURES

- *0.56 inch (14.22 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 LTS-5825CKR-P is a 0.56 inch (14.22 mm) digit height single digit SMD display. This device utilizes AllnGaP SUPER RED LED chips which are made from AllnGaP on a non-transparent GaAs substrate. The display has gray face and white segments.

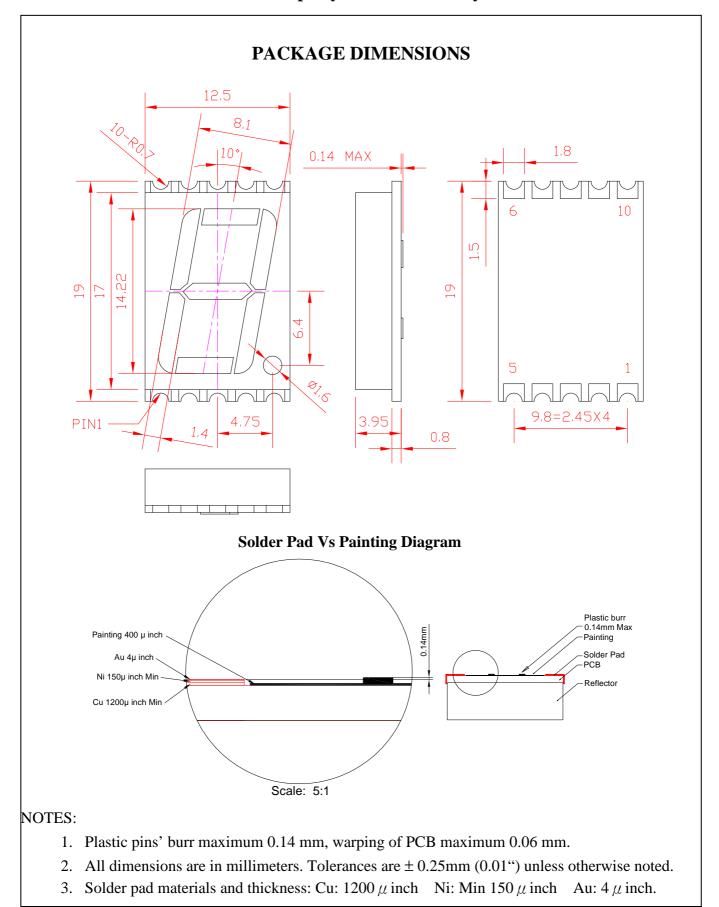
DEVICE

PART NO.	DESCRIPTION		
AllnGaP SUPER RED	Common Anode		
LTS-5825CKR-P			

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PAGE:

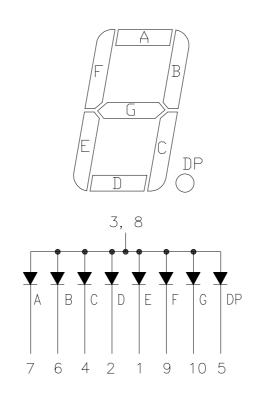
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INTERNAL CIRCUIT DIAGRAM



PIN CONNECTION

No.	CONNECTION
1	CATHODE E
2	CATHODE D
3	COMMON ANODE
4	CATHODE C
5	CATHODE DP
6	CATHODE B
7	CATHODE A
8	COMMON ANODE
9	CATHODE F
10	CATHODE G

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ABSOLUTE MAXIMUM RATING AT Ta = 25°C

PARAMETER	MAXIMUM RATING	UNIT	
Power Dissipation Per Segment	70	mW	
Peak Forward Current Per Segment	00		
(Frequency 1Khz,10% duty cycle)	90	mA	
Continuous Forward Current Per Segment	25	mA	
Forward Current Derating from 25 °C	0.28	mA/°C	
Operating Temperature Range -35 °C to +105 °C			
Storage Temperature Range -35 °C to +105 °C			
Soldering Conditions: 1/16 inch Below Seating Plane for 3 Seconds at 260°C			

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta = 25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Luminous Intensity	IV		T.B.D		mcd	I _F =20mA
Peak Emission Wavelength	λр		639		nm	I _F =20mA
Spectral Line Half-Width	Δλ		20		nm	I _F =20mA
Dominant Wavelength	λd		631		nm	I _F =20mA
Forward Voltage Per Segment	V_{F}		2.0	2.6	V	I _F =20mA
Reverse Current Per Segment ⁽²⁾	IR			100	uA	$V_R=5V$
Luminous Intensity Matching Ratio	Iv-m			2:1		I _F =2mA

Note:

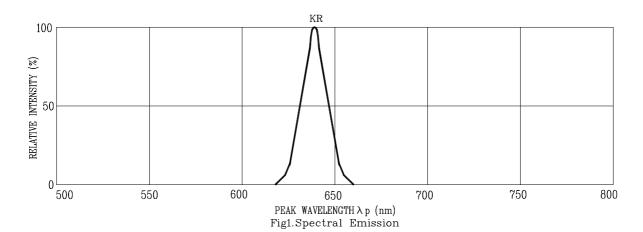
- 1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commision Internationale De L'Eclairage) eye-response curve.
- 2. Reverse voltage is only for IR test. It can not continue to operate at this situation.

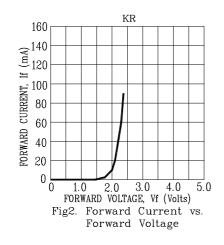
PART NO.: LTS-5825CKR-P PAGE: 5 of 9

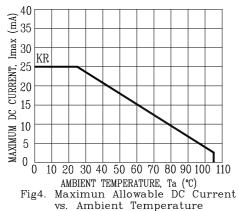
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TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)







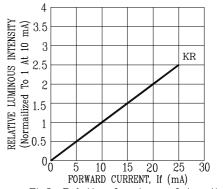
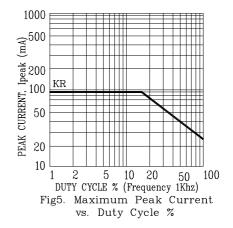


Fig3. Relative Luminous Intensity vs. DC Forward Current



NOTE: KR=AlInGaP SUPER RED

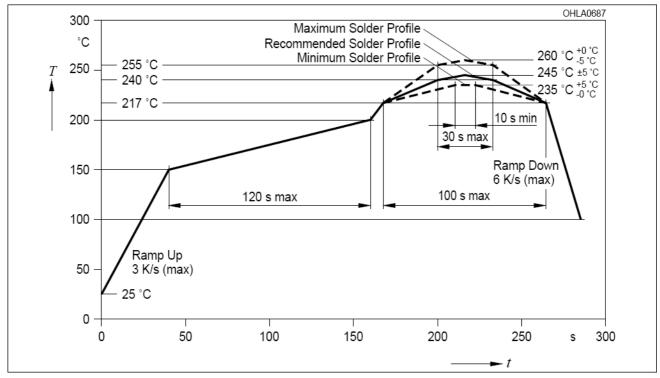
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SMT SOLDERING INSTRUCTION

(Number of reflow process shall be less than 2 times, and cooling process to normal temperature is required between the first and the second soldering process)



Note:

1. Recommended soldering condition:

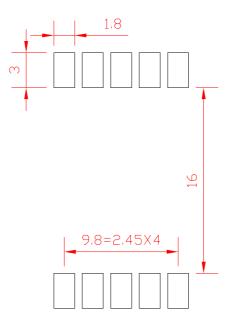
Reflow Soldering (Two times only)		Soldering Iron (One time only)		
Pre-heat:	120~150°C.	Temperature 300°C Max.		
Pre-heat time:	120sec. Max.	Soldering time	3sec. Max.	
Peak temperature:	260°C Max.			
Soldering time:	5sec. Max.			

2. Number of reflow process shall be less than 2 times, and cooling process to normal temperature is required between the first and the second soldering process.

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RECOMMENDED SOLDERING PATTERN (UNIT: MM)



PACKING REEL DIMENSIONS

T.B.D.

PACKING CARRIER DIMENSIONS

1. Taping parts:

T.B.D.

2. Trailer part/ Leader part:

T.B.D.

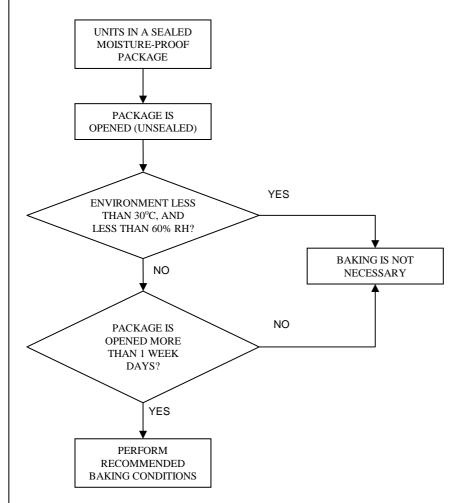
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MOISTURE PROOF PACKAGING

All N/D SMD displays are shipped in moisture proof package. The displays should be stored at 30°C or less and 90% RH or less. Once the package opened, moisture absorption begins.



Baking Conditions

If the parts are not stored in dry conditions, they must be baked before reflow to prevent damage to the parts.

Package	Temperature	Time
In Reel	60°C	≧48hours
In Bulk	100°C	≧4hours
	125°C	≥2hours

Baking should only be done once.

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