

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

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

**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

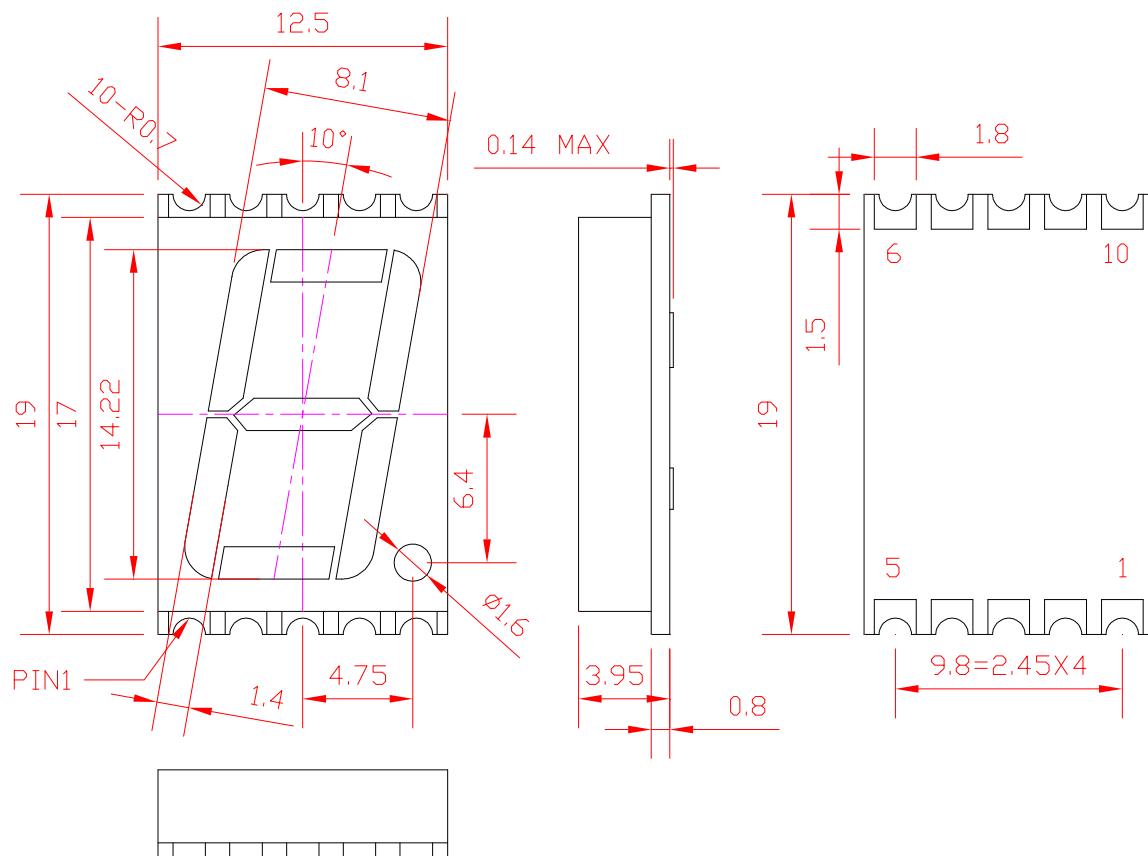
**DESCRIPTION**

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

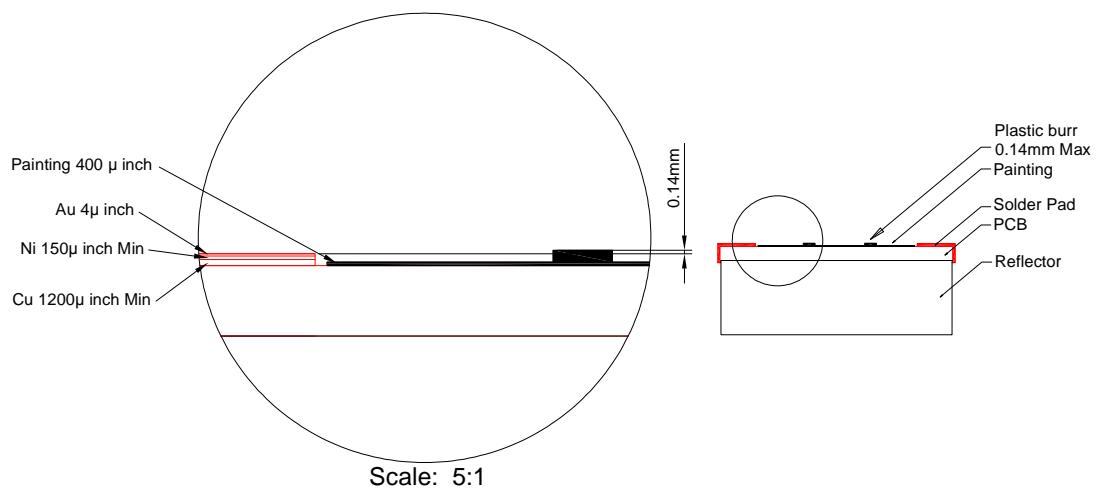
**DEVICE**

<b>PART NO.</b>	<b>DESCRIPTION</b>
AllnGaP SUPER RED	
LTS-5825CKR-P	Common Anode

## PACKAGE DIMENSIONS



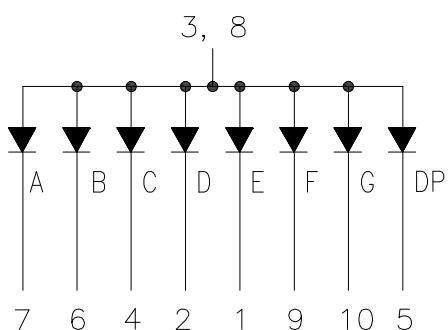
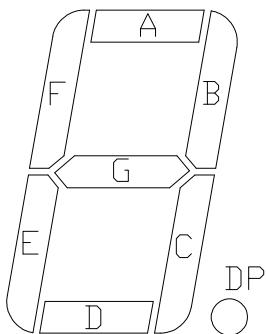
## Solder Pad Vs Painting Diagram



## NOTES:

1. Plastic pins' burr maximum 0.14 mm, warping of PCB maximum 0.06 mm.
2. All dimensions are in millimeters. Tolerances are  $\pm 0.25\text{mm}$  (0.01") unless otherwise noted.
3. Solder pad materials and thickness: Cu: 1200  $\mu\text{ inch}$  Ni: Min 150  $\mu\text{ inch}$  Au: 4  $\mu\text{ inch}$ .

## 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

ABSOLUTE MAXIMUM RATING AT  $T_a = 25^\circ C$ 

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

ELECTRICAL / OPTICAL CHARACTERISTICS AT  $T_a = 25^\circ C$ 

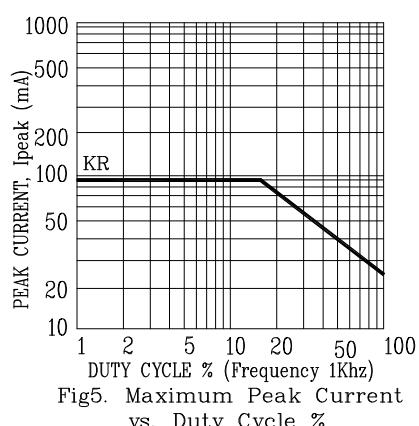
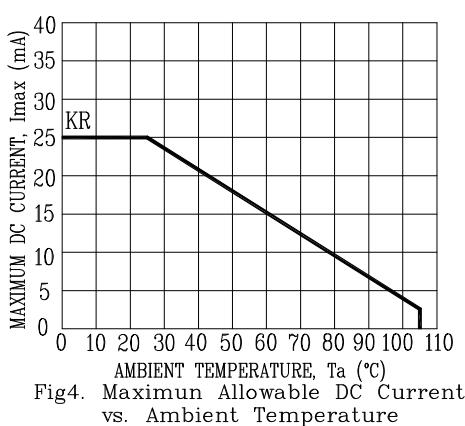
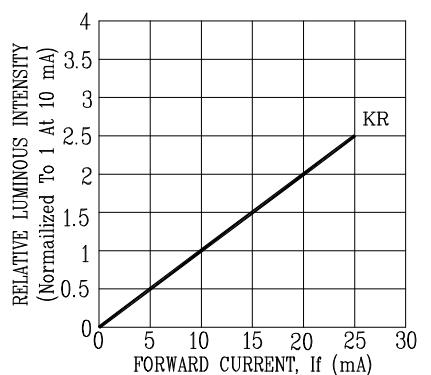
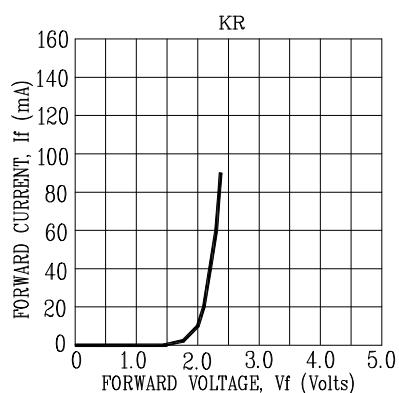
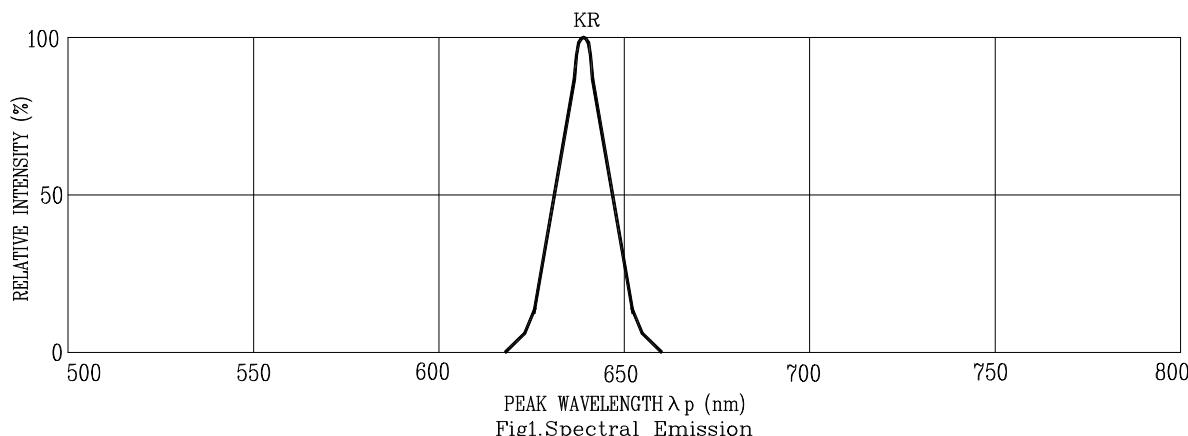
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Luminous Intensity	IV		T.B.D		mcd	$I_F=20mA$
Peak Emission Wavelength	$\lambda_p$		639		nm	$I_F=20mA$
Spectral Line Half-Width	$\Delta\lambda$		20		nm	$I_F=20mA$
Dominant Wavelength	$\lambda_d$		631		nm	$I_F=20mA$
Forward Voltage Per Segment	$V_F$		2.0	2.6	V	$I_F=20mA$
Reverse Current Per Segment <sup>(2)</sup>	$I_R$			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.

## TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

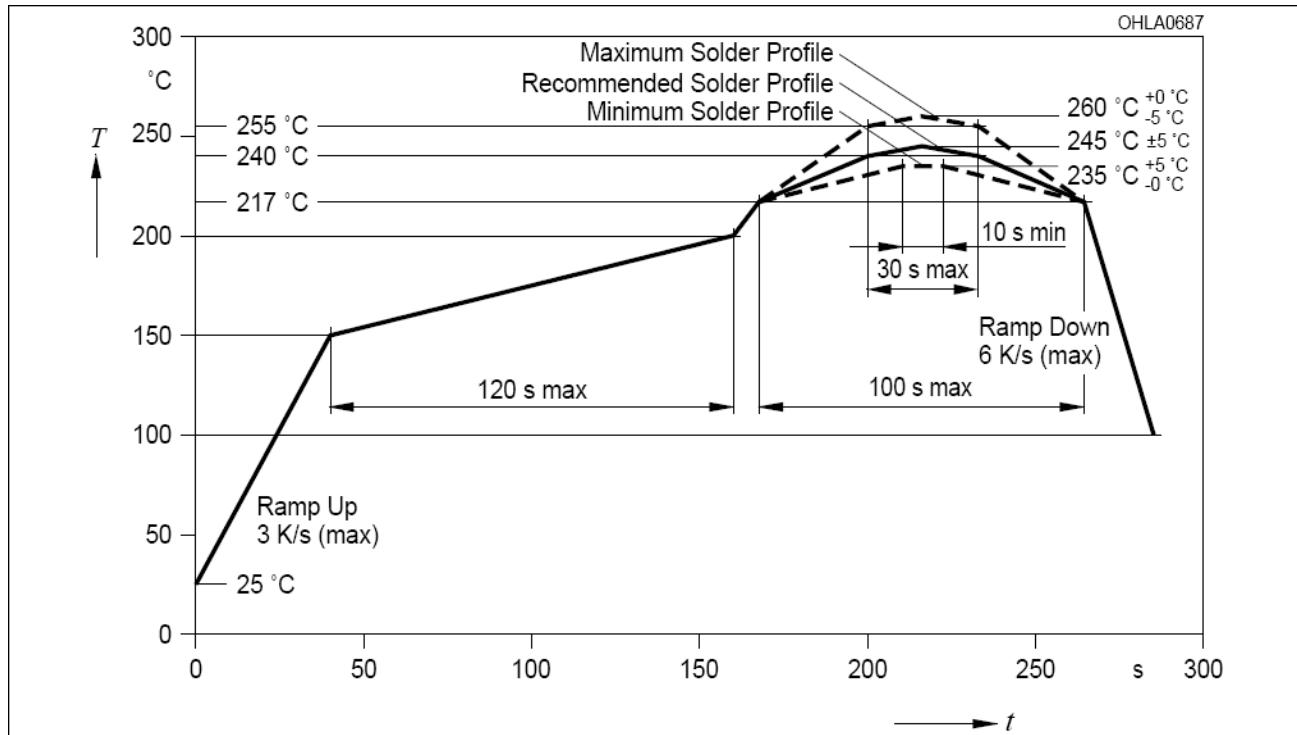
(25°C Ambient Temperature Unless Otherwise Noted)



NOTE : KR=AlInGaP SUPER RED

## 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)

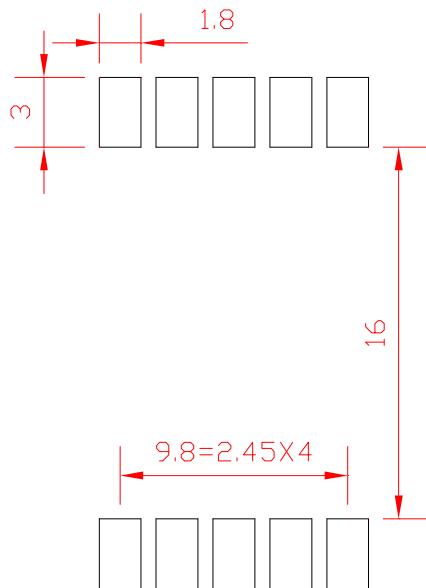


Note:

1. Recommended soldering condition:

Reflow Soldering (Two times only)		Soldering Iron (One time only)	
Pre-heat:	$120\text{~}150^{\circ}\text{C}$ .	Temperature	$300^{\circ}\text{C}$ Max.
Pre-heat time:	120sec. Max.	Soldering time	3sec. Max.
Peak temperature:	$260^{\circ}\text{C}$ 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.

**RECOMMENDED SOLDERING PATTERN (UNIT: MM)****PACKING REEL DIMENSIONS**

T.B.D.

**PACKING CARRIER DIMENSIONS**

1. Taping parts:

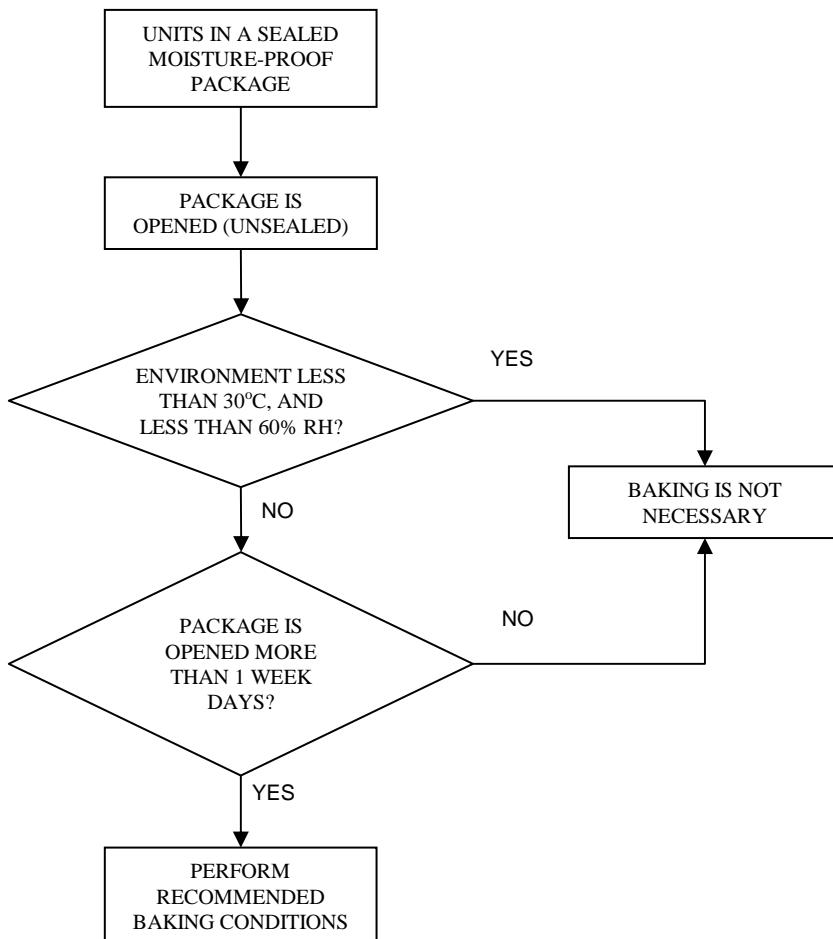
T.B.D.

2. Trailer part/ Leader part:

T.B.D.

## 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.**

# Mouser Electronics

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