

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

<u>ITEM</u>	<u>Description</u>	<u>By</u>	<u>DATE</u>
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

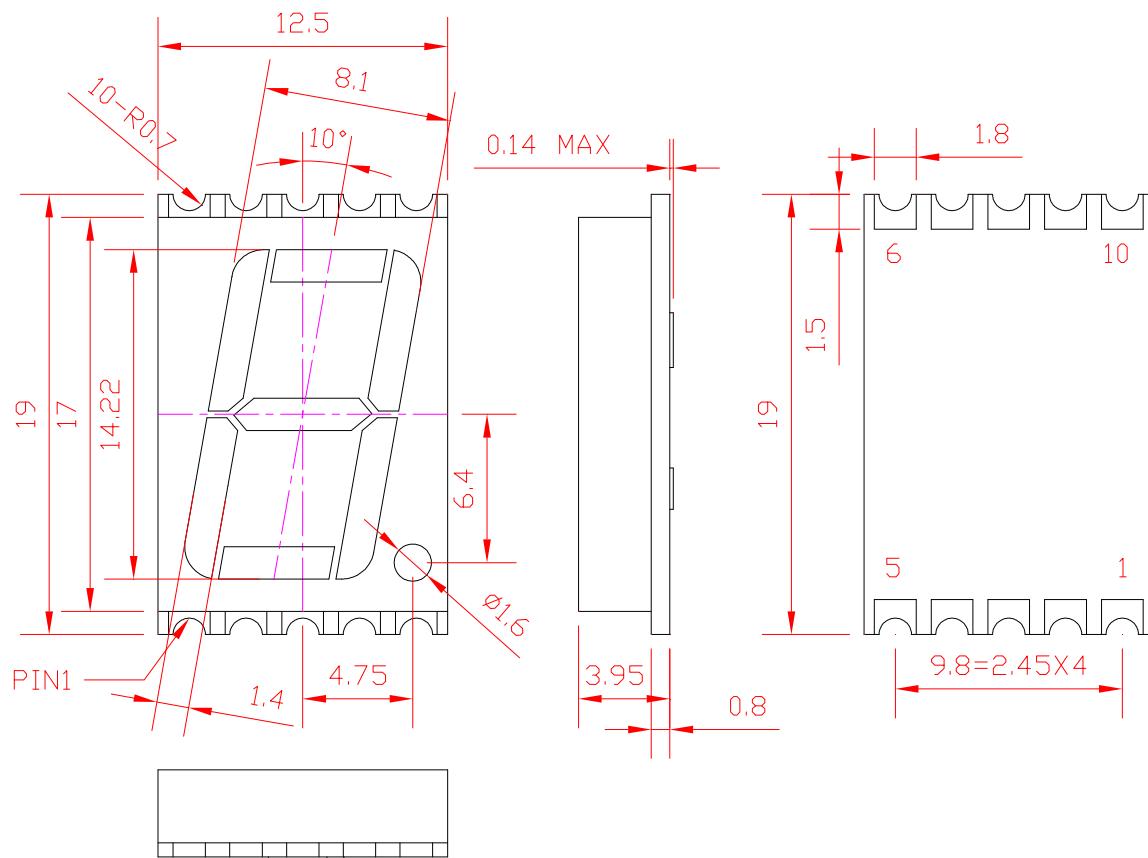
DESCRIPTION

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.

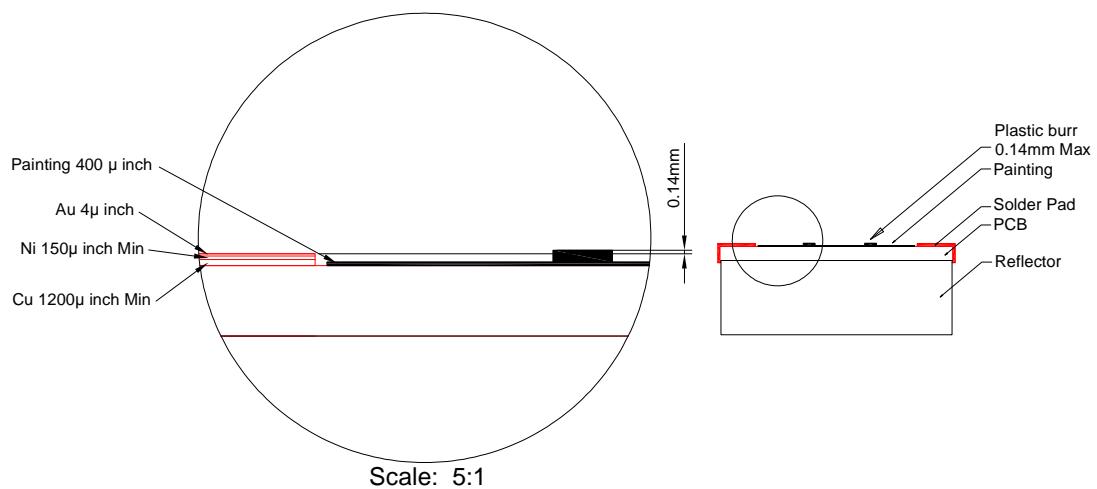
DEVICE

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

PACKAGE DIMENSIONS



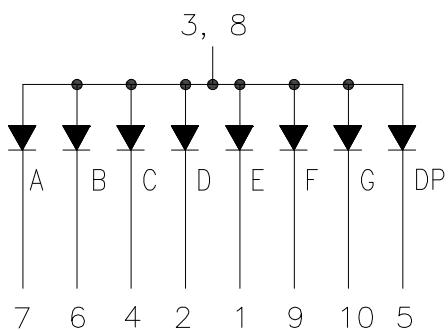
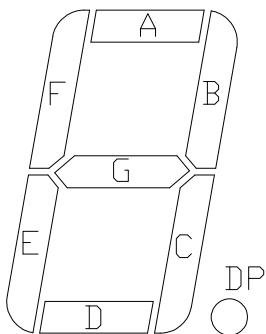
Solder Pad Vs Painting Diagram



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 $T_a = 25^\circ C$

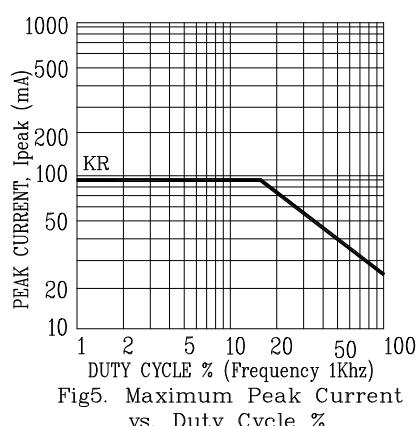
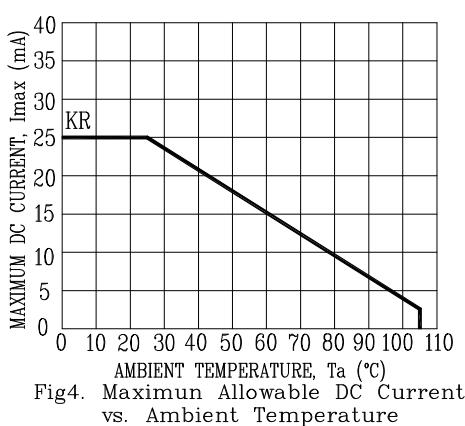
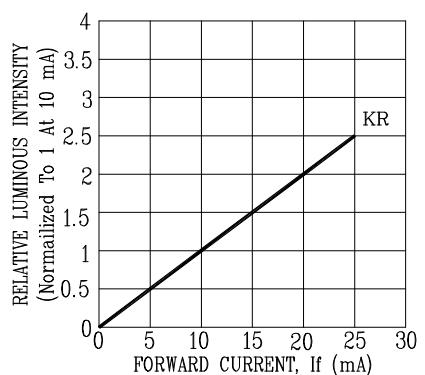
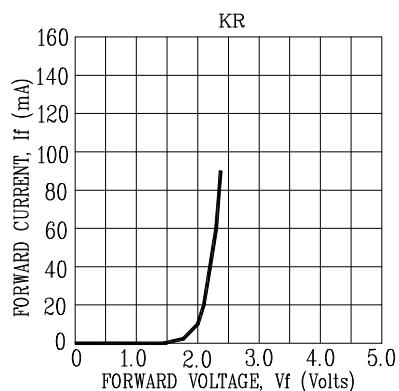
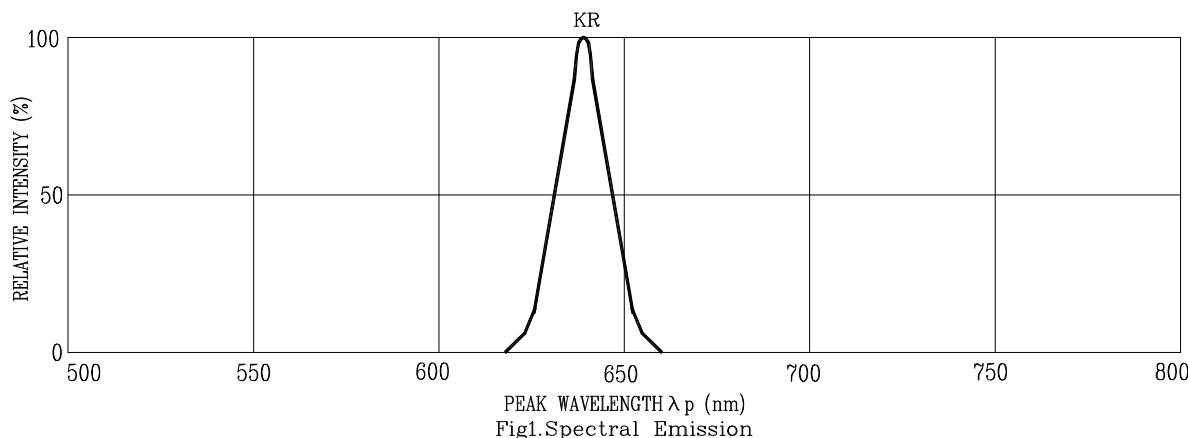
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Luminous Intensity	IV		T.B.D		mcd	$I_F=20mA$
Peak Emission Wavelength	λ_p		639		nm	$I_F=20mA$
Spectral Line Half-Width	$\Delta\lambda$		20		nm	$I_F=20mA$
Dominant Wavelength	λ_d		631		nm	$I_F=20mA$
Forward Voltage Per Segment	V_F		2.0	2.6	V	$I_F=20mA$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

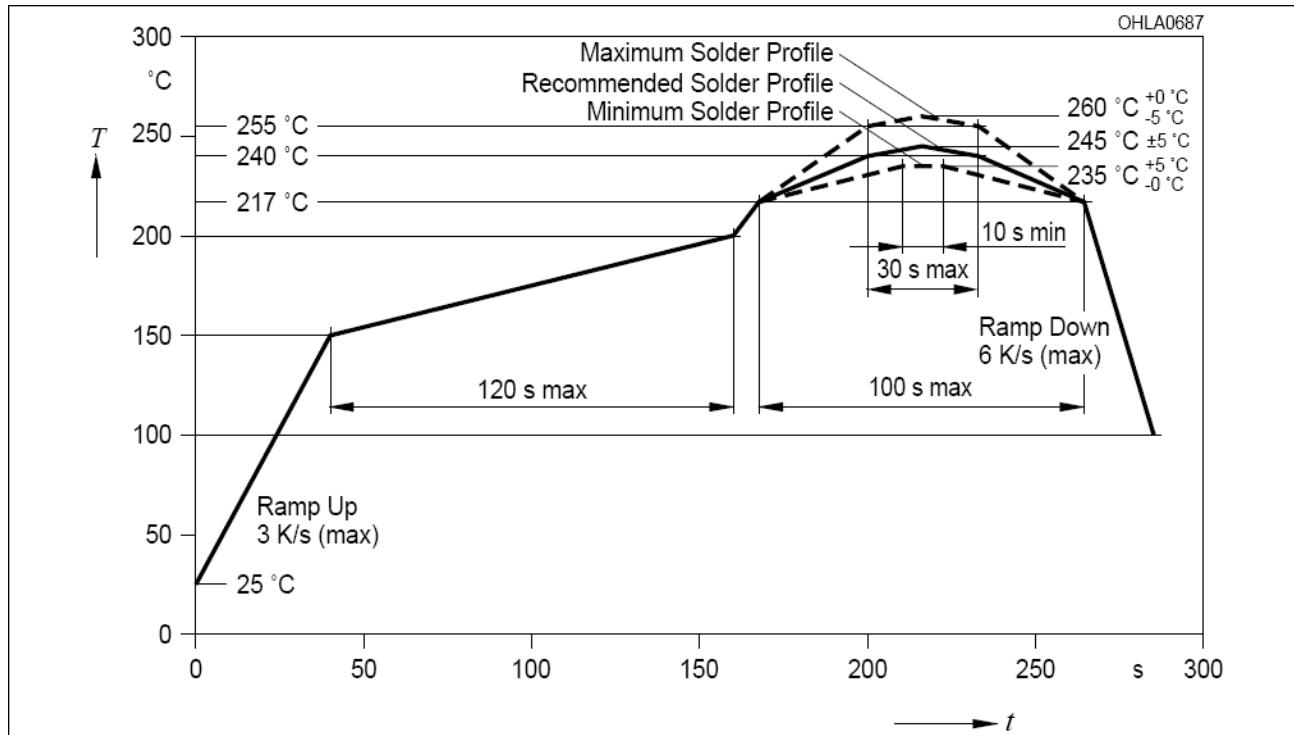
(25°C Ambient Temperature Unless Otherwise Noted)



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)

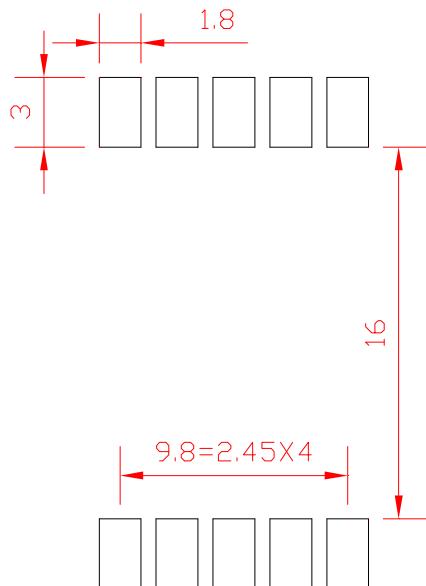


Note:

1. Recommended soldering condition:

Reflow Soldering (Two times only)		Soldering Iron (One time only)	
Pre-heat:	120~150°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.

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

T.B.D.

PACKING CARRIER DIMENSIONS

1. Taping parts:

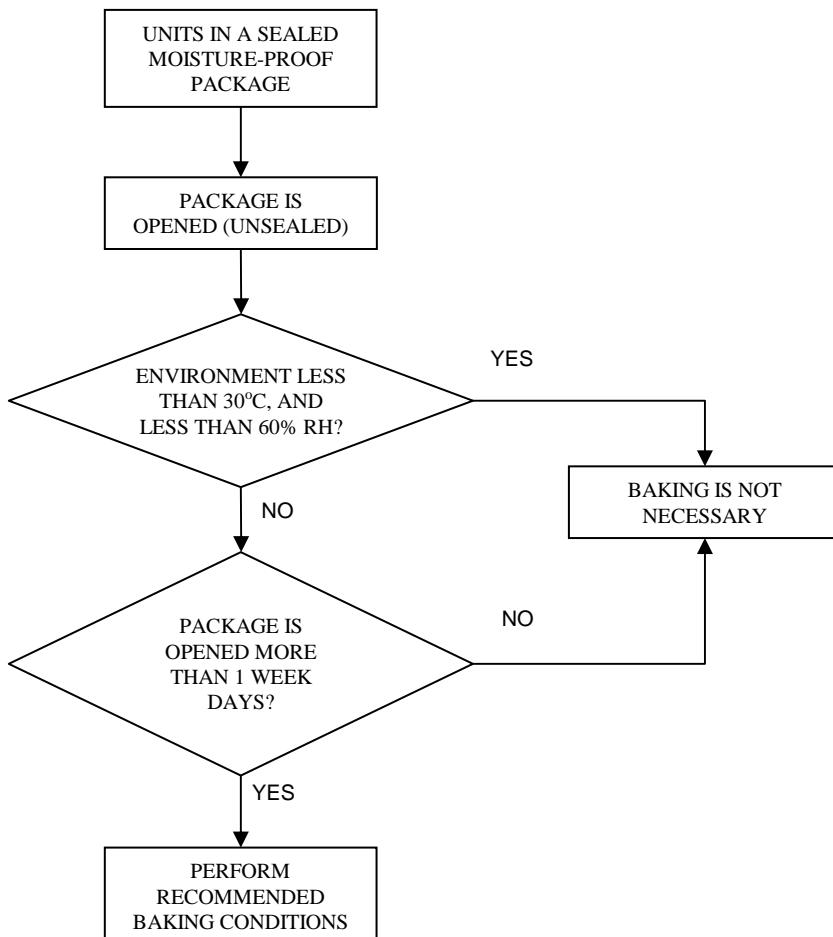
T.B.D.

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.

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