



LED Display

Product Data Sheet

LTP-3784AKS

Spec No.: DS30-2007-0090

Effective Date: 06/30/2010

Revision: A

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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LED DISPLAY**LTP-3784AKS**
DATA SHEET

<u>Item</u>	<u>Description</u>	<u>By</u>
1	Original Spec	<u>Phanomkorn J.</u>

FEATURES

- * 0.54 INCH (13.8 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.
- * **LEAD-FREE PACKAGE (ACCORDING TO ROHS)**

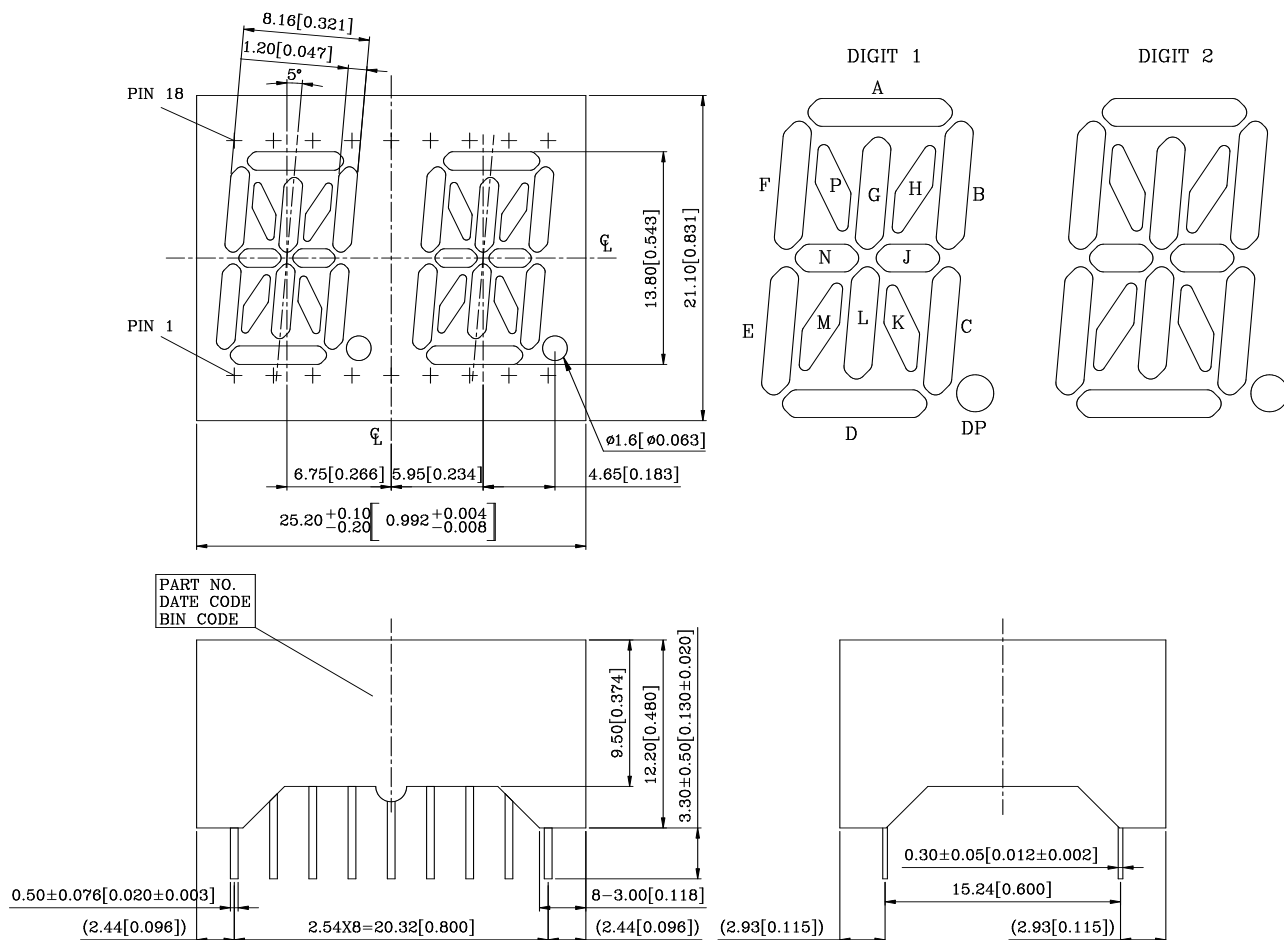
DESCRIPTION

The LTP-3784AKS is a 0.54 inch (13.8 mm) digit height dual digit 14-segment alphanumeric display. This device utilizes AlInGaP Yellow LED chips, which are made from AlInGaP on a non-transparent GaAs substrate, and has a gray face and white segments.

DEVICE

PART NO.	DESCRIPTION
AlInGaP Yellow	Dual Common Cathode
LTP-3784AKS	Rt. Hand Decimal

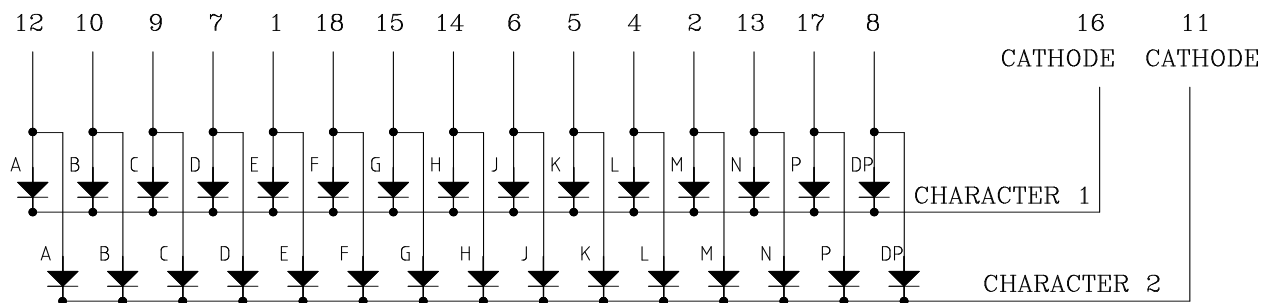
PACKAGE DIMENSIONS



NOTES: 1. All dimensions are in millimeters. Tolerances are ± 0.25 mm unless otherwise note.

2. Pin tip's shift tolerance is ± 0.4 mm.

INTERNAL CIRCUIT DIAGRAM



PIN CONNECTION

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

ABSOLUTE MAXIMUM RATING AT $T_A=25^{\circ}\text{C}$

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation Per Segment	70	mW
Peak Forward Current Per Segment (1/10 Duty Cycle, 1.0ms Pulse Width)	60	mA
Continuous Forward Current Per Segment	25	mA
Derating Linear From 25 ⁰ C Per Segment	0.33	mA/ ⁰ C
Reverse Voltage Per Segment	5	V
Operating Temperature Range	-35 ⁰ C to +105 ⁰ C	
Storage Temperature Range	-35 ⁰ C to +105 ⁰ C	
Soldering Conditions: 1/16 inch below seating plane for 3 seconds at 260 ⁰ C or of temperature unit (during assembly) not over max. temperature rating above.		

ELECTRICAL / OPTICAL CHARACTERISTICS AT $T_A=25^{\circ}\text{C}$

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_v	200	1000		μcd	$I_F=1\text{mA}$
Peak Emission Wavelength	λ_p		588		nm	$I_F=20\text{mA}$
Spectral Line Half-Width	$\Delta\lambda$		15		nm	$I_F=20\text{mA}$
Dominant Wavelength	λ_d		587		nm	$I_F=20\text{mA}$
Forward Voltage Per Segment	V_F		2.05	2.6	V	$I_F=20\text{mA}$
Reverse Current Per Segment	I_R			100	μA	$V_R=5\text{V}$
Luminous Intensity Matching Ratio (Similar Light Area)	$I_v\text{-m}$			2:1		$I_F=1\text{mA}$

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

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

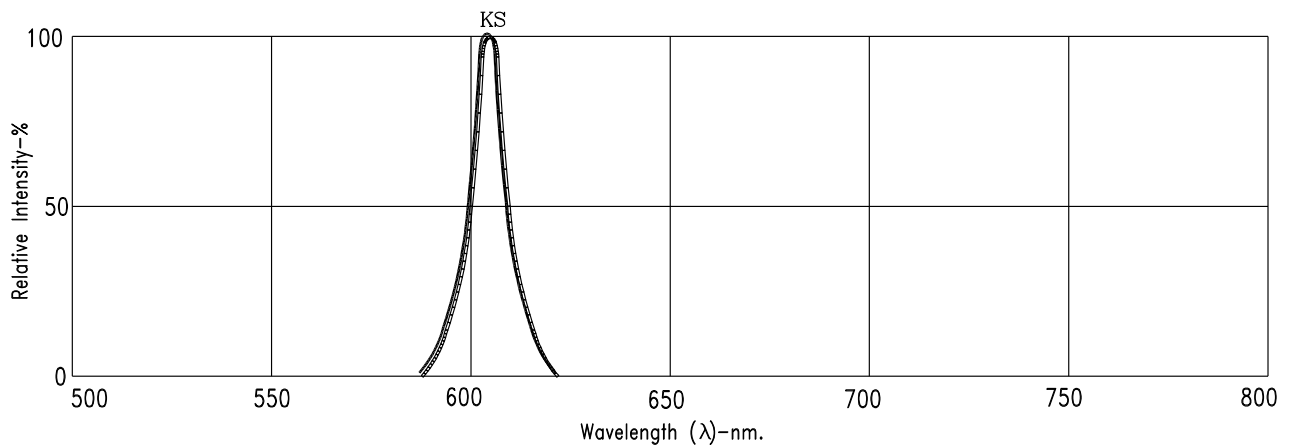


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

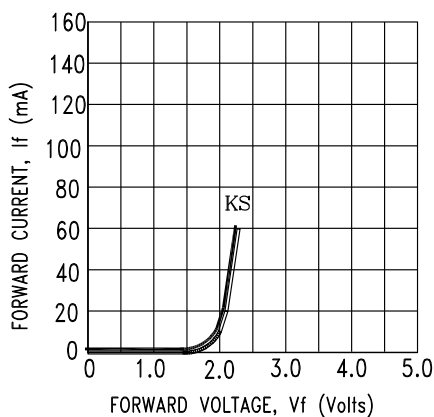


Fig2. Forward Current vs. Forward Voltage

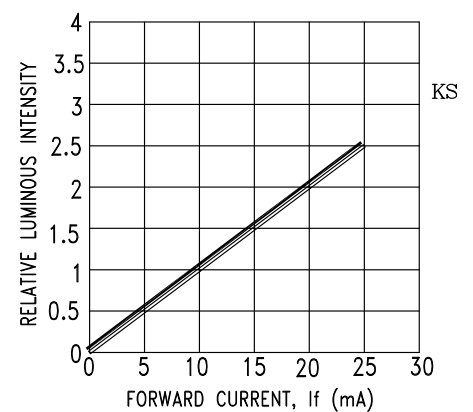


Fig3. Relative Luminous Intensity vs. DC Forward Current

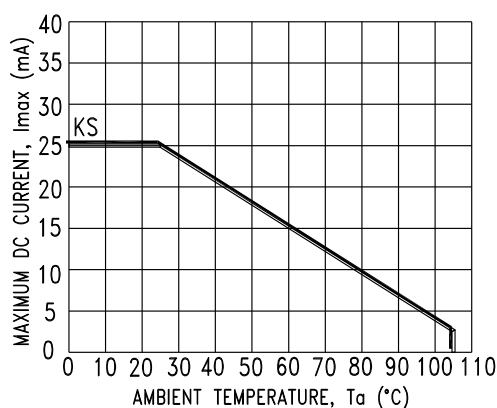


Fig4. Maximum Allowable DC Current vs. Ambient Temperature

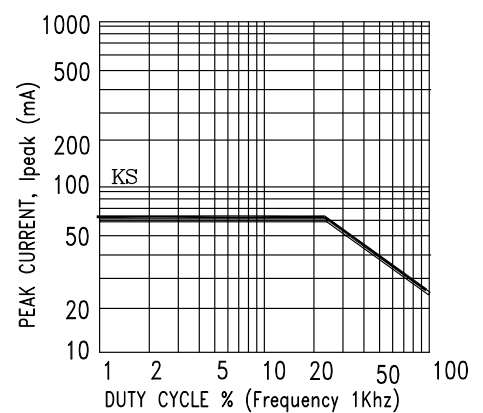


Fig5. Maximum Peak Current vs. Duty Cycle %

NOTE : KS=AlInGaP YEELOW