LITEON®
OPTOELECTRONICS

LED Display

Product Data Sheet

LTS-546AKS

Spec No.: DS30-2007-0198

Effective Date: 12/18/2007

Revision: -

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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LED DISPLAY

LTS-546AKS
DATASHEET

Rev	Description	By
01	ORIGINAL	WARIN Oct 3 .2007
Above data for PD and Customer tracking only		
-	NPPR Received and Up load on OPNC	WARIN Dec 4 .2007

SPEC. NO.: DS30-2007-0198

D A T E : Dec 4 .2007

REV. NO. : -

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FEATURES

∗0.52 INCH (13.2-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)**

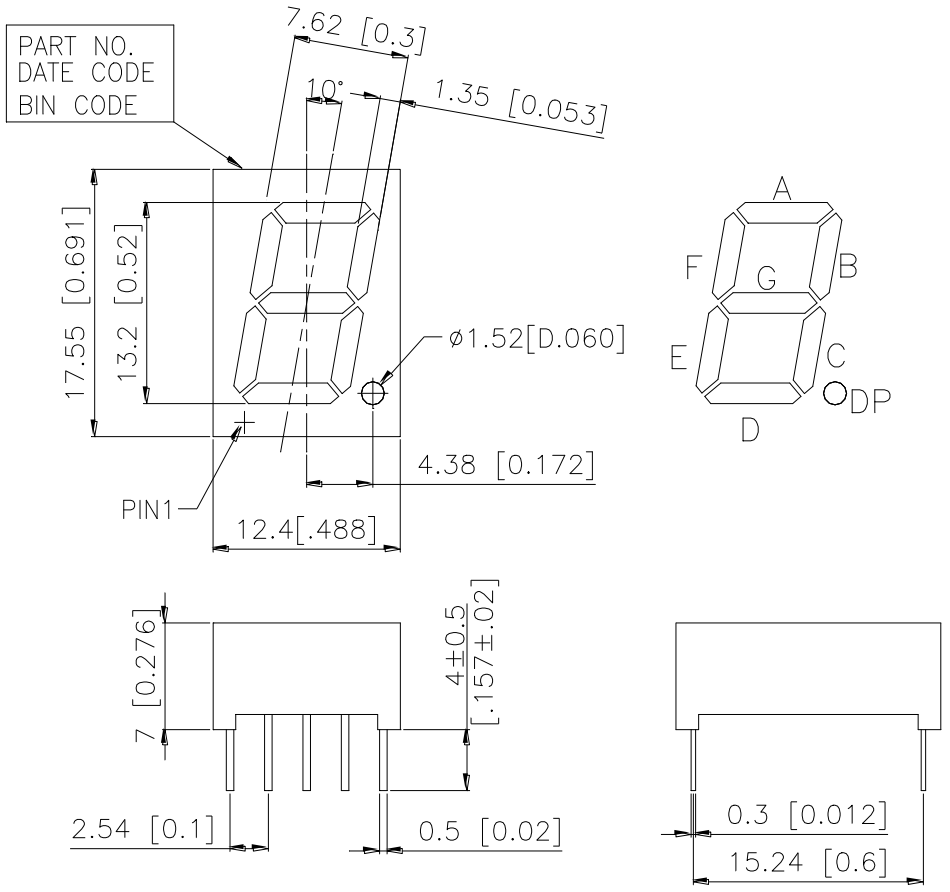
DESCRIPTION

The LTS-546AKS is a 0.52-inch (13.2-mm) height single digit display. This device uses AS-AlInGaP Yellow LED chips (AlInGaP epi on GaAs substrate)., and has a gray face and white segments.

DEVICE

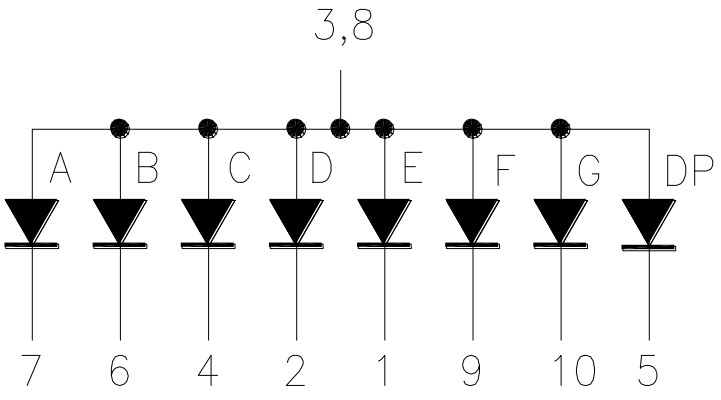
PART NO.	DESCRIPTION
AlInGaP Yellow LED	Common Anode,
LTS-546AKS	Rt. Hand decimal

PACKAGE DIMENSIONS



NOTES: 1.All dimensions are in millimeters. Tolerances are ± 0.25-mm (0.01“) unless otherwise noted.
2.Pin tip’s shift are ± 0.40 mm .

INTERNAL CIRCUIT DIAGRAM



PIN CONNECTION

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

ABSOLUTE MAXIMUM RATING

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation Per Chip	70	mW
Peak Forward Current Per Chip (Frequency 1Khz, 18% duty cycle)	60	mA
Continuous Forward Current Per Chip	25	mA
Forward Current Derating from 25^0C	0.33	mA/℃
Reverse Voltage Per Chip	5	V
Operating Temperature Range	-35℃ to +105℃	
Storage Temperature Range	-35℃ to +105℃	
Soldering Conditions: 1/16 inch below seating plane for 3 seconds at 260^0C or of temperature unit (during assembly) not over max. temperature rating above.		

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25^oC

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity Per Segment	I_V	500	1300		μcd	I_F =1mA
Peak Emission Wavelength	λp		588		nm	I_F=20mA
Spectral Line Half-Width	Δλ		15		nm	I_F=20mA
Dominant Wavelength	λd		587		nm	I_F=20mA
Forward Voltage Per Segment	V_F		2.05	2.6	V	I_F=20mA
Reverse Current Per Chip	I_R			100	μA	V_R=5V
Luminous Intensity Matching Ratio (Similar Light Area)	I_V-m			2:1		I_F=1mA

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)

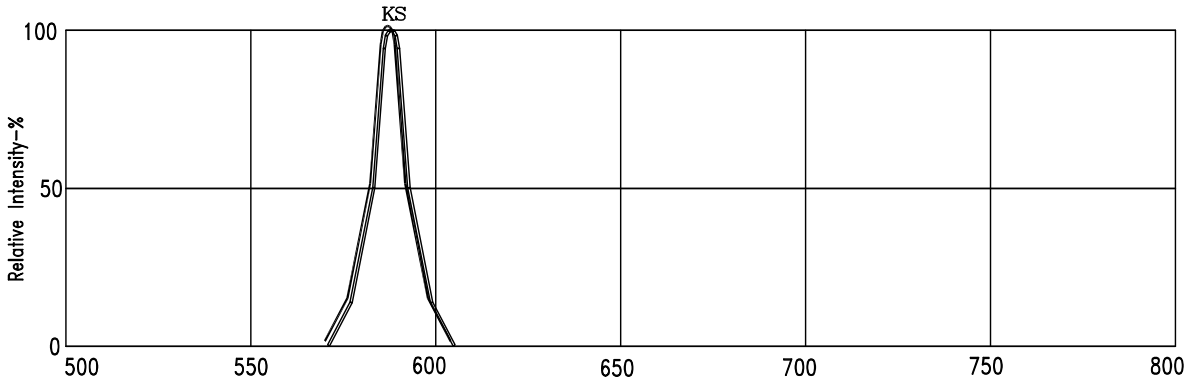


Fig1.Spectral Emission

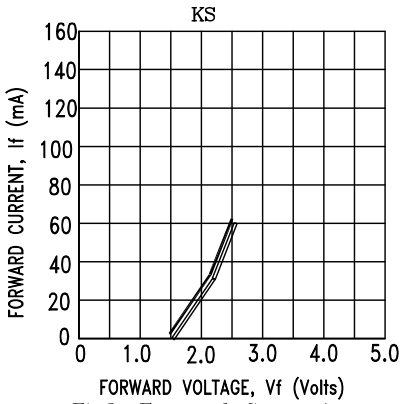


Fig2. Forward Current vs. Forward Voltage

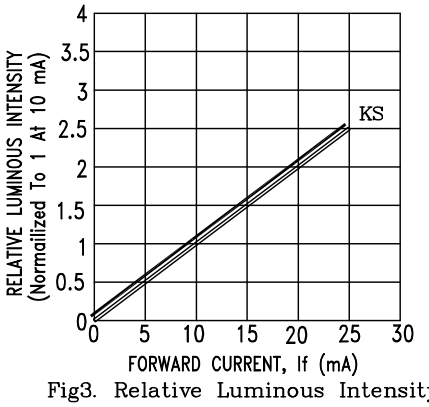


Fig3. Relative Luminous Intensity vs. DC Forward Current

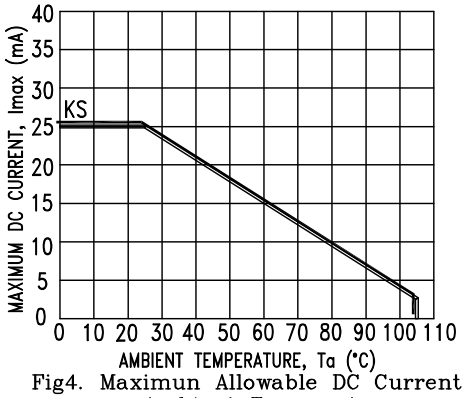


Fig4. Maximun Allowable DC Current vs. Ambient Temperature

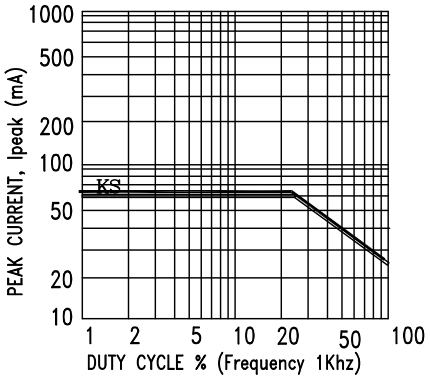


Fig5. Maximum Peak Current vs. Duty Cycle %

NOTE : KS=AlInGaP YELLOW