LITEON®
OPTOELECTRONICS

LED Display

Product Data Sheet

LTS-546AKF

Spec No.: DS30-2010-0245

Effective Date: 11/02/2010

Revision: -

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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LED DISPLAY

LTS-546AKF
DATASHEET

Item	Description	By	DATE
-	New Spec	Eason Lin	07/27/2010

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)**

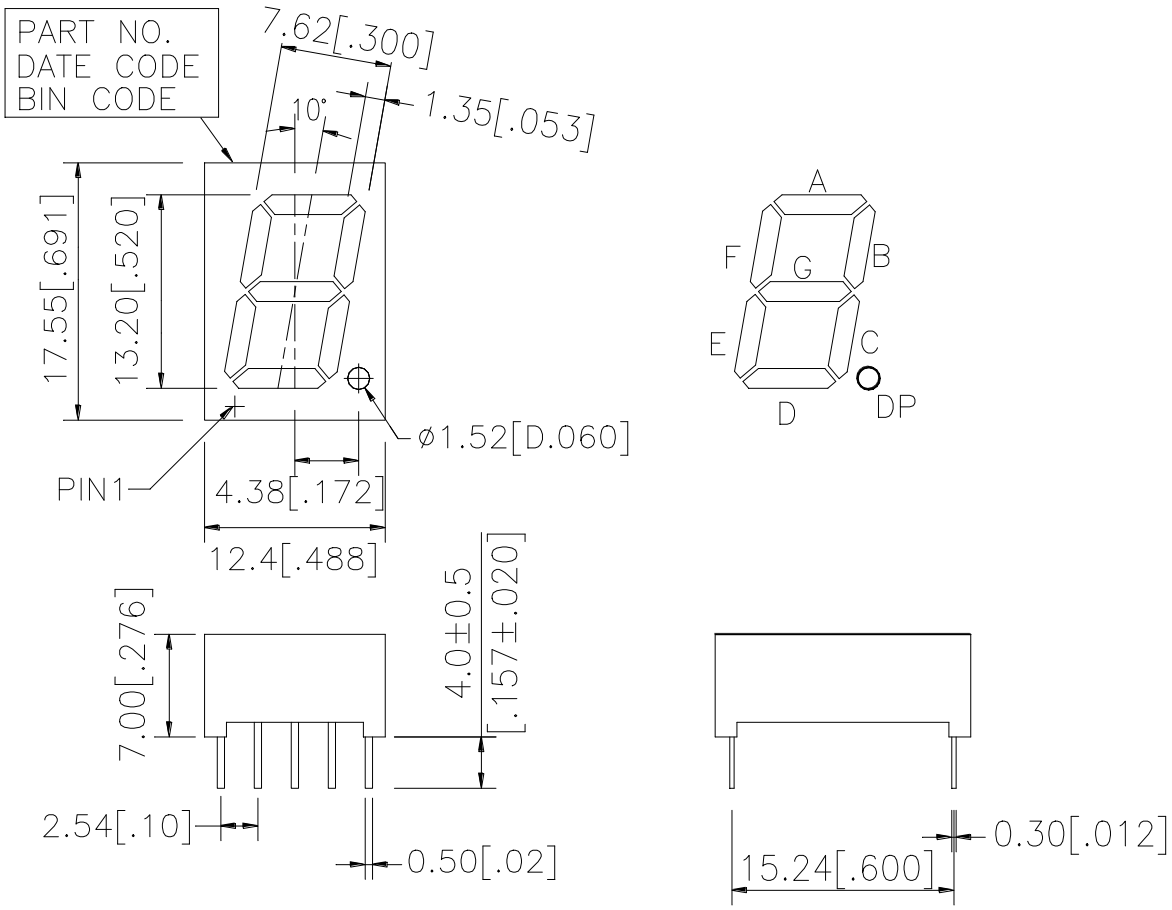
DESCRIPTION

The LTS-546AKF is a 0.52 inch (13.2 mm) digit height single digit seven-segment display. This device uses AlInGaP Yellow Orange LED chips, which are made from AlInGaP on a non-transparent GaAs substrate. The display has gray face and white segments.

DEVICE

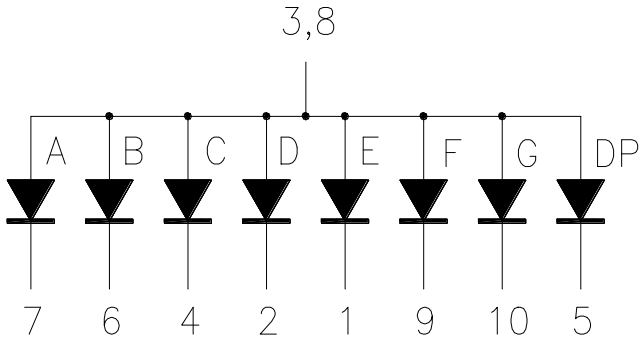
PART NO.	DESCRIPTION
AlInGaP Yellow Orange	Common Anode
LTS-546AKF	Rt. Hand Decimal

PACKAGE DIMENSIONS



NOTES: All dimensions are in millimeters. Tolerances are ± 0.25 mm (0.01“) unless otherwise noted.

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 Segment	70	mW
Peak Forward Current Per Segment (Frequency 1Khz, 10% duty cycle)	60	mA
Continuous Forward Current Per Segment Forward Current Derating from 25℃	25 0.33	mA mA/℃
Operating Temperature Range	-35℃ to +85℃	
Storage Temperature Range	-35℃ to +85℃	
Soldering Conditions : 1/16 inch below seating plane for 3 seconds at 260^0C		

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	500	1400		μcd	I_F=1mA
Peak Emission Wavelength	λp		611		nm	I_F=20mA
Spectral Line Half-Width	Δλ		17		nm	I_F=20mA
Dominant Wavelength	λd		605		nm	I_F=20mA
Forward Voltage Per Segment	V_F		2.05	2.6	V	I_F=20mA
Reverse Current Per Segment(2)	I_R			100	μA	V_R=5V
Luminous Intensity Matching Ratio (Similar Light Area)	I_V-m			2:1		I_F=1mA

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)

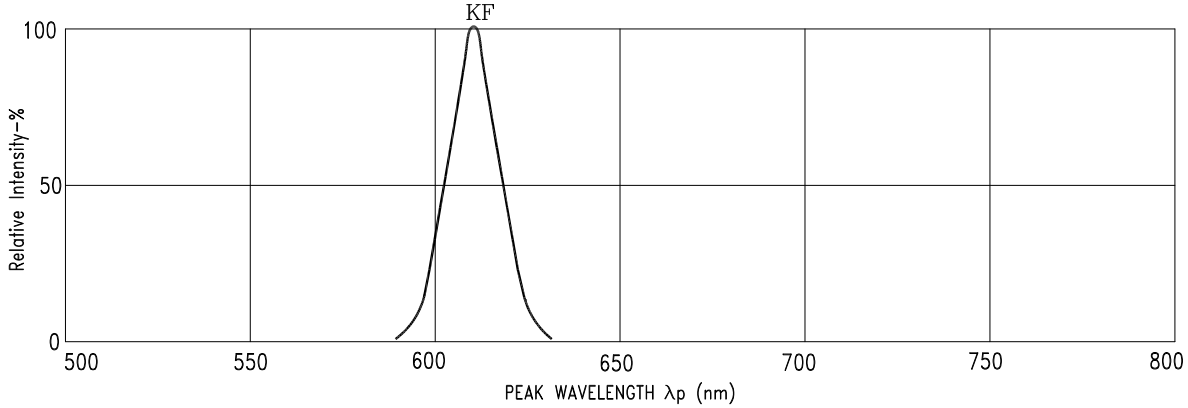


Fig1.Spectral Emission

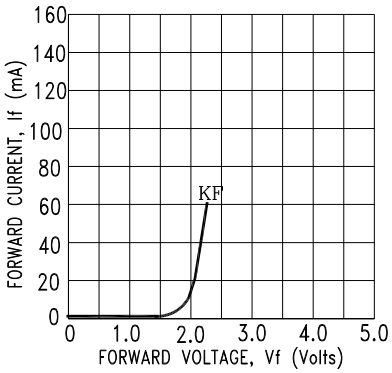


Fig2. Forward Current vs. Forward Voltage

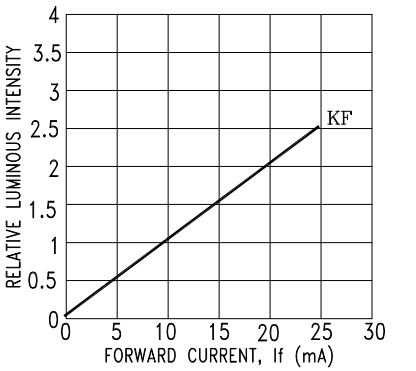


Fig3. Relative Luminous Intensity vs. DC Forward Current

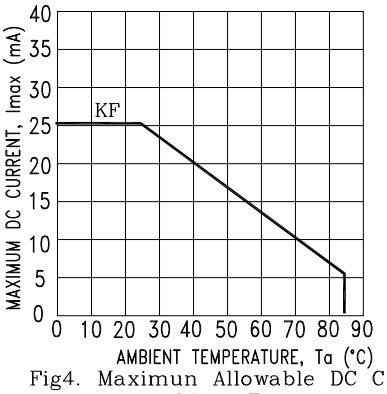


Fig4. Maximun Allowable DC Current vs. Ambient Temperature

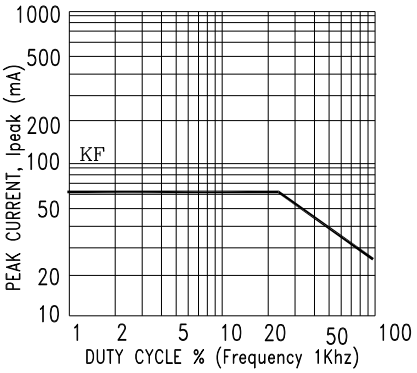


Fig5. Maximum Peak Current vs. Duty Cycle %

NOTE : KF=AlInGaP YELLOW ORANGE