LITEON®
OPTOELECTRONICS

LED Display

Product Data Sheet

LTC-561KF

Spec No.: DS30-2006-041

Effective Date: 07/16/2008

Revision: A

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

LITE-ON Technology Corp. / Optoelectronics
No.90,Chien 1 Road, Chung Ho, New Taipei City 23585, Taiwan, R.O.C.
Tel: 886-2-2222-6181 Fax: 886-2-2221-1948 / 886-2-2221-0660
http://www.liteon.com/opto

LED DISPLAY

LTC-561KF

DATA SHEET

Rev	Description	By
01	ORIGINAL (Refer to contour drawing Revision (-))	PRAPHAN 04/05/2006
(Above data for PD and Customer tracking only)		
-	NPPR Received and Upload on OPNC	PRAPHAN 04/05/2006
A	Change average Luminous Intensity Per Segment test condition from 1mA to 20mA	KITTISAK B. July 04/08

SPEC. NO.: **DS30-2006-041**

D A T E : **July 04/08**

REV. NO. : A

PAGE NO. : **0 OF 5**

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.
- **LEAD-FREE PACKAGE (ACCORDING TO ROHS).**

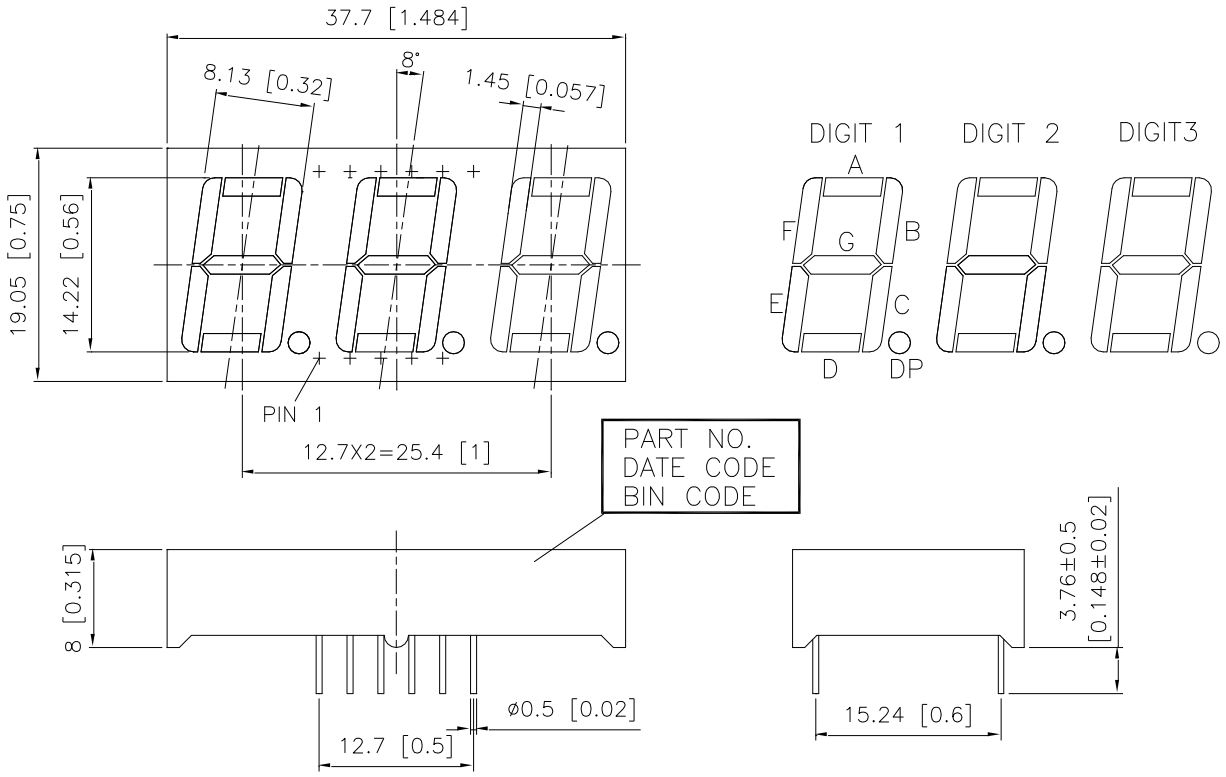
DESCRIPTION

The LTC-561KF is a 0.56 inch (14.22 mm) digit height triple digit seven-segment display. This device AS-AlInGaP Yellow Orange LED chips (AlInGaP epi on GaAs substrate). The display has gray face and white segments.

DEVICE

PART NO.	DESCRIPTION
AlInGaP Yellow Orange	Multiplex Common Anode
LTC-561KF	Rt. Hand Decimal

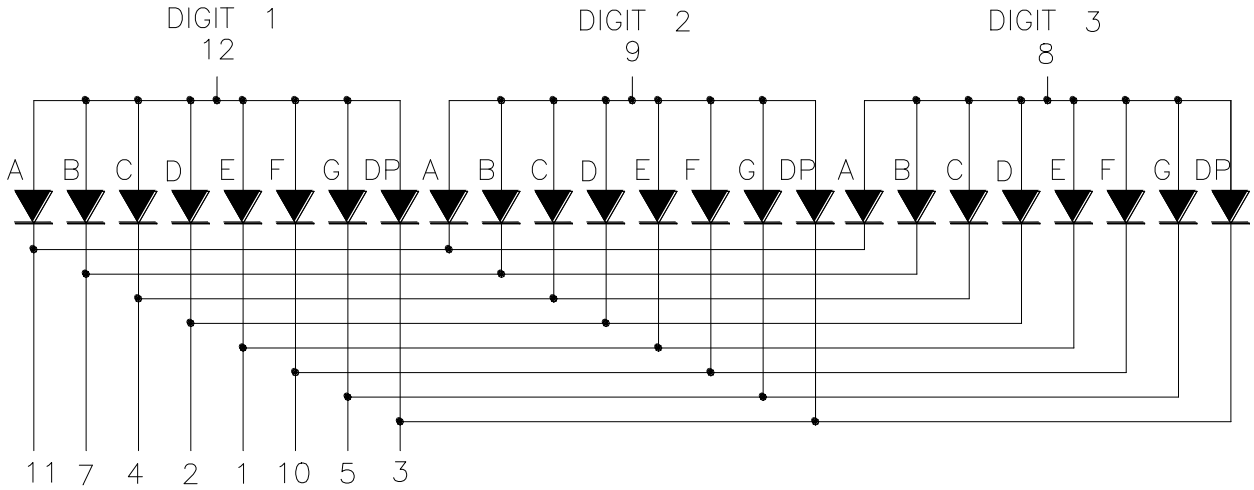
PACKAGE DIMENSIONS



NOTES: 1.All dimensions are in millimeters. Tolerances are± 0.25 mm (0.01“) unless otherwise noted.

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

INTERNAL CIRCUIT DIAGRAM



PIN CONNECTION

NO.	CONNECTION
1	CATHODE E
2	CATHODE D
3	CATHODE D.P.
4	CATHODE C
5	CATHODE G
6	NO CONNECTION
7	CATHODE B
8	COMMON ANODE, DIGIT 3
9	COMMON ANODE, DIGIT 2
10	CATHODE F
11	CATHODE A
12	COMMON ANODE , DIGIT 1

ABSOLUTE MAXIMUM RATING AT Ta=25°C

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	25	mA
Forward Current Derating from 25°C	0.28	mA/°C
Reverse Voltage Per Segment	5	V
Operating Temperature Range	-35°C to +105C	
Storage Temperature Range	-35°C to +105C	
Solder Temperature 1/16 inch Below Seating Plane for 3 Seconds at 260°C., or temperature of unit (during assembly) not over max. temperature rating above .		

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITION
Average Luminous Intensity Per Segment	I_V	43750	70000		μcd	I_F = 20mA
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	I_R			100	μA	V_R = 5V
Luminous Intensity Matching Ratio (Similar Light Area)	I_V-m			2 : 1		I_F = 20mA

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)

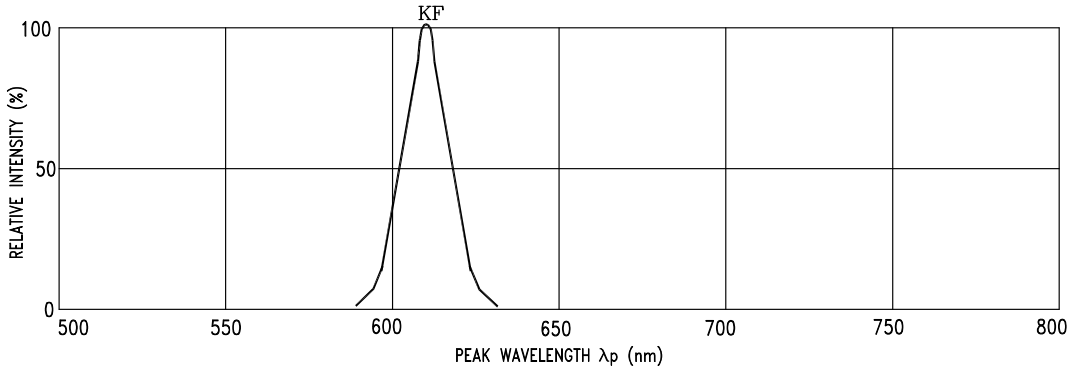


Fig1.Spectral Emission

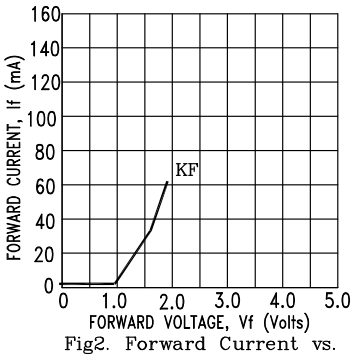


Fig2. Forward Current vs. Forward Voltage

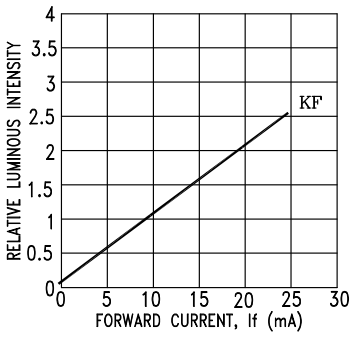


Fig3. Relative Luminous Intensity vs. DC Forward Current

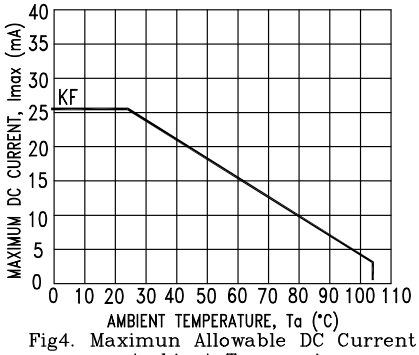


Fig4. Maximun Allowable DC Current vs. Ambient Temperature

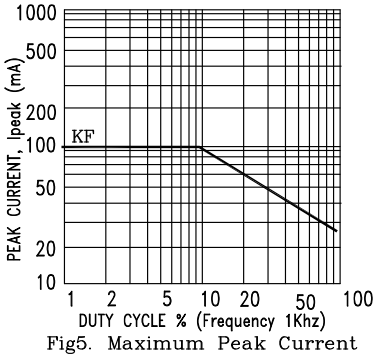


Fig5. Maximum Peak Current vs. Duty Cycle %

NOTE : JF=AlInGaP YELLOW ORANGE