LITEON®
OPTOELECTRONICS

LED Display

Product Data Sheet

LTS-10804KF

Spec No.: DS30-2009-0133

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Revision: A

LITE-ON DCC

RELEASE

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LED DISPLAY

LTS-10804KF

Rev	Description	By	Date
01	Preliminary SPEC	MINALIN	09-Sep-2009
Above data for PD and Customer tracking only			
-	NPPR Received and Upload on system	MINALIN	09-Sep-2009
A	Add cosmetics spec as note on page 3 of 6 Add Operating and Storage Temperature Range to -35°C to +105°C And VF	ANON/ James	26-Feb-2014

LED DISPLAY
LTS-10804KF

1. Description

The LTS-10804KF is a 1.0 inch (25.4 mm) digit height single digit low current seven-segment display. This device uses AS-AlInGaP yellow orange LED chips (AlInGaP epi on GaAs substrate). The display has a black face and white segments.

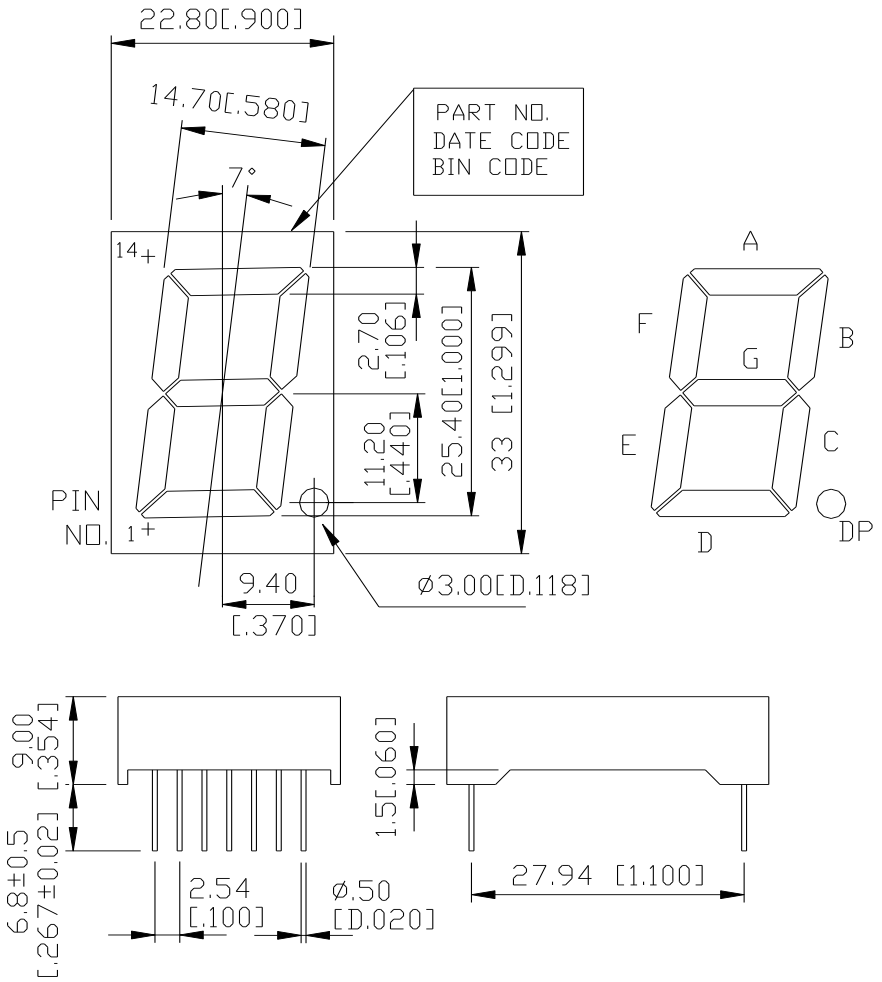
1.1 Features

- 1.0 inch (25.40 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)

1.2 Device

Part No	Description
AlInGaP Yellow Orange	COMMON ANODE
LTS-10804KF	RT. HAND DECIMAL

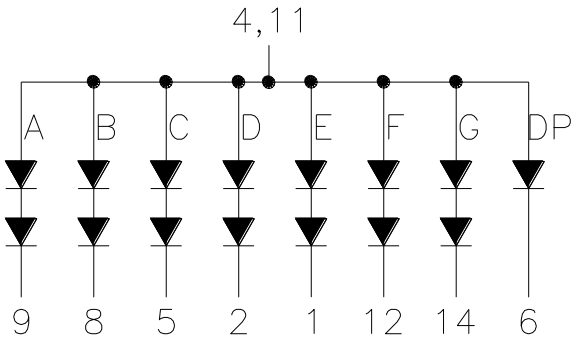
2. Package Dimensions



Notes :

1. All dimensions are in millimeters. Tolerances are ± 0.25mm (0.01“) unless otherwise noted.
2. Foreign materials on segment ≦20mils
3. Bubble in segment ≦20mils
4. Bending≦1% of reflector length
5. Ink contamination (surface) ≦20mils
6. Pin tip’s shift tolerance is ± 0.40 mm.
7. Recommend the best pcb hole : diameter 1.00 mm

3. Internal Circuit Diagram



4. Pin Connection

No	Connection
1	CATHODE E
2	CATHODE D
3	NO PIN
4	COMMON ANODE
5	CATHODE C
6	CATHODE D.P.
7	NO PIN
8	CATHODE B
9	CATHODE A
10	NO PIN
11	COMMON ANODE
12	CATHODE F
13	NO PIN
14	CATHODE G

5. Rating and Characteristics

5.1. Absolute Maximum Rating at Ta=25°C

Parameter	Maximum Rating	Unit
Power Dissipation Per Segment	134	mW
Peak Forward Current Per Segment (1/10 Duty Cycle, 0.1ms Pulse Width)	60	mA
Continuous Forward Current Per Segment Derating Linear From 25°C Per Segment	25 0.33	mA mA/°C
Operating Temperature Range	-35°C to +105°C	
Storage Temperature Range	-35°C to +105°C	
Solder Condition: 1/16 inch below seating plane for 3 seconds at 260°C or temperature of unit (during assembly) not over max. temperature rating above		

5.2.Electrical / Optical Characteristics at Ta=25°C

Parameter	Symbol	MIN.	TYP.	MAX.	Unit	Test Condition
Average Luminous Intensity Per Segment	IV	420	1400		μcd	IF=1mA
Peak Emission Wavelength	λp		611		nm	IF=20mA
Spectral Line Half-Width	Δλ		17		nm	IF=20mA
Dominant Wavelength	λd		605		nm	IF=20mA
Forward Voltage Per segment(DP)	VF		4.20 (2.1)	5.20 (2.6)	V	IF=20mA
Reverse Current Per Segment (DP) (*2)	IR			100	μA	VR=10V (5V)
Luminous Intensity Matching Ratio (Similar Light Area)	IV-m			2:1		IF=10mA

Notes :

1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commission International De L'Eclariage) eye-response curve
2. Reverse voltage is only for IR test. It cannot continue to operate at this situation
3. Cross talk specification $\leq$ 1.0%

5.3. Typical Electrical / Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)

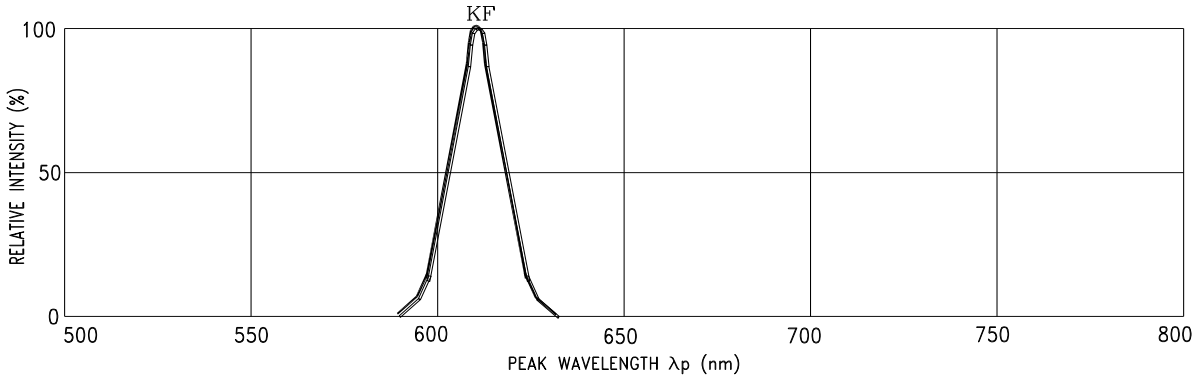


Fig1.Spectral Emission

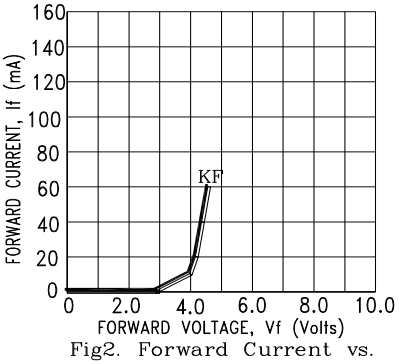


Fig2. Forward Current vs. Forward Voltage

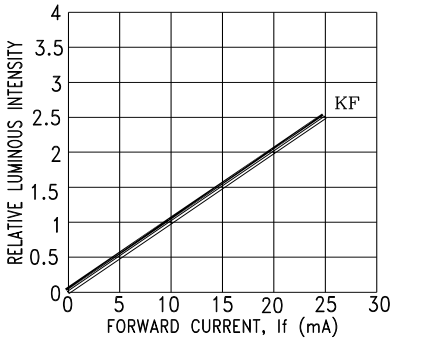


Fig3. Relative Luminous Intensity vs. DC Forward Current

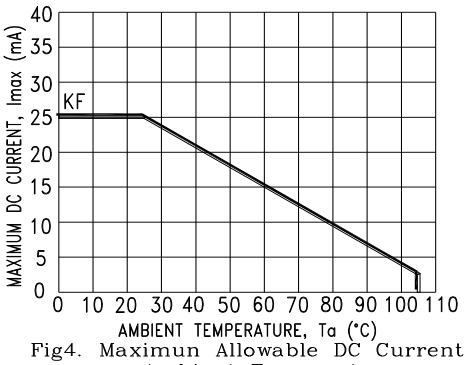


Fig4. Maximun Allowable DC Current vs. Ambient Temperature

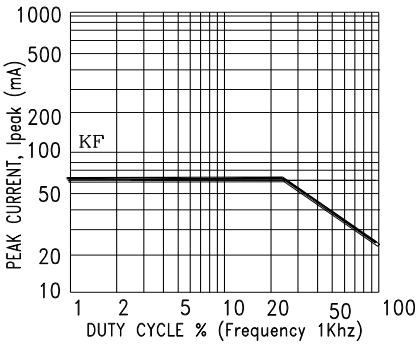


Fig5. Maximum Peak Current vs. Duty Cycle %

NOTE : KF=AlInGaP YELLOW ORANGE