



LED Display

Product Data Sheet

LTC-3698KF

Spec No.: DS30-2010-0282

Effective Date: 11/28/2012

Revision: B

LITE-ON DCC

RELEASE

LED DISPLAY

LTC-3698KF
DATA SHEET

ITEM	DESCRIPTION	ISSUER	DATE
1	New	Reo	11/09/2010
2	1.Change the height 15.8 to 15.3 mm 2.Change spacer drawing.	Reo	12/08/2010
3	Change Dice from KR to KF	Reo	12/09/2010
4	4.1 Modify Luminous Intensity Matching Ratio from 2:1 to 1.6:1 in Page 6 4.2 Modify Spacer structure in Page 3 4.3 Add Liteon Spec. Note in Page 3	Reo	08/07/2012
5	Revised Package Dimensions in Page 3	Reo	11/08/2012

FEATURES

- * 0.39 inch (9.8 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)**

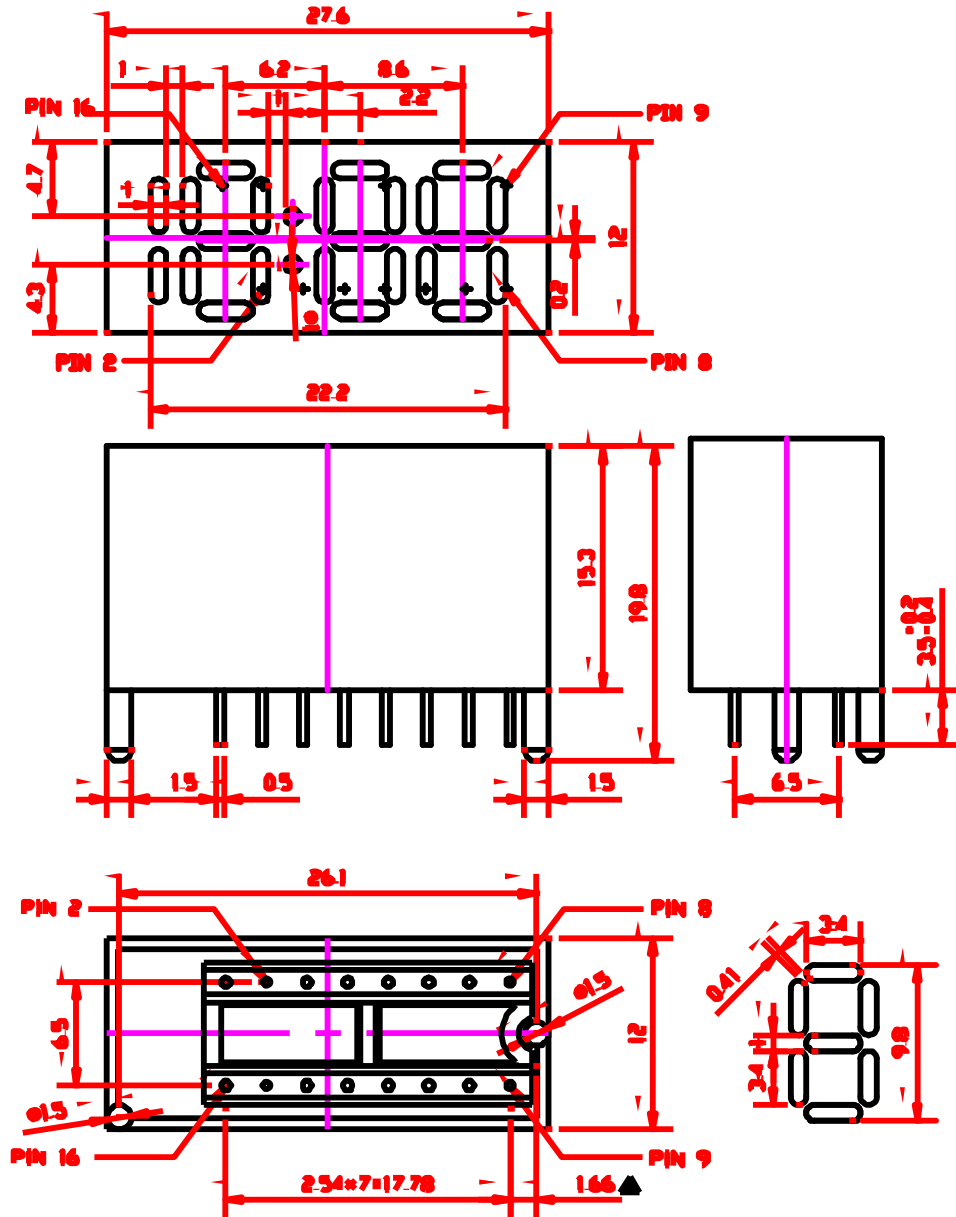
DESCRIPTION

The LTC-3698KF is a 0.39inch (9.8 mm) height digit display. The devices utilize AlInGaP yellow orange LED chips, which are made from AlInGaP on a non-transparent GaAs substrate, and has a light gray face and white segments.

DEVICE

PART NO.	DESCRIPTION
AlInGaP Yellow Orange	COMMON ANODE
LTC-3698KF	

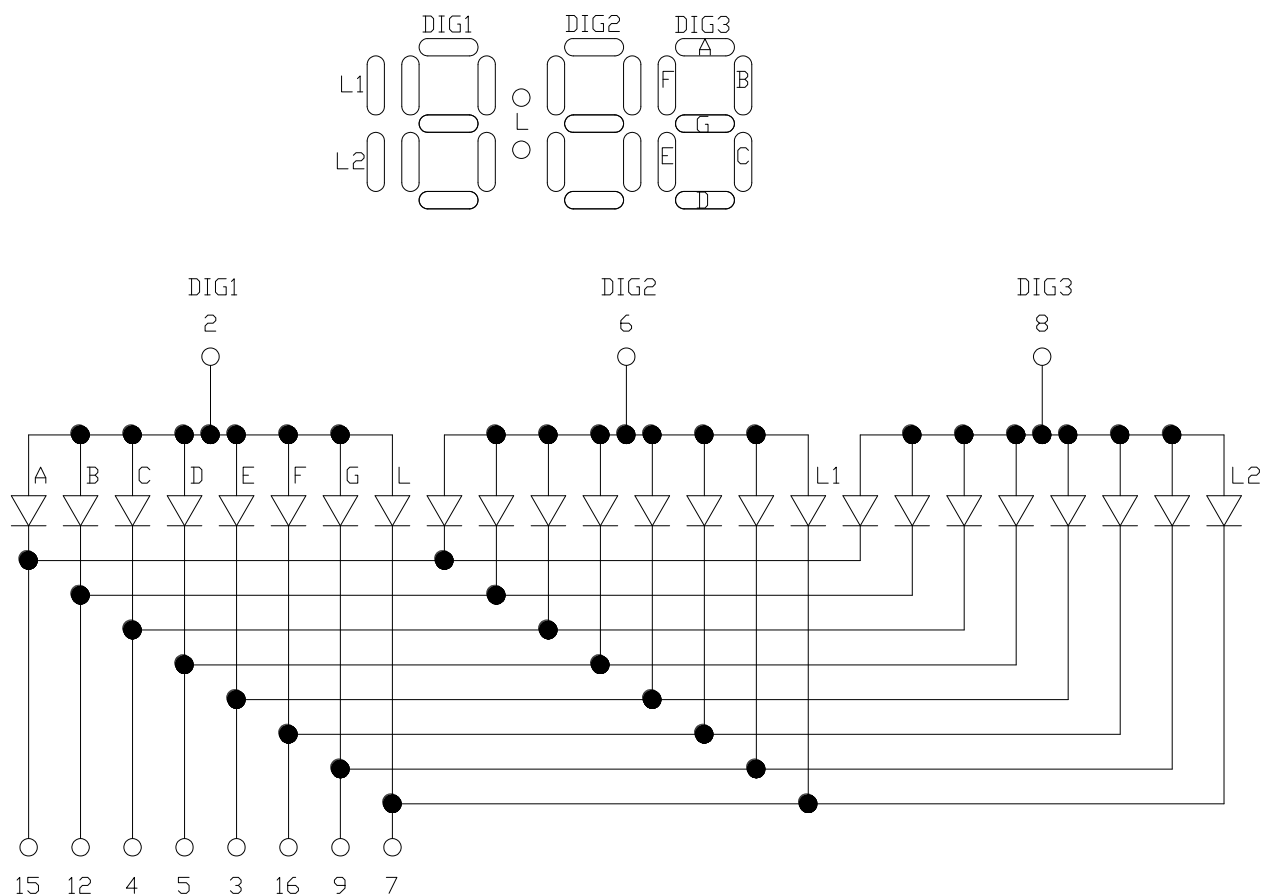
PACKAGE DIMENSIONS



NOTES:

1. All dimensions are in millimeters. Tolerances are $\pm 0.25\text{mm}$ (0.01") unless otherwise noted.
2. Pin tip's shift tolerance is $\pm 0.4\text{mm}$.
3. Foreign material on segment $\leq 10\text{mils}$
4. Ink contamination (surface) $\leq 20\text{mils}$
5. Bending $\leq 1\%$ of reflector length
6. Bubble in segment $\leq 10\text{mils}$
7. Recommend the best pcb hole : diameter 1.0mm

INTERNAL CIRCUIT DIAGRAM



PIN CONNECTION

No.	CONNECTION
1	NO CONNECTION AND NO PIN
2	COMMON ANODE (DIGIT 1)
3	CATHODE E
4	CATHODE C
5	CATHODE D
6	COMMON ANODE (DIGIT 2)
7	CATHODE L / L1 / L2
8	COMMON ANODE (DIGIT 3)
9	CATHODE G
10	NO CONNECTION AND NO PIN
11	NO CONNECTION AND NO PIN
12	CATHODE B
13	NO CONNECTION AND NO PIN
14	NO CONNECTION AND NO PIN
15	CATHODE A
16	CATHODE F

Property of Lite-On Only
ABSOLUTE MAXIMUM RATING AT T_A=25°C

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation Per Chip	70	mW
Peak Forward Current Per Chip (1/10 Duty Cycle, 0.1ms Pulse Width)	60	mA
Continuous Forward Current Per Chip	25	mA
Derating Linear From 25°C Per Chip	0.28	mA/°C
Operating Temperature Range	-35°C to +105°C	
Storage Temperature Range	-35°C to +105°C	
Solder Temperature: max 260°C for max 3sec at 1.6mm below seating plane		

TYPICAL / OPTICAL CHARACTERISTICS AT T_A=25°C

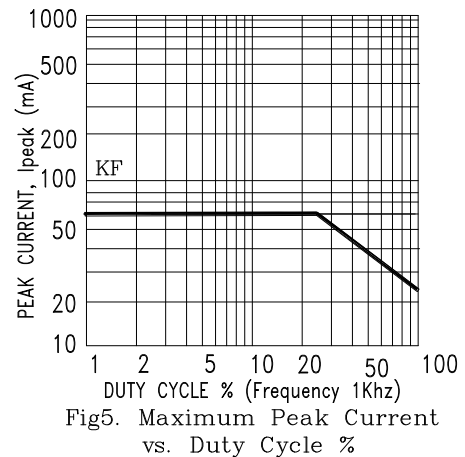
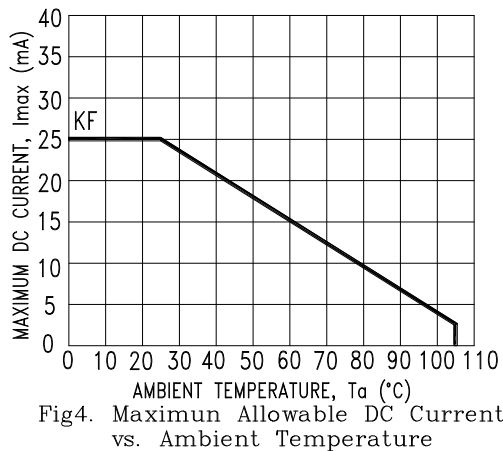
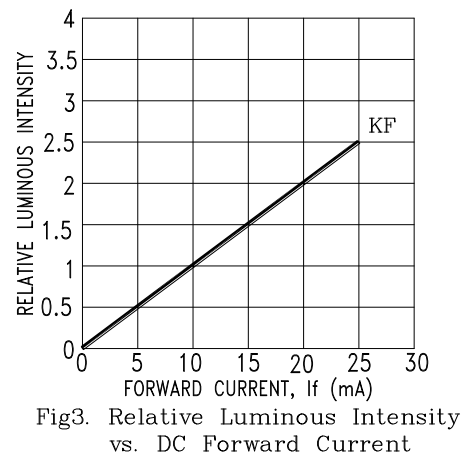
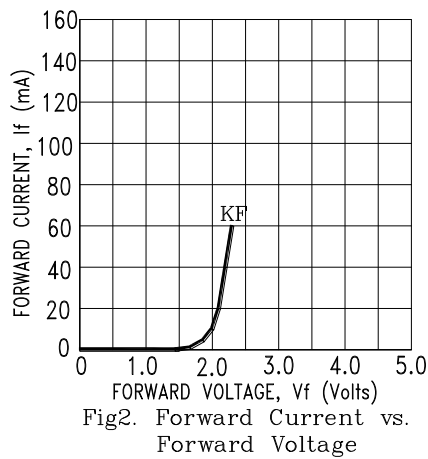
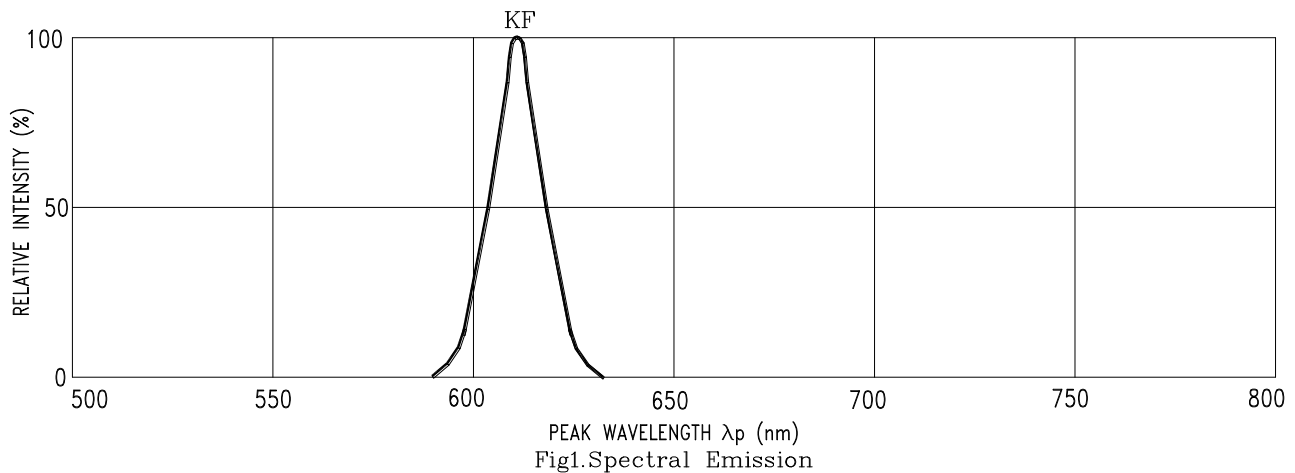
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I _v	500	1300		μcd	I _F =1mA
Peak Emission Wavelength	λ _p		611		nm	I _F =20mA
Spectral Line Half-Width	Δλ		17		nm	I _F =20mA
Dominant Wavelength	λ _d		605		nm	I _F =20mA
Forward Voltage Per Segment	V _F		2.05	2.6	V	I _F =20mA
Reverse Current Per Segment ⁽²⁾	I _R			100	μA	V _R =5V
Luminous Intensity Matching Ratio	I _v -m			1.6:1		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.
3. Cross talk specification ≤ 2.5%

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)



NOTE : KF=AlInGaP YELLOW ORANGE