



LED Display

Product Data Sheet

LTC-46C6KF

Spec No.: DS30-2012-0119

Effective Date: 04/24/2014

Revision: A

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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**LED DISPLAY
LTC-46C6KF**

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<u>Rev</u>	<u>Description</u>	<u>By</u>	<u>Date</u>
-	Preliminary Spec.	Reo Lin	11/08/2012
1	Add Bin Table In Page 7	Reo Lin	04/15/2014
Above data for PD and Customer tracking only			
-	NPPR Received and Upload on System	Reo Lin	04/15/2014
A	Revised error for Bin Table In Page 7	Reo Lin	04/22/2014

**LED DISPLAY
LTC-46C6KF****1. Description**

The LTC-46C6KF is a 0.4 inch (10.0 mm) digit height quadruple digit 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

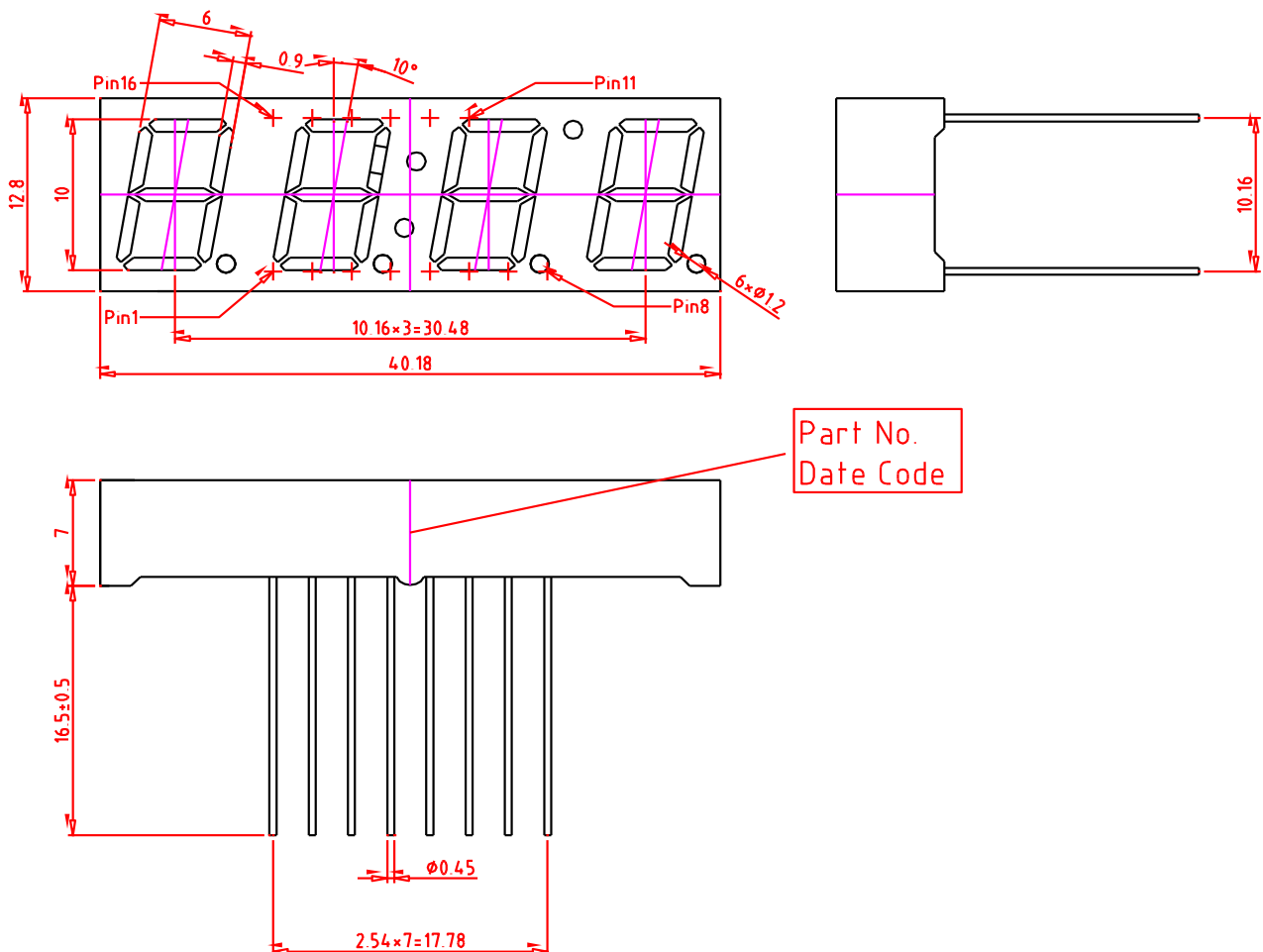
- 0.4 inch (10.0 mm) DIGIT HEIGHT
- CONTINUOUS UNIFORM SEGMENTS
- LOW POWER REQUIREMENT
- EXCELLENT CHARACTERS APPEARANCE
- HIGH BRIGHTNESS & HIGH CONTRAST
- WIDE VIEWING ANGLE
- SOLID STATE RELIABILITY
- CATEGORIZED FOR LUMINOUS INTENSITY.
- LEAD-FREE PACKAGE (ACCORDING TO ROHS)

1.2 Device

Part No	Description
AlInGaP Yellow Orange	Multiplex Common Anode
LTC-46C6KF	
	Rt. Hand Decimal

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2. Package Dimensions

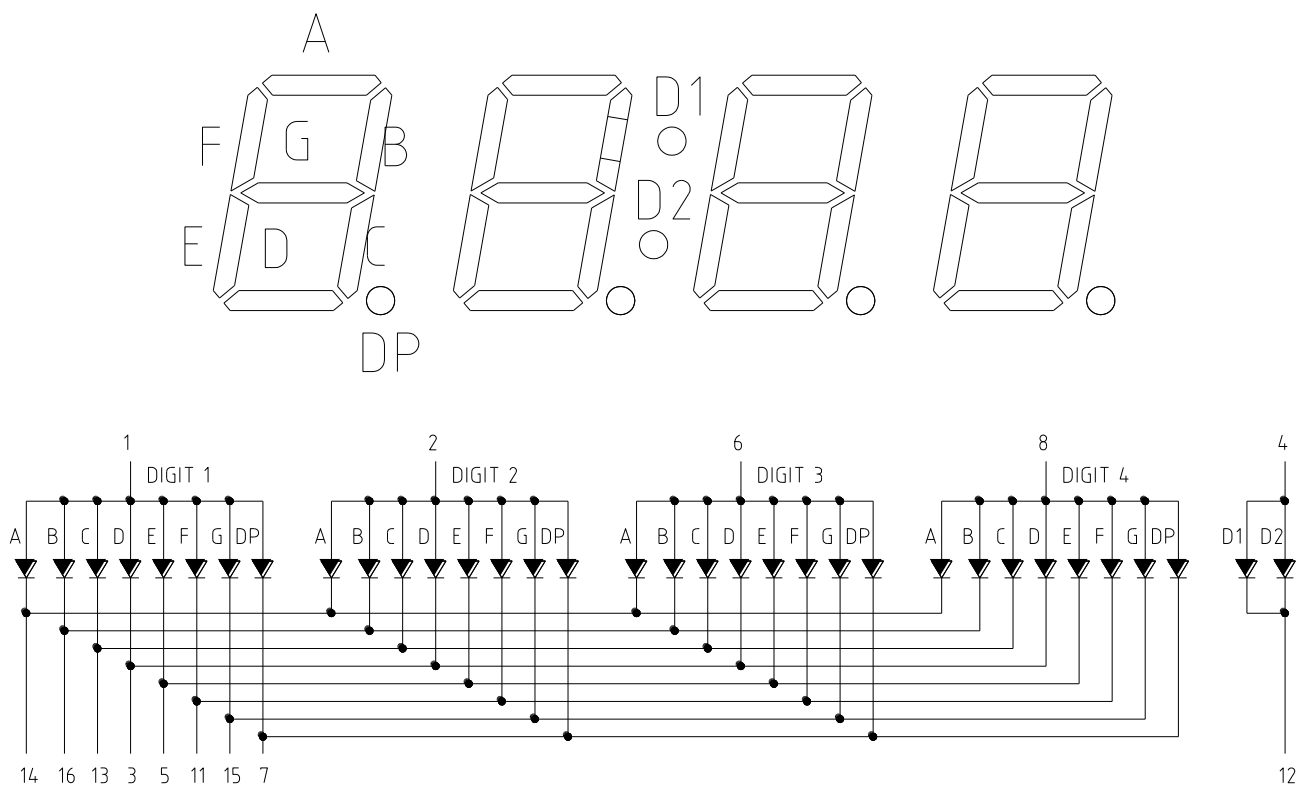


Notes :

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
3. Foreign material on segment ≤ 10 mil
4. Ink contamination (surface) ≤ 20 mils
5. Bubble in segment ≤ 10 mil
6. Bending $\leq 1\%$ of reflector length
7. Recommend the best PCB hole: Diameter 0.9 mm

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3. Internal Circuit Diagram



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4. Pin Connection

No	Connection
1	COMMON ANODE DIGIT 1
2	COMMON ANODE DIGIT 2
3	CATHODE D
4	COMMON ANODE D1 AND D2
5	CATHODE E
6	COMMON ANODE DIGIT 3
7	CATHODE DP
8	COMMON ANODE DIGIT 4
9	NO PIN
10	NO PIN
11	CATHODE F
12	CATHODE D1 AND D2
13	CATHODE C
14	CATHODE A
15	CATHODE G
16	CATHODE B

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5. Rating and Characteristics

5.1. Absolute Maximum Rating at Ta=25°C

Parameter	Maximum Rating	Unit
Power Dissipation Per Segment	70	mW
Peak Forward Current Per Segment (1/10 Duty Cycle, 0.1ms Pulse Width)	60	mA
Continuous Forward Current Per Segment	25	mA
Derating Linear From 25°C Per Segment	0.33	mA/°C
Operating Temperature Range	-35°C to +85°C	
Storage Temperature Range	-35°C to +85°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	500	1300		μcd	IF=1mA
			16900		μcd	IF=10mA
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 Chip	VF		2.05	2.6	V	IF=20mA
Reverse Current Per Segment ^(*)	IR			100	μA	VR=5V
Luminous Intensity Matching Ratio (Similar Light Area)	IV-m			2:1		IF=1mA

Notes :

- Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commission International De L'Eclairage) eye-response curve
- Reverse voltage is only for IR test. It cannot continue to operate at this situation
- Cross talk specification $\leq 2.5\%$

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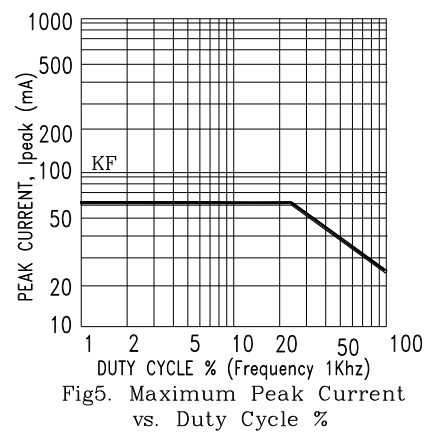
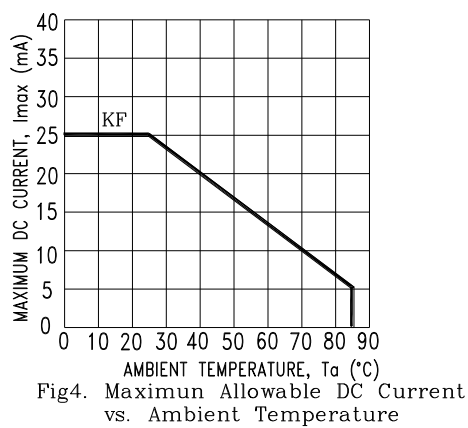
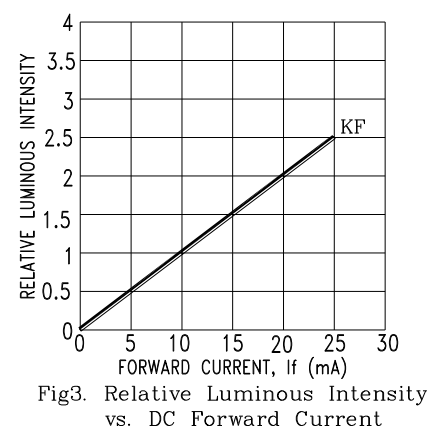
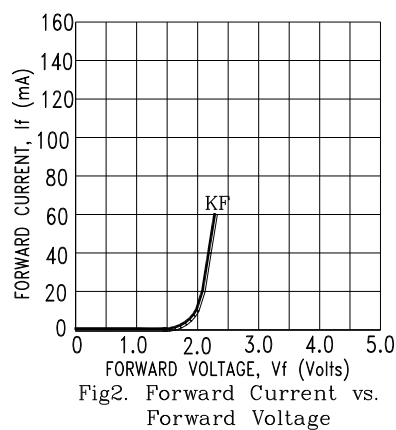
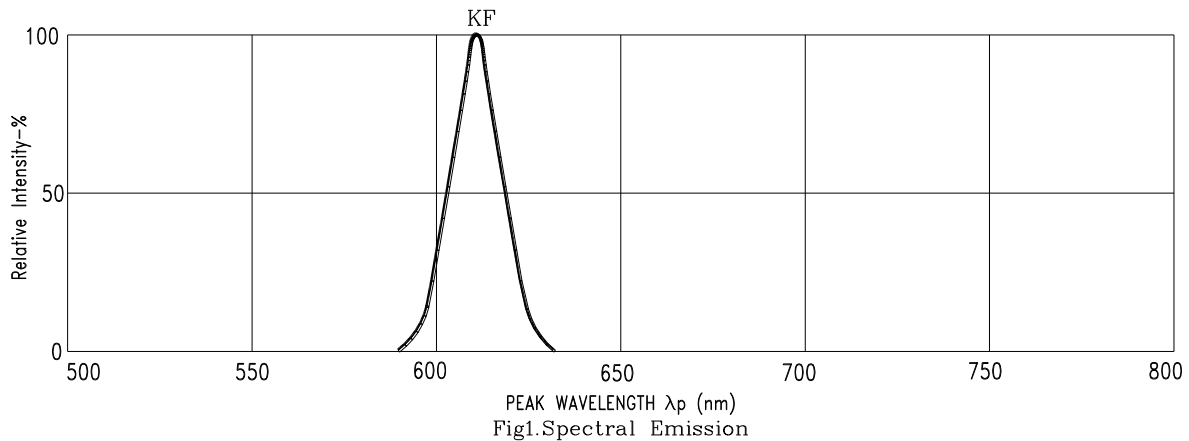
5.3. Bin Range Distribution

Bin	G	H	J	K	L
Min.	501	801	1301	2101	3401
Max.	800	1300	2100	3400	5400

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5.4. Typical Electrical / Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)



NOTE : KF=AlInGaP YELLOW ORANGE