LED DISPLAY

LTC-3650KD-J
DATASHEET

Rev	Description	By
01	UPDATED VERSION	WARIN Feb 13 .08
02	Change diameter pin from 0.5mm to 0.45mm	KITTISAK Mar 10/2008
	(Above data for PD and Customer tracking only)	
-	NPPR Received and Upload on OPNC	KITTISAK Mar 10/2008

SPEC. NO.: DS30-2008-0044

D A T E : Mar 10/2008

REV. NO. : -

PAGE NO. : 0 OF 5

FEATURES

- 0.31 inch (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)**

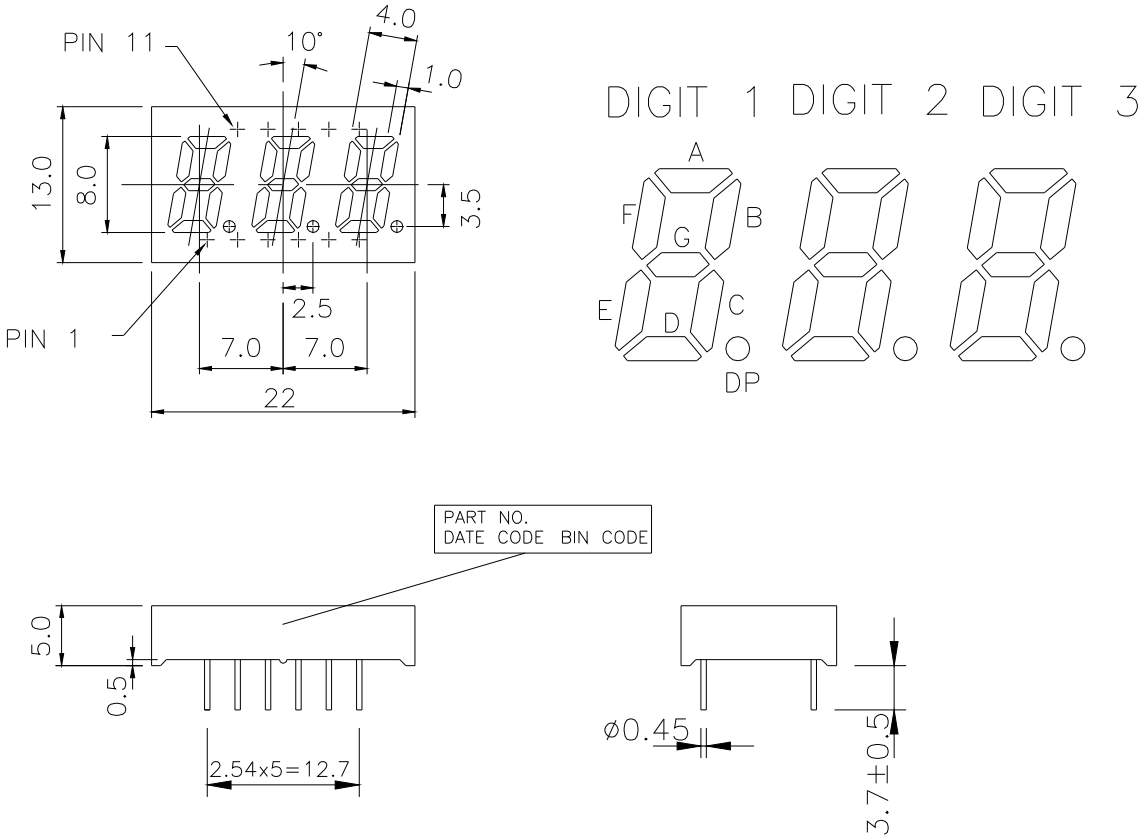
DESCRIPTION

The LTC-3650KD-J is a 0.31 inch (8 mm) digit height triple digit seven-segment display. The device uses AS-AlInGaP Hyper Red LED chips (AlInGaP epi on GaAs substrate) and has a black face and Red segments.

DEVICE

PART NO.	DESCRIPTION
AlInGaP Hyper Red	COMMON ANODE
LTC-3650KD-J	

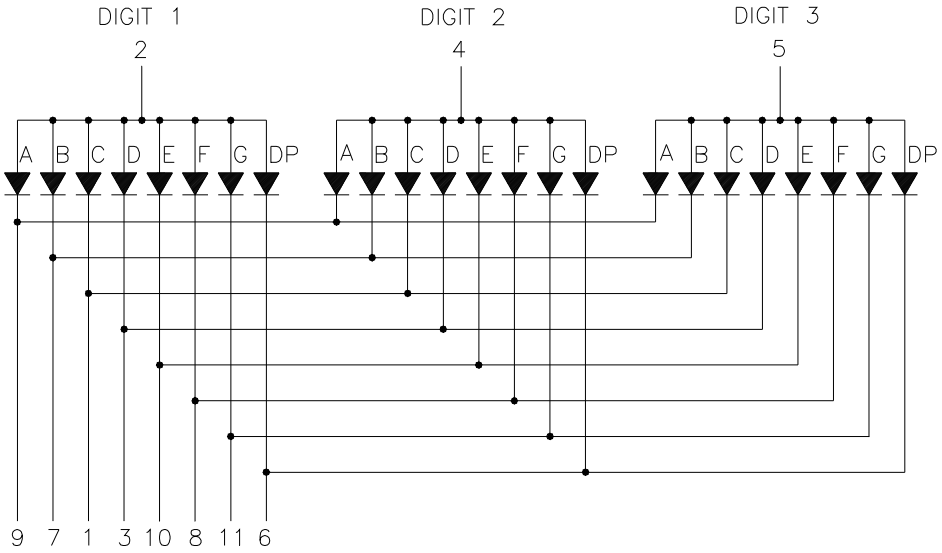
PACKAGE DIMENSIONS



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

2. Pin tip’s shift tolerance is +/- 0.4 mm.

INTERNAL CIRCUIT DIAGRAM



PIN CONNECTION

No.	CONNECTION
1	CATHODE C
2	COMMON ANODE (DIGIT 1)
3	CATHODE D.
4	COMMON ANODE (DIGIT 2)
5	COMMON ANODE (DIGIT 3)
6	CATHODE DP
7	CATHODE B
8	CATHODE F
9	CATHODE A
10	CATHODE E
11	CATHODE G

ABSOLUTE MAXIMUM RATING

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation Per Segment	75	mW
Peak Forward Current Per Segment (Frequency 1Khz, 10% duty cycle)	100	mA
Continuous Forward Current Per Segment Forward Current Derating from 25^0C	25 0.28	mA mA/℃
Reverse Voltage Per Segment	5	V
Operating Temperature Range	-35℃ to + 105℃	
Storage Temperature Range	-35℃ to + 105℃	
Soldering Conditions : 1/16 inch below seating plane for 8 seconds at 265^0C 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	Iv	320	900		μcd	IF=1mA
		3400	9000			IF=10mA
Peak Emission Wavelength	λp		650		nm	IF=20mA
Spectral Line Half-Width	Δλ		20		nm	IF=20mA
Dominant Wavelength	λd		639		nm	IF=20mA
Forward Voltage Per Segment	VF		2.1	2.6	V	IF=20mA
Reverse Current Per Segment	IR			100	μA	VR=5V
Luminous Intensity Matching Ratio (Same Light Area)	Iv-m			2:1		IF=1mA

Note: Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commision Internationale De L'Eclairage) eye-response curve.

BIN TABLE

BIN TEBLE 2 FOR LUMINOUS INTENSITY

BIN GRADE	F	G	H	J	K
RANGE(ucd)IF=1mA	321-500	501-800	801-1300	1301-2100	2101-3400

The Luminous Intensity Tolerance ±15percentage

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

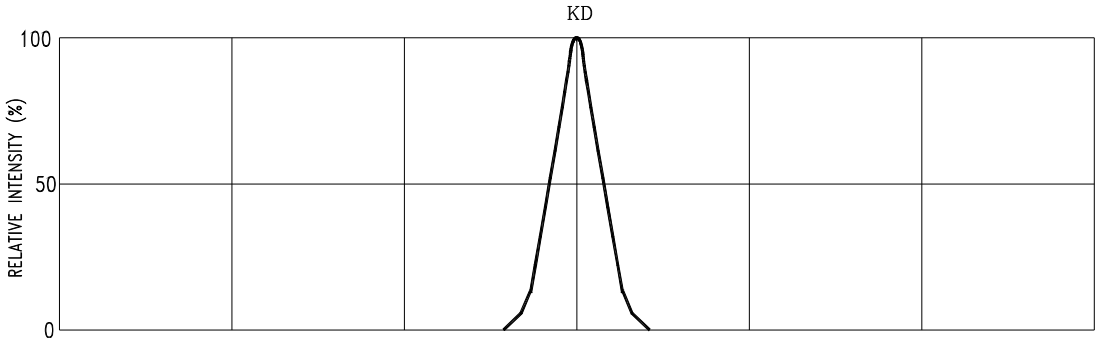


Fig1.Spectral Emission

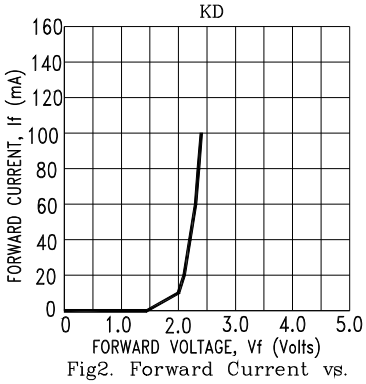


Fig2. Forward Current vs. Forward Voltage

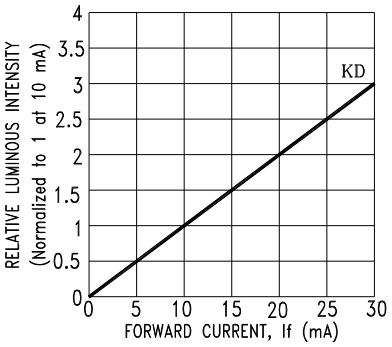


Fig3. Relative Luminous Intensity vs. DC Forward Current

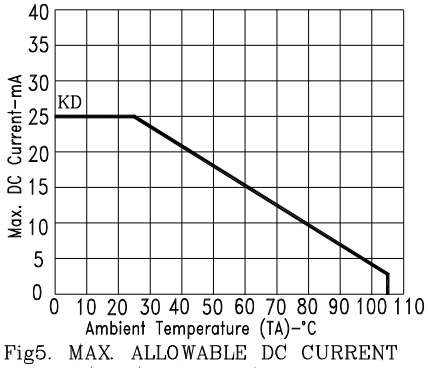


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

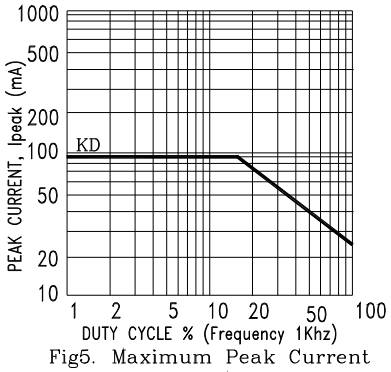


Fig5. Maximum Peak Current vs. Duty Cycle %

NOTE : KD=AlInGaP HYPER RED