

DUAL DIGIT SMD DISPLAY(0.28")

LSDD215/6DBK-XX

DATA SHEET

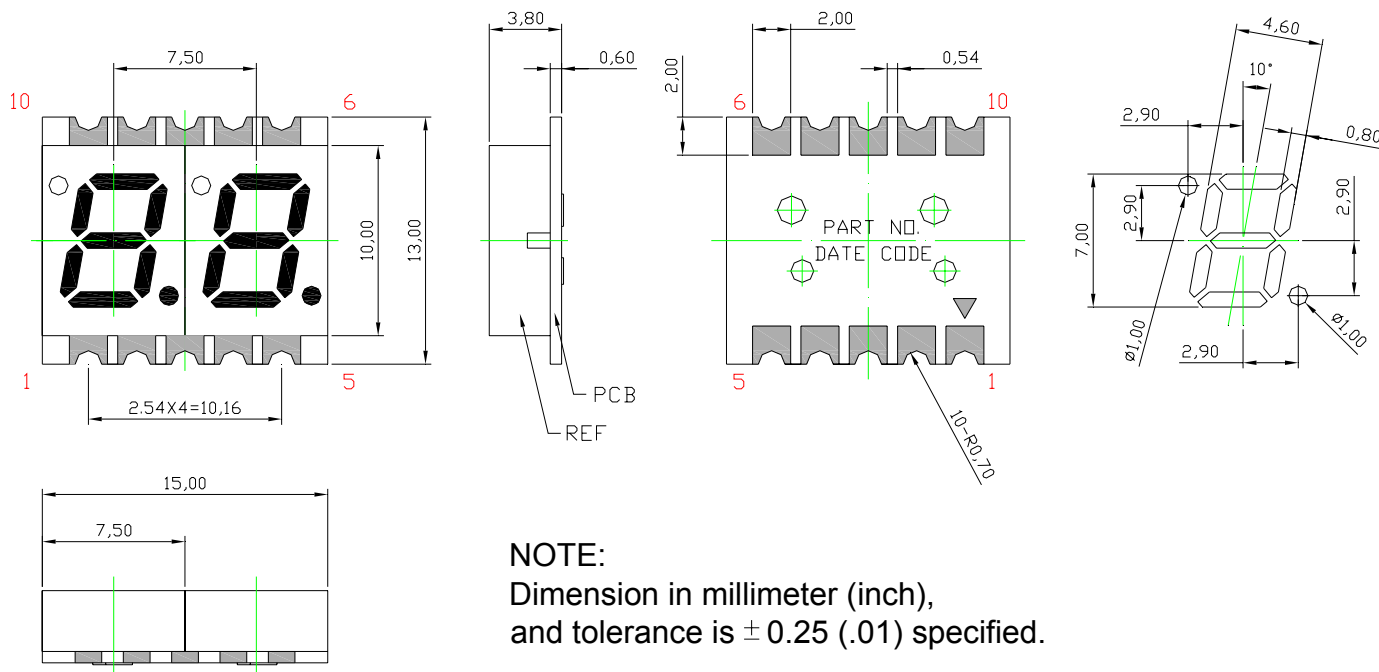
DOC.NO : QW0905- LSDD215/6DBK-XX

REV. : A

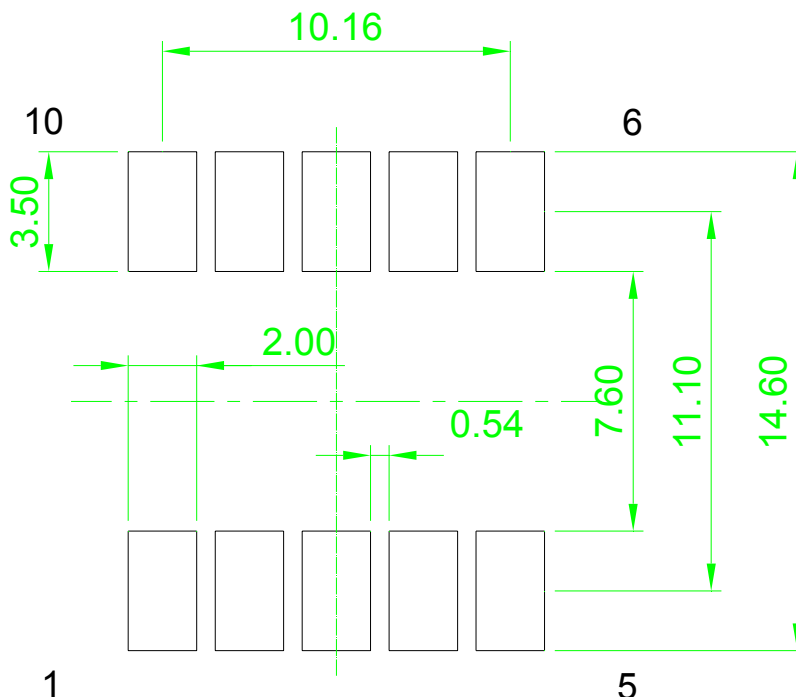
DATE : 30 – May. – 2013



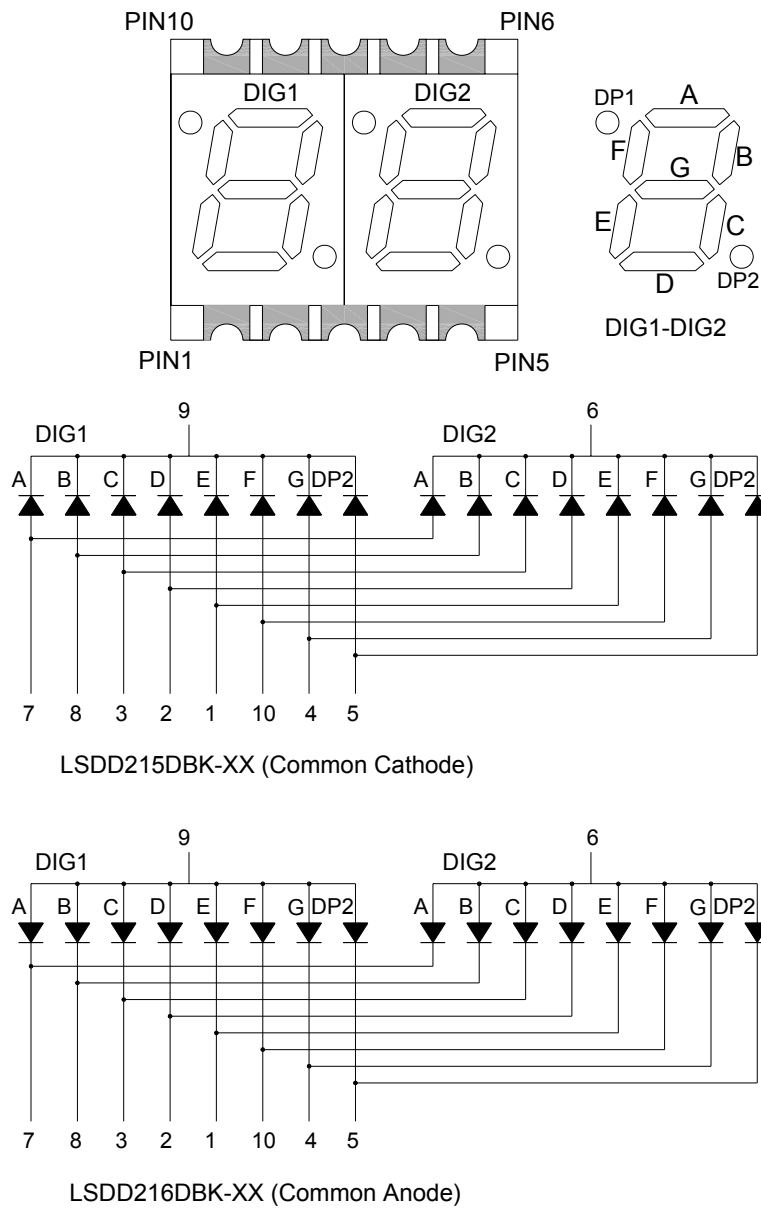
Package Dimensions



Recommended Soldering Pad Dimensions



Internal Circuit Diagram



Electrical Connection

PIN NO.	LSDD215DBK-XX	PIN NO.	LSDD216DBK-XX
1	Anode E	1	Cathode E
2	Anode D	2	Cathode D
3	Anode C	3	Cathode C
4	Anode G	4	Cathode G
5	Anode DP2	5	Cathode DP2
6	Common Cathode DIG2	6	Common Anode DIG2
7	Anode A	7	Cathode A
8	Anode B	8	Cathode B
9	Common Cathode DIG1	9	Common Anode DIG1
10	Anode F	10	Cathode F

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Ratings	UNIT
Power Dissipation	PD	120	mW
Peak pulse current Duty 1/10@10KHz	I _{FP}	100	mA
Forward Current Per Chip	I _F	30	mA
Debating liner from 25°C per segment	---	0.3	mA / °C
Storage Temperature	T _{stg}	-40 ~ +105	°C
Operating Temperature	T _{opr}	-40 ~ +105	°C

Typical Electrical & Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	IV	----	20		mcd	IF=20mA
Dominant Wavelength	λ D	----	470	-----	nm	IF=20mA
Spectral Line Half-Width	ΔP	----	30	----	nm	IF=20mA
Forward Voltage	VF	----	3.2	4.0	V	IF=20mA
Reverse Current	I _r	----	----	10	μA	VR=5V

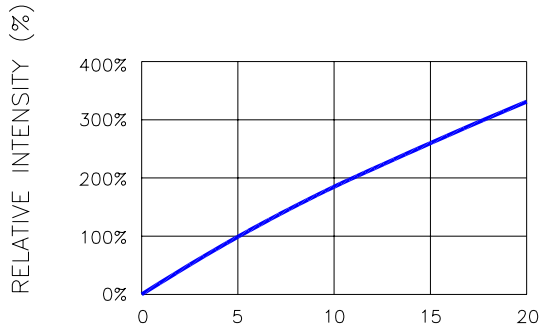
Note : 1.The forward voltage data did not including ±0.1V testing tolerance.

2.The luminous intensity data did not including ±15% testing tolerance.

Typical Electro-Optical Characteristics Curve

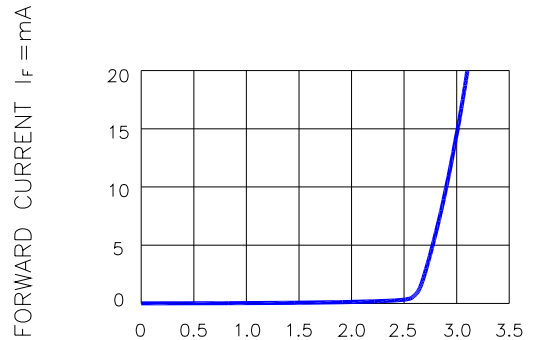
(25 °C Free Air Temperature Unless Otherwise Specified)

DBK: SUPER BRIGHT BLUE (InGaN) CURVE



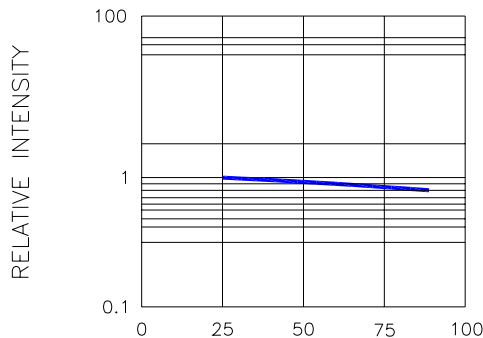
$I_F @ 20\text{mA}$ (mA)

Fig.1 RELATIVE INTENSITY VS. FORWARD CURRENT



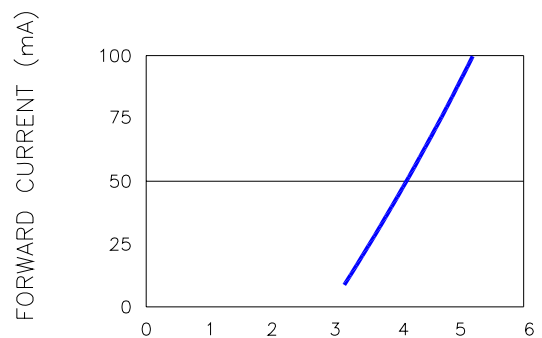
FORWARD VOLTAGE (V)

Fig.2 FORWARD CURRENT VS. FORWARD VOLT.



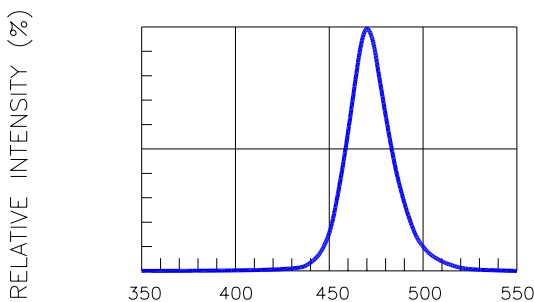
LEAD TEMPERATURE(°C)

Fig.3 RELATIVE INTENSITY VS.LEAD TEMPERATURE
(PULSED 20 mA; 300us
PULSE,10ms PERIOD)



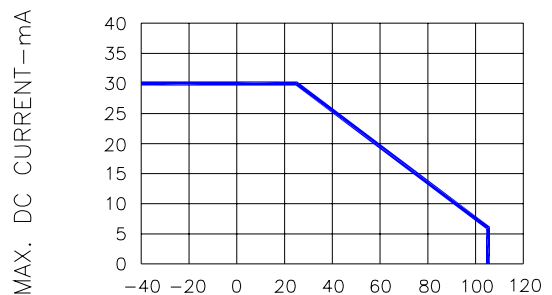
FORWARD VOLTAGE(V)

Fig.4 PEAK FORWARD VOLTAGE
VS.FORWARD(100us TEST PULSE,
1% DUTY CYCLE)



WAVELENGTH (nm)

Fig.5 RELATIVE INTENSITY VS. WAVELENGTH



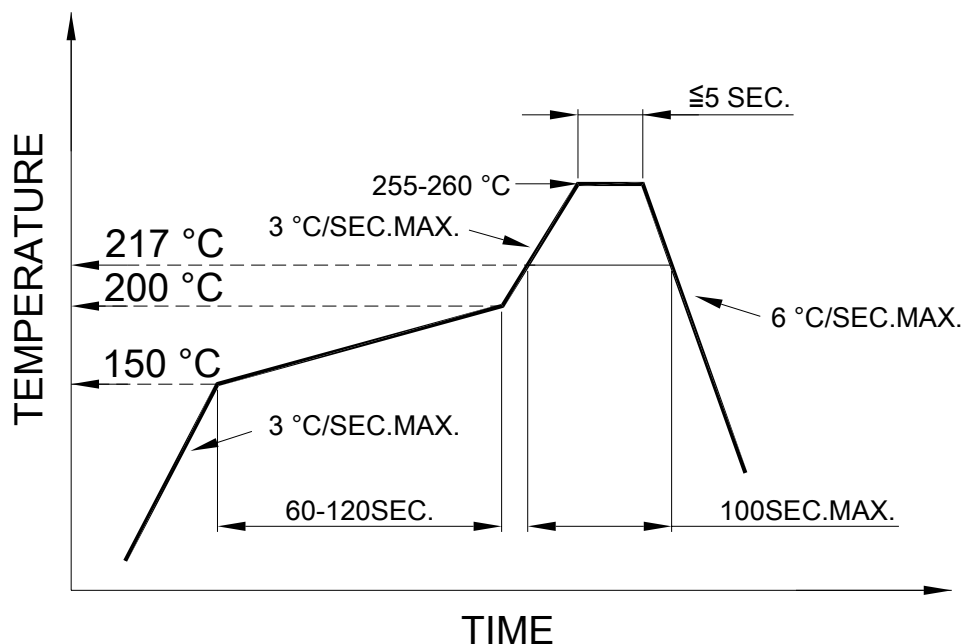
AMBIENT TEMPERATURE (T_A)—°C

Fig.6 MAX. ALLOWABLE DC CURRENT
VS. AMBIENT TEMPERATURE

SMT REFLOW SOLDERING INSTRUCTIONS

SMT Soldering Profile

Pb free reflow soldering Profile



SOLDERING IRON

Basic spec is ≤ 4 sec when 260°C. If temperature is higher, time should be shorter (+10°C→1 sec). Power dissipation of Iron should be smaller than 15W, and temperature should be controllable. Surface temperature of the device should be under 230°C.

REWORK

Customer must finish rework within 3 sec. under 350°C.

The head of soldering iron cannot touch copper foil.