LIGITEK ELECTRONICS CO.,LTD.
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SQUARE WITH 4LEADS TYPE LED LAMPS

Pb
Lead-Free Parts

LDBK9653-30B/A-B02

DATA SHEET

DOC. NO : QW0905-LDBK9653-30B/A-B02

REV. : A

DATE : 25 - Mar. - 2017

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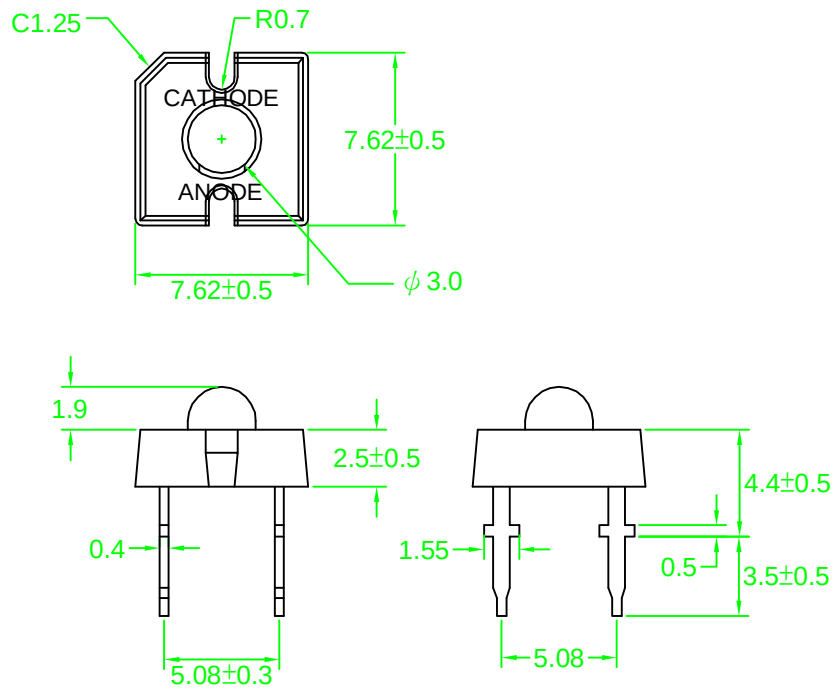
DCC

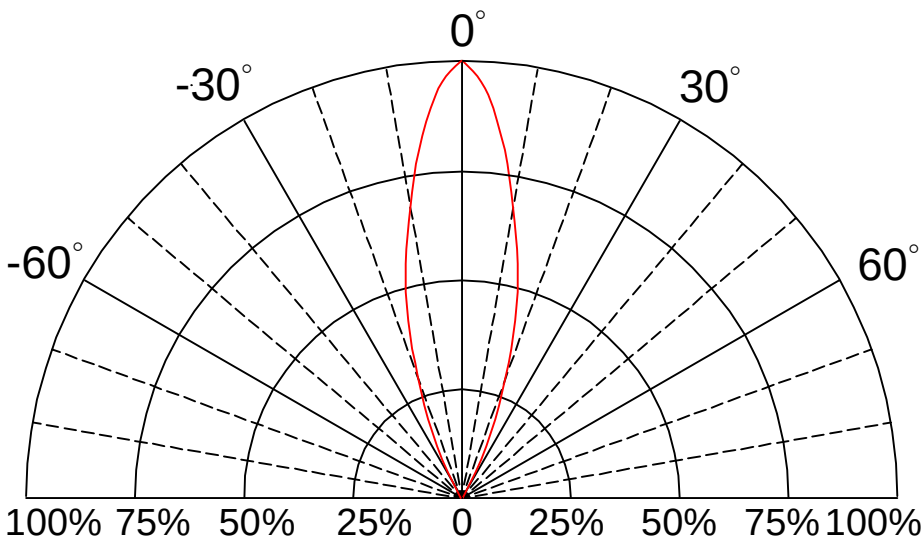
PART NO. LDBK9653-30B/A-B02 Page 1/7

Package Dimensions



Note : 1.All dimension are in millimeter tolerance is ±0.25mm unless otherwise noted.
2.Specifications are subject to change without notice.

Directivity Radiation



Absolute Maximum Ratings at Ta=25 ℃

Parameter	Symbol	Ratings	UNIT
		DBK	
Forward Current	IF	30	mA
Peak Forward Current Duty 1/10@10KHz	IFP	100	mA
Power Dissipation	PD	120	mW
Reverse Current @5V	Ir	50	μA
Electrostatic Discharge(*)	ESD	150	V
Operating Temperature	Topr	-20 ~ +80	℃
Storage Temperature	Tstg	-30 ~ +100	℃

Typical Electrical & Optical Characteristics (Ta=25 ℃)

PART NO	MATERIAL	COLOR		Dominant wave length λDnm	Spectral halfwidth △λ nm	Forward voltage @30mA(V)		Luminous Flux @30mA(lm)		Viewing angle 2θ 1/2 (deg)
		Emitted	Lens			Min	Max.	Min.	Typ.	
LDBK9653-30B/A-B02	InGaN	Blue	Water Clear	465	30	2.8	4.0	1.3	1.7	30

Note : 1.The forward voltage data did not including ±0.1V testing tolerance.
2. The luminous intensity data did not including ±15% testing tolerance.

Brightness Code For Standard LED Lamps

DBK CHIP

Group	Luminous flux(lm) at30mA	
	Min.	Max.
F9	1.3	1.7
F10	1.7	2.2
F11	2.2	2.9
F12	2.9	3.8
F13	3.8	4.9

Group	Wave length(nm) at 30mA	
	Min.	Max.
0E	462	465
0D	465	468
0C	468	471

Typical Electro-Optical Characteristics Curve

DBK CHIP

Fig.1 Forward current vs. Forward Voltage

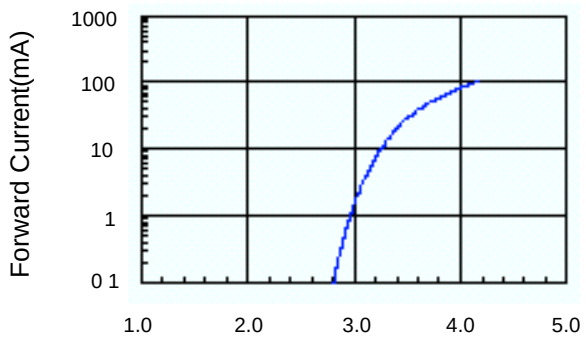


Fig.2 Relative Intensity vs. Forward Current

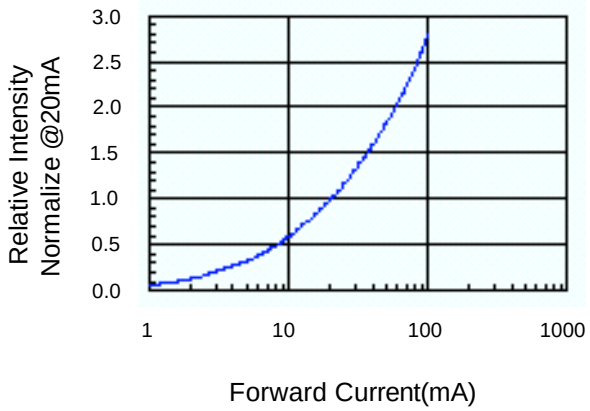


Fig.3 Forward Voltage vs. Temperature

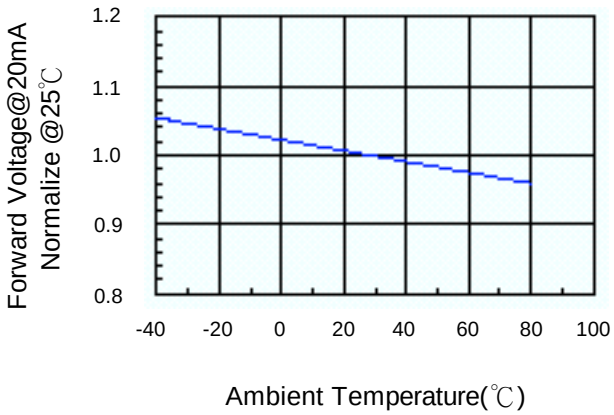


Fig.4 Relative Intensity vs. Temperature

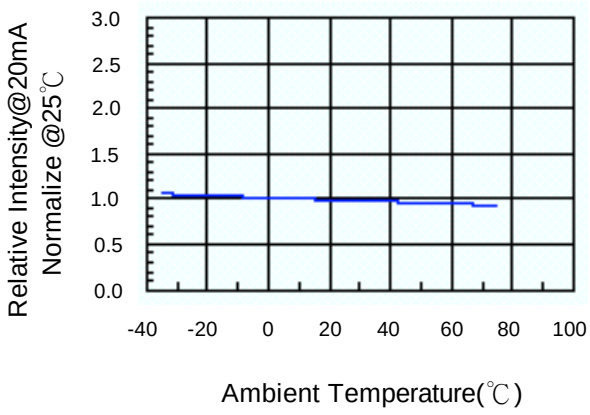
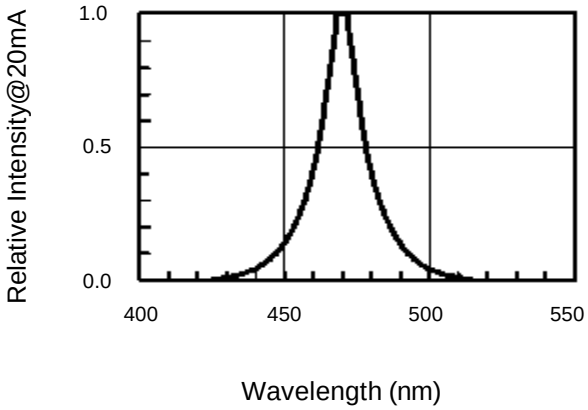


Fig.5 Relative Intensity vs. Wavelength



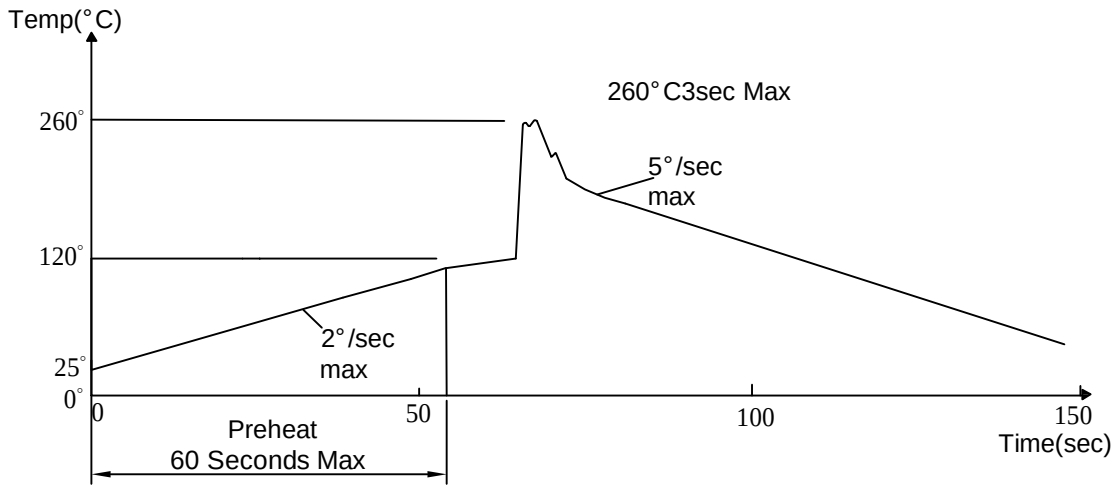
Soldering Condition(Pb-Free)

1.Iron:

Soldering Iron:30W Max
Temperature 350°C Max
Soldering Time:3 Seconds Max(One Time)
Distance:2mm Min(From solder joint to body)

2.Wave Soldering Profile

Dip Soldering
Preheat: 120°C Max
Preheat time: 60seconds Max
Ramp-up
2°C/sec(max)
Ramp-Down:-5°C/sec(max)
Solder Bath:260°C Max
Dipping Time:3 seconds Max
Distance:2mm Min(From solder joint to body)



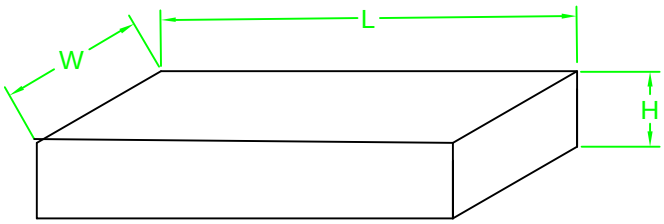
Reliability Test:

Test Item	Test Condition	Description	Reference Standard
Operating Life Test	1.Under Room Temperature 2.If=20mA 3.t=1000 hrs (-24hrs, +72hrs)	This test is conducted for the purpose of detemining the resistance of a part in electrical and themal stressed.	MIL-STD-750: 1026 MIL-STD-883: 1005 JIS C 7021: B-1
High Temperature Storage Test	1.Ta=105℃±5℃ 2.t=1000 hrs (-24hrs, +72hrs)	The purpose of this is the resistance of the device which is laid under condition of high temperature for hours.	MIL-STD-883:1008 JIS C 7021: B-10
Low Temperature Storage Test	1.Ta=-40℃±5℃ 2.t=1000 hrs (-24hrs, +72hrs)	The purpose of this is the resistance of the device which is laid under condition of low temperature for hours.	JIS C 7021: B-12
High Temperature High Humidity Test	1.Ta=65℃±5℃ 2.RH=90%~95% 3.t=240hrs±2hrs	The purpose of this test is the resistance of the device under tropical for hours.	MIL-STD-202:103B JIS C 7021: B-11
Thermal Shock Test	1.Ta=105℃±5℃&-40℃±5℃ (10min) (10min) 2.total 10 cycles	The purpose of this is the resistance of the device to sudden extreme changes in high and low temperature.	MIL-STD-202: 107D MIL-STD-750: 1051 MIL-STD-883: 1011
Solder Resistance Test	1.T.Sol=260℃±5℃ 2.Dwell time= 10±1sec.	This test intended to determine the thermal characteristic resistance of the device to sudden exposures at extreme changes in temperature when soldering the lead wire.	MIL-STD-202: 210A MIL-STD-750: 2031 JIS C 7021: A-1
Solderability Test	1.T.Sol=245℃±5℃ 2.Dwell time=5±1sec	This test intended to see soldering well performed or not.	MIL-STD-202: 208D MIL-STD-750: 2026 MIL-STD-883: 2003 JIS C 7021: A-2

1. 60PCS Max/ TUBE

2. 105TUBES / INNER BOX

SIZE : L X W X H 55cm X 22.5cm X 10cm



3. 4 INNER BOXES / CARTON

SIZE : L X W X H 56.5cm X 47.5cm X 24cm