TRIPLE DIGIT SMD DISPLAY (0.20")

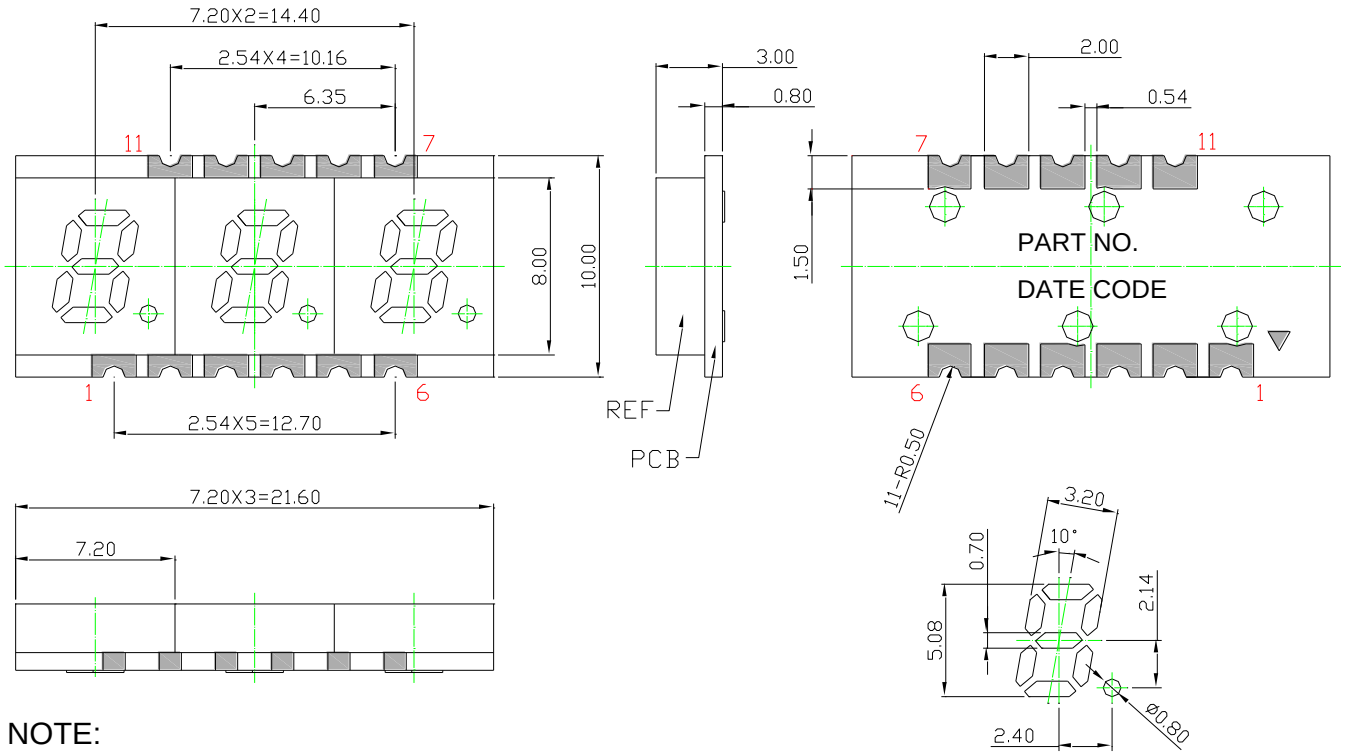
LSTD205/6DBK-XX

DATA SHEET

DOC.NO	:	QW0905- LSTD205/6DBK-XX
REV.	:	B
DATE	:	09 – Jul. – 2020

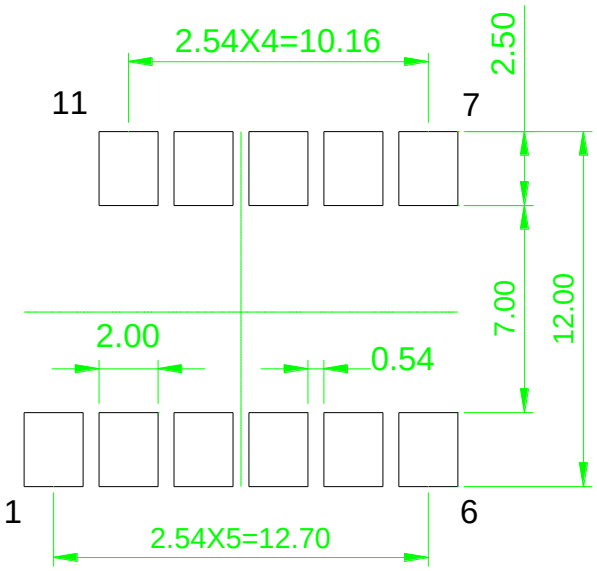
發行
立碁電子
DCC

Package Dimensions

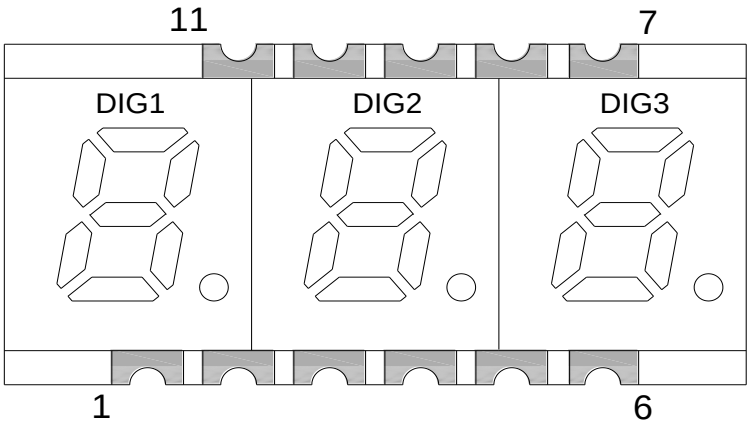


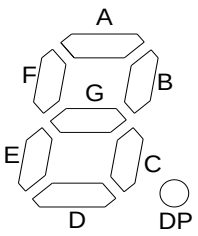
NOTE:
Dimension in millimeters (inches),
And tolerance are ±0.25mm (.01") specified.

Recommended Soldering Pad Dimensions

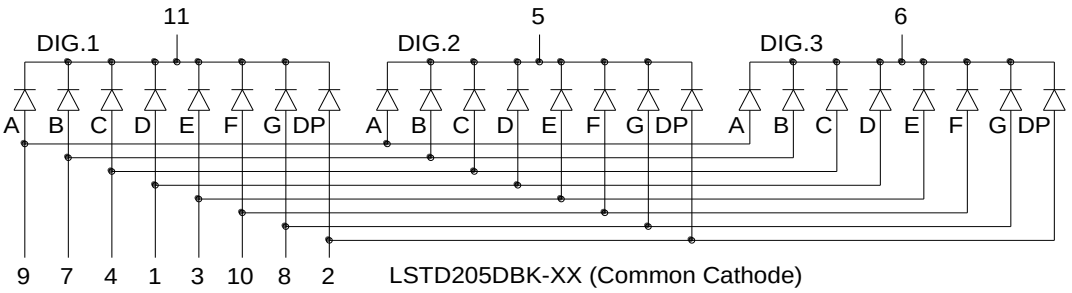


Internal Circuit Diagram

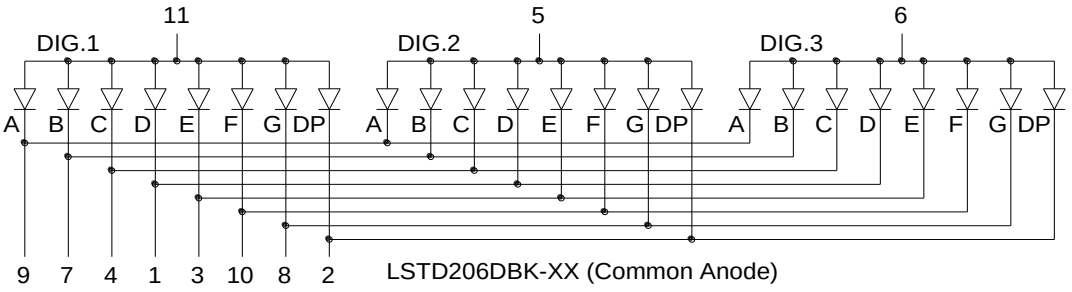




DIG1-DIG3



LSTD205DBK-XX (Common Cathode)



LSTD206DBK-XX (Common Anode)

Electrical Connection

PIN NO.	LSTD205DBK-XX	PIN NO.	LSTD206DBK-XX
1	Anode D	1	Cathode D
2	Anode DP	2	Cathode DP
3	Anode E	3	Cathode E
4	Anode C	4	Cathode C
5	Common Cathode DIG2	5	Common Cathode DIG2
6	Common Cathode DIG3	6	Common Cathode DIG3
7	Anode B	7	Cathode B
8	Anode G	8	Cathode G
9	Anode A	9	Cathode A
10	Anode F	10	Cathode F
11	Common Cathode DIG1	11	Common Cathode DIG1

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Ratings	UNIT
Power Dissipation	PD	68	mW
Peak pulse current Duty 1/10@10KHz	I_{FP}	60	mA
Forward Current Per Chip	I_F	20	mA
Reverse voltage	Vr	5	V
Storage Temperature	T_{stg}	-40 ~ +85	°C
Operating Temperature	T_{opr}	-40 ~ +85	°C

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	IV	25	----	85	mcd	IF=20mA
Dominant Wavelength	λ D	464	----	474	nm	IF=20mA
Spectral Line Half-Width	ΔP	----	30	----	nm	IF=20mA
Forward Voltage	VF	----	3.2	4.0	V	IF=20mA
Reverse Current	Ir	----	----	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.

Luminous Intensity Classification

BIN CODE	Iv(mcd) at 20mA	
	Min	Max
I	25	45
J	45.1	65
K	65.1	85

Dominant Wavelength Classification

BIN CODE	λ D (nm) at 20mA	
	Min	Max
1	464	467
2	467.1	470
3	470.1	474

Typical Electro-Optical Characteristics Curve

(25℃ Free Air Temperature Unless Otherwise Specified)

DBK: SUPER BRIGHT BLUE (InGaN) CURVE

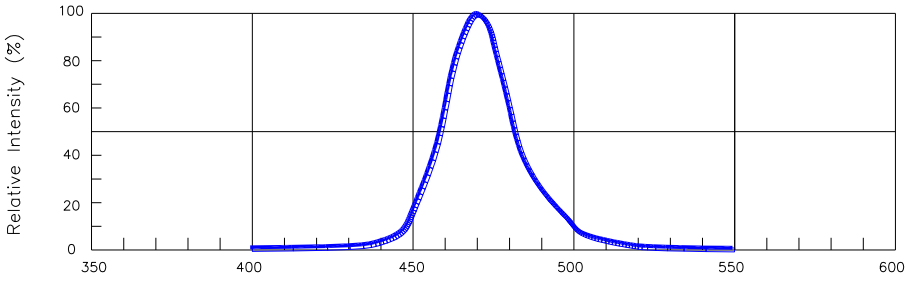


Fig.1—Relative Intensity VS. Wavelength

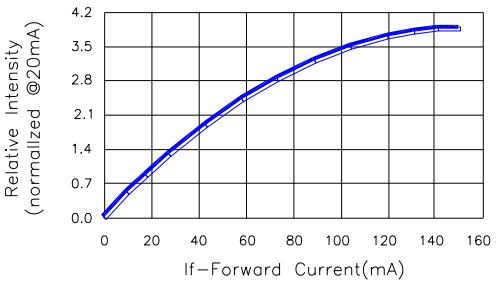


Fig.2—Relative Luminous Intensity vs. Forward Current

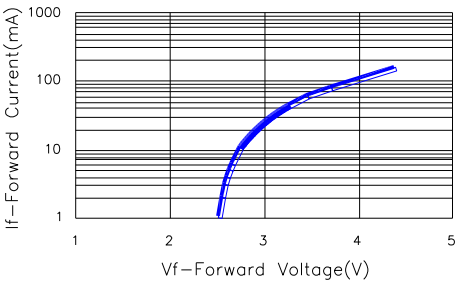


Fig.3—Forward Current vs. Forward Voltage

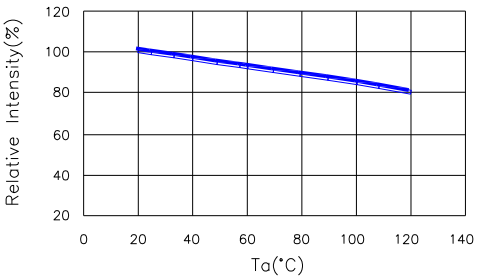


Fig.4—Relative Intensity(@20mA)VS. Ambient Temperature

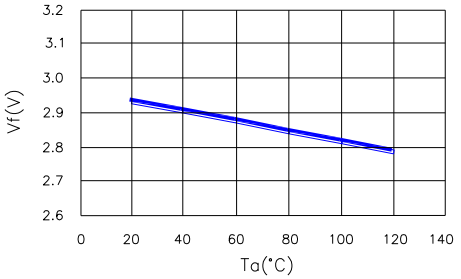


Fig.5—Forward Voltage(@20mA)VS. Ambient Temperature

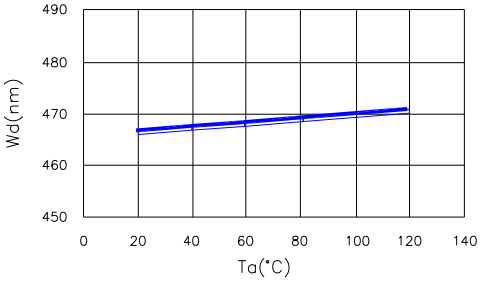


Fig.6—Dominant Wavelength(@20mA)
VS. Ambient Temperature

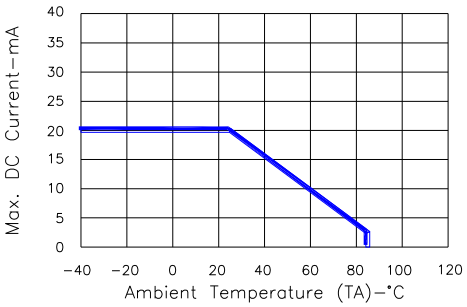
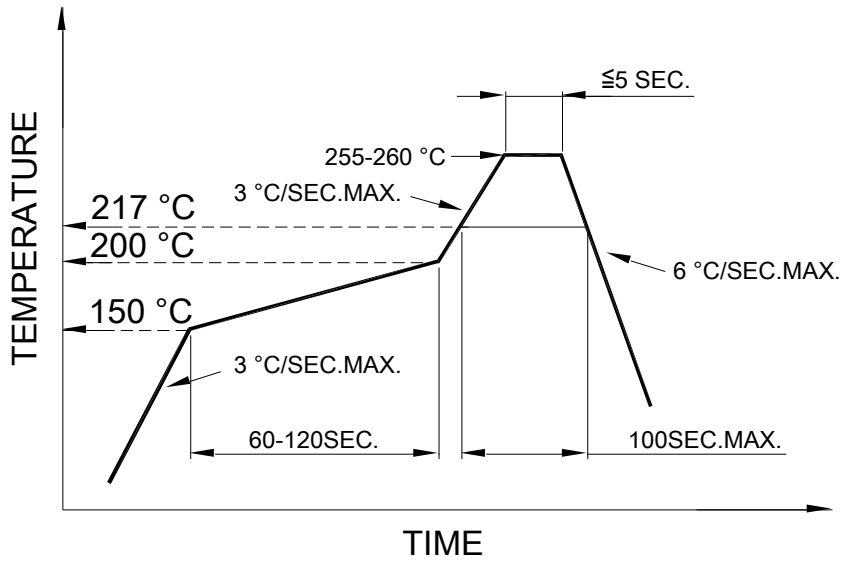


Fig.7—Max. Allowable DC Current
VS. Ambient Temperature

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℃.

The head of soldering iron cannot touch copper foil.

STORAGED CONDITION

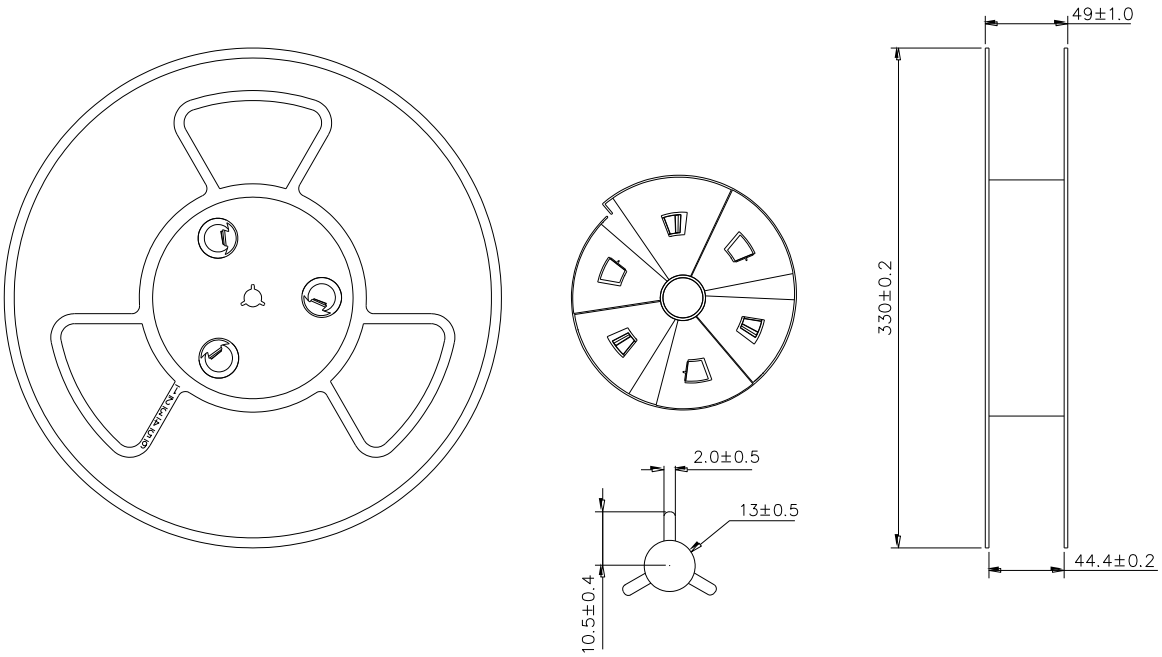
In factory original sealed bag package

TEMPERATURE CONDITION	HUMIDITY CONDITION
5°C ~ 30°C	Below 60%RH

After opened and not in factory original sealed bag package

TEMPERATURE CONDITION	HUMIDITY CONDITION	STORAGE TIME
5°C ~ 30°C	Below 60%RH	Within 4 weeks (MSL as level 2a)

REEL DIMENSIONS



PACKING & LABEL SPECIFICATIONS