NextGen Components,Inc.

PART CODE: BND1206JKWS001

SPECIFICATION SHEET

SPECIFICATION SHEET NO.	R0126- BND1206JKWS001	
DATE	Jan. 26, 2024	
REVISION	A0	Updated With Most Recent Data - Official First Release
DESCRIPTION AND MAIN PARAMETRICS	SMD LED 1206 Series Dimension L3.20*W1.60*H0.90mm, Color White Clear Forward Voltage (VF) 2.8~3.4V Color Temperature (CCT) 6201 ~12159k Luminous Intensity Rank (IV) 182~545mcd Operating Temp. Range -30°C ~+85°C Package in Tape/Reel, REACH/RoHS/RoHS III Compliant	
CUSTOMER		
CUSTOMER PART NO.		
CROSS REF. PART NO.		
ORIGINAL MFG/PART NO.	Oriental Technology/BND-1206JKW	
PART CODE	BND1206JKWS001	

VENDOR APPROVE
Issued/Checked/Approved 
DATE: Jan. 26, 2024

CUSTOMER APPROVE
DATE:

NextGen Components, Inc. sales@NextGenComponent.com www.NextGenComponent.com

NextGen Components,Inc.

PART CODE: **BND1206JKWS001**

SMD LED 1206 SERIES WHITE CLEAR COLOR

MAIN FEATURE

- Gold Substrate and Wide Viewing Angle
- High Luminous Intensity and Low Power Dissipation
- Reflow Solderable
- Suitable for SMT process
- Cross Competitors Parts
- REACH/RoHS/RoHS III Complaint

APPLICATION

- Optical Indicator
- Indoor Display
- Backlighting In Dashboard And Switch
- Backlighting For LCD, Symbol And Display

RFQ
Request For Quotation

PART CODE GUIDE

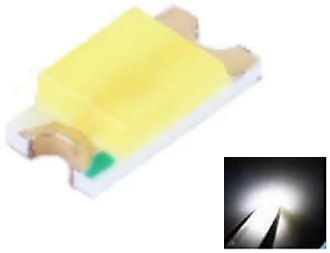
BND1206	JK	W	S001	( )
1	2	3	4	5

1. BND1206: Part family Code for SMD LED 1206 Series Red Clear Color Dimensions L3.20*W1.60*H0.90mm
2. JK: QC Code
3. W: Color code, R: Red Clear; B: Blue Clear; G: Pure Green; YG: Yellow Green Clear; W: White Clear; RGB: Red/Green/Blue Tri-color.
4. S001: Internal Control Code or special Parameters code letter A~Z or digits (1-9)
5. ( ): Custom Parameters code letter A~Z or digits (1-9); Blank: N/A

SMD LED 1206 SERIES WHITE CLEAR COLOR

DIMENSION – (Unit: mm, Tol.: +/-0.1mm)

Image For Reference

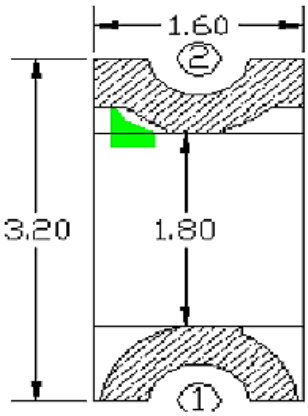


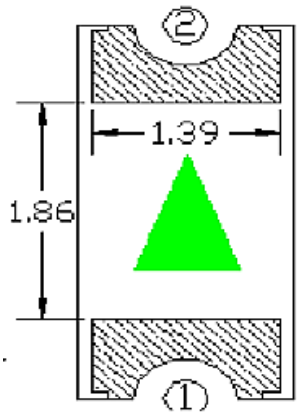
BND1206 Series

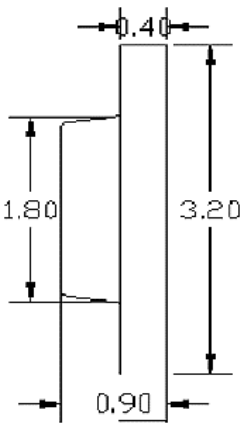
Size Code 1206

Dimension

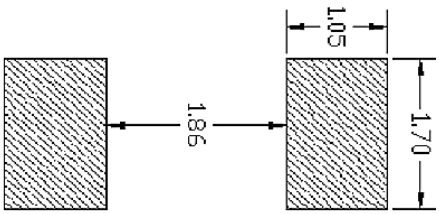
L3.20*W1.60*H0.90mm







Recommend Pad Layout



SMD LED 1206 SERIES WHITE CLEAR COLOR

MAXIMUM RATING Ts=25℃, RH60%

PARAMETERS	SYMBOL	VALUES	UNIT
Operating Temperature	Top	-30~+85	℃
Storage Temperature	Tstg	-40~+90	℃
Junction Temperature	Tj	125	℃
Forward Current (Ts=25℃)	I_F	20	mA
Peak Forward Current Duty ratio=1/10, Pulse Width=0.1ms	I_{FS}	80	mA
Reverse Voltage (Ts=25℃)	V_R	5.0	V
Electrostatic Discharge (acc.to ANSI/ESDA/JEDEC JS-001-2017)	V_{ESD}	≥2.0	kV

OPTICAL & ELECTRICAL CHARACTERISTICS I_F=20mA, Ts=25℃, RH60%

Parameters	Symbol	Values			Unit
		Min.	Typ.	Max.	
Color Temperature	CCT	6201	-	12159	k
Chromaticity Coordinates	Cx/Cy	-	0.295/0.295	-	-
Luminous Intensity Rank @20mA	Iv	182	-	545	mcd
Forward Current	I_F	3	-	20	mA
Viewing Angle	$2\theta_{1/2}$	-	120	-	Deg
Forward Voltage	V_F	2.8	-	3.4	V
Reverse Current	I_R (V_R=5V)	-	-	5	μA
Power Dissipation	P_D	-	-	70	mW

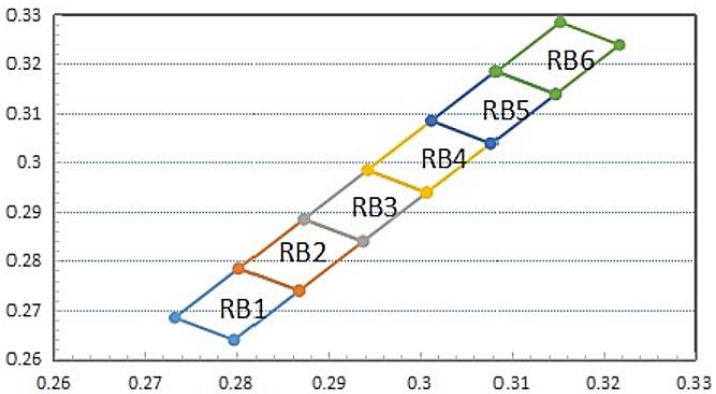
BIN CODE LIST

PARAMETERS	SYMBOL	VALUES	TOLERANCE	UNIT
Forward Voltage Rank (VF) @IF=20mA, Ts=25℃, RH60%	V7	2.8~3.0	±0.05	V
	V8	3.0~3.2		
	V9	3.2~3.4		
Luminous Intensity Rank (IV) @IF=20mA, Ts=25℃, RH60%	F5	182~227	±13%	mcd
	F6	227~285		
	F7	285~362		
	F8	362~450		
	F9	450~545		

Color Bin Rank - White Binning Structure - Notes: color coordinate tolerance:±0.005-

Bin Code	X1	Y1	X2	Y2	X3	Y3	X4	Y5	CCT (k)
RB1	0.2753	0.2644	0.2672	0.2703	0.2744	0.2802	0.2825	0.2743	10270~12159
RB2	0.2825	0.2743	0.2744	0.2802	0.2815	0.2900	0.2896	0.2841	8953~10270
RB3	0.2896	0.2841	0.2815	0.2900	0.2887	0.2999	0.2968	0.2940	7986~8953
RB4	0.2968	0.2940	0.2887	0.2999	0.2959	0.3098	0.3040	0.3039	7248~7986
RB5	0.3040	0.3039	0.2959	0.3098	0.3030	0.3196	0.3111	0.3137	6668~7248
RB6	0.3111	0.3137	0.3030	0.3196	0.3102	0.3295	0.3183	0.3236	6201~6668

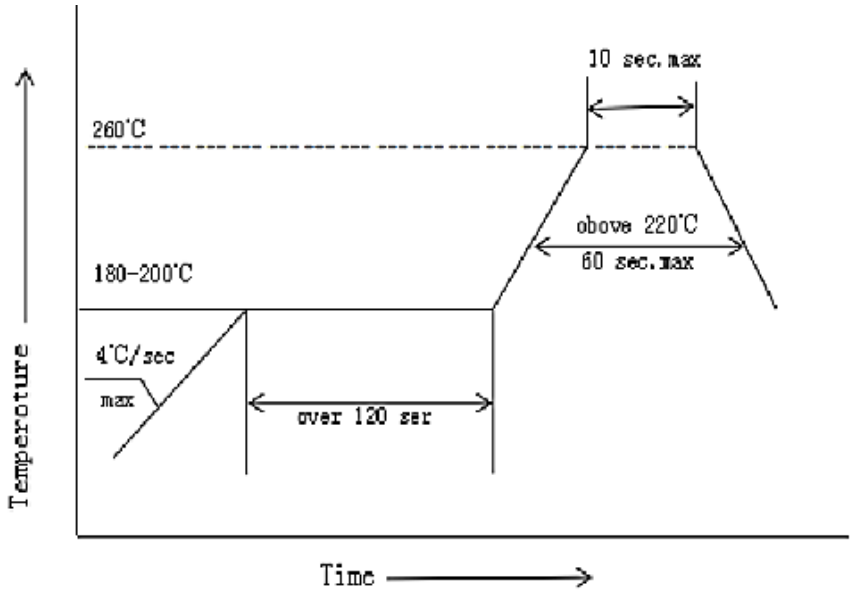
Color Bin Rank - White Binning Structure



Note:

1. We support custom parameter on the basis of above mentioned Bin Code List if customer required.
2. Custom parameter code can be added as per Part Code Guide Page 2.

REFLOW SOLDERING CHARACTERISTICS



PROFILE FEATURE		PB-FREE ASSEMBLY
Average Ramp-up Rate (Ts Max to Tp)		4℃/second Max
Preheat	Temperature Min (Ts Min.)	180℃
	Temperature Max (Ts Max.)	200℃
	Time (ts Min. to ts Max.)	60~120 seconds Max.
Time maintained above	Temperature (TL)	220℃
	Time(ts) maintained above TL	60 seconds Max.
Peak/Classification Temperature (Tp)		260 ℃
Time within 5℃ of actual Peak Temperature (tp)		10 seconds Max
Suggest reflow times		2 Times Max.

OPTICAL & ELECTRICAL CHARACTERISTICS CURVES -IF=20mA, Ts=25℃, RH60%

Figure 1. Forward Current Vs. Forward Voltage

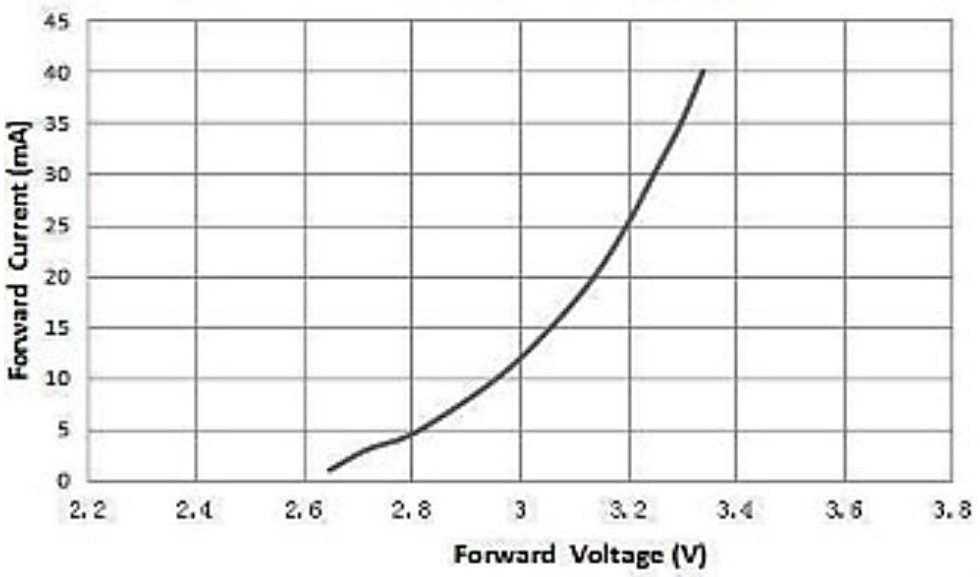
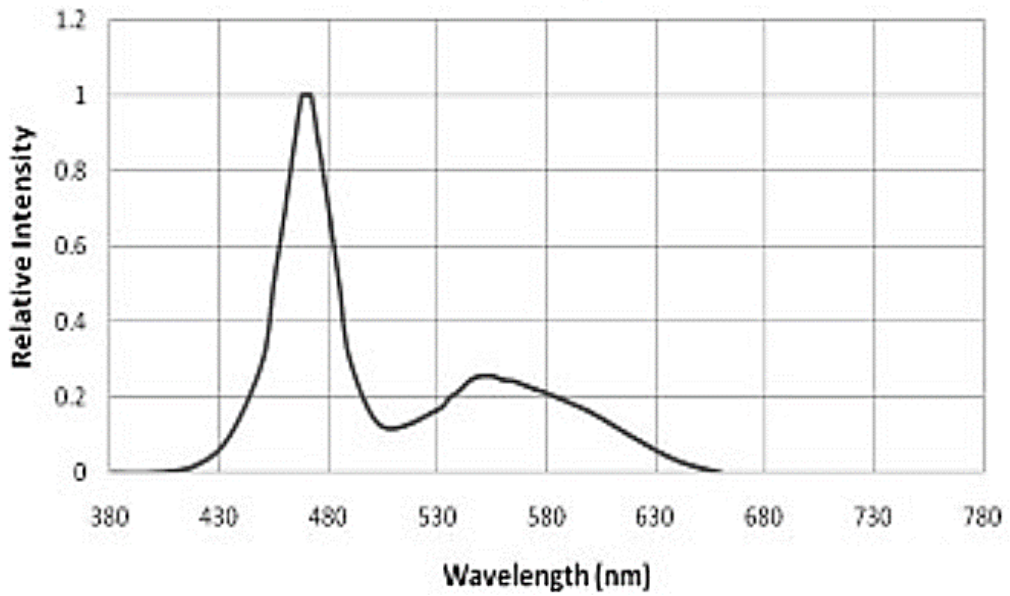


Figure 2. Spectrum Distribution



OPTICAL & ELECTRICAL CHARACTERISTICS CURVES -IF=20mA, Ts=25℃, RH60%

Figure 3. Relative Intensity Vs. Ambient Temperature

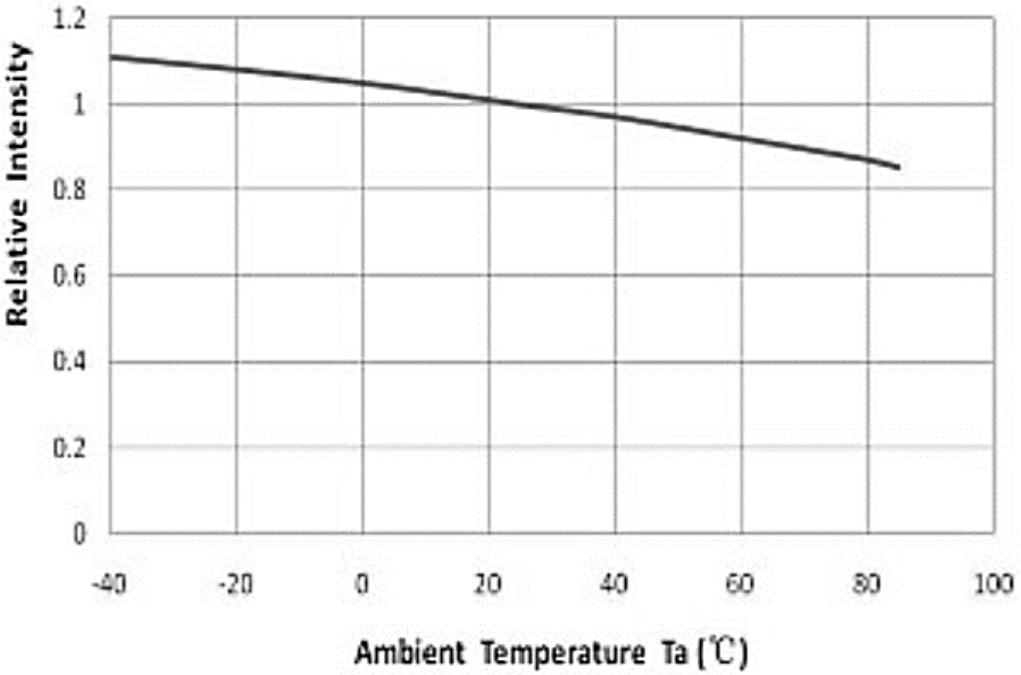
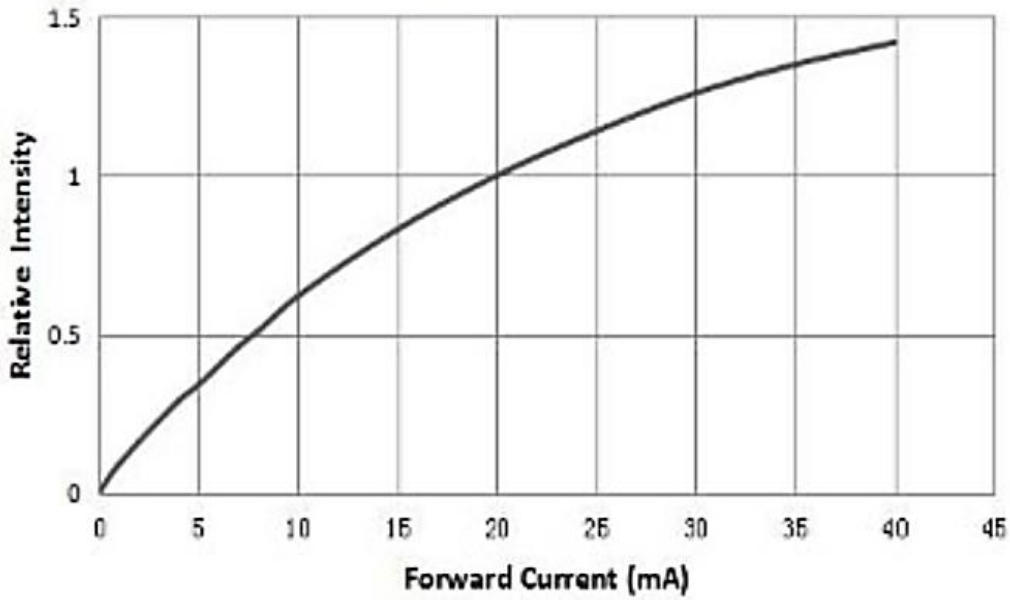


Figure 4. Relative Intensity Vs. Forward Current



OPTICAL & ELECTRICAL CHARACTERISTICS CURVES -IF=20mA, Ts=25℃, RH60%

Figure 5. Max. Forward Current Vs. Ambient Temperature

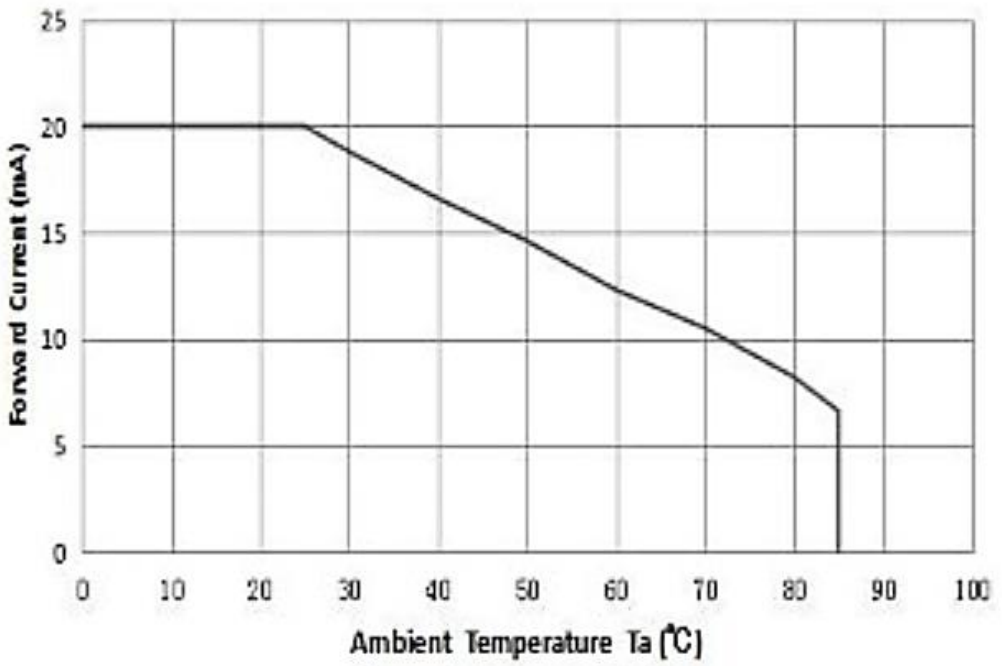
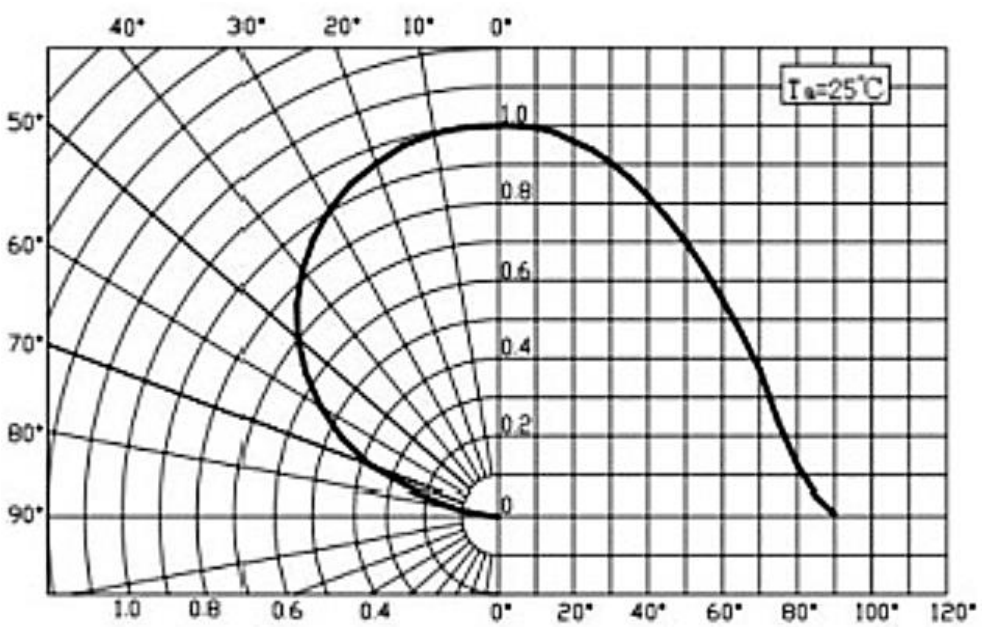


Figure 6 . Diagram Characteristics of Radiation



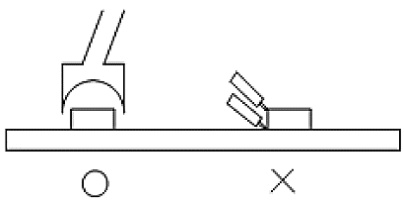
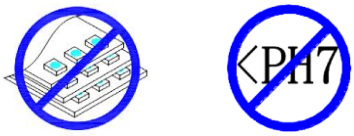
RELIABILITY TEST ITEMS AND CONDITION

TEST ITEMS	TEST CONDITIONS	REQUIREMENT
Solderability	Solder Temperature : 240 °C Solder Duration:3.5 +/-0.5 sec.	Solderable Area over 95%
Thermal Shock Followed by High Temperature & High Humidity Cyclic	-40° → 10min. 5 Cycles ↑ ↓ Shift (2~3) min 100 °C → 10min 25 °C ~55 °C (90%~ 95%) RH 2 Cycles for 48 hours. Recover for 2 hours.	C = 0 & I **
Resistance for Soldering Heat	Reflow Solder	
DC Operating Life	1000 hours Forward Current: 20 mA	
High Temperature Storage	100 °C → 1000 hrs.	
High Temperature & Humidity Cyclic	25 °C ~55 °C (90%~ 95%) RH 6 Cycles for 144 hours. Recover for 2 hours.	

Reminds

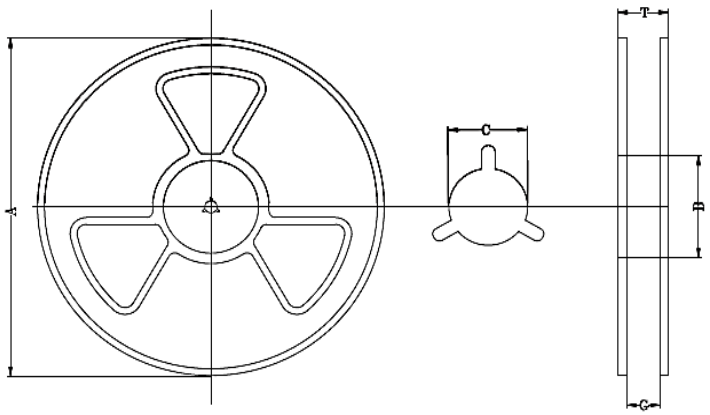
1. The reliability of products shall be satisfied with items listed above
2. Confidence level: 90%; LTPD:10%
3. The technical information shown in the data sheets are limited to the typical characteristics and related circuit samples.

NOTICE CONDITION

ITEMS	TEST CONDITIONS
Soldering by Iron	1. The temperature of Iron must be lower than 300 °C, 3 second by hand soldering 2. The hand solder should be done only one times
Repairing	Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed before if the characteristics of LEDS will or not be damaged by repair. 
Storage	1. Package is sealed: Recommended storage condition @ 5°C ~30°C and Humidity 90% RH Max. for 24 months 2. Package is opened: (1) After this bag is opened ,devises that will be applied to infrared to infrared reflow, vapor-phase reflow. A. Completed within 672 hour. B. Stored at 5℃~30℃and 60% RH or less 3. If baking is required, devices must be baked under below conditions 24 hours at 60℃±3℃
Handling Precautions	1. Don’t stack together assembled PCBs containing LEDs. Impact may scratch the silicone lens or damage 2. Not available in the situation of Acidity for PH 

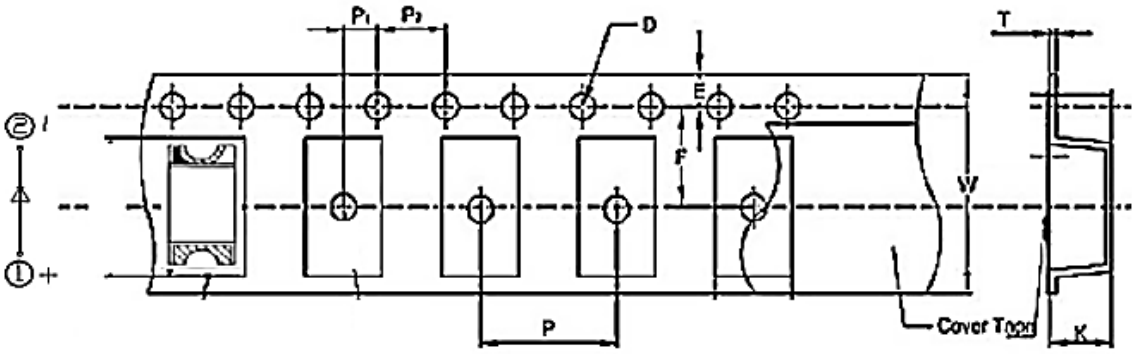
SMD LED 1206 SERIES WHITE CLEAR COLOR

REEL DIMENSION (Unit: mm, 3000pcs/Reel)



CODE	DIMENSION
A	178.0+/-2.0
B	Φ60+/-2.0
C	R6.5+/-0.5
G	9.0+/-1.0
T	12.0+/-1.0

TAPE DIMENSION (Unit mm)



CODE	D	E	F	K	P	P1	P2	T	W
Dimension	1.50 ±0.20	1.75 ±0.10	3.50 ±0.05	1.00 ±0.10	4.00 ±0.10	2.00 ±0.05	4.00 ±0.10	0.200 ±0.1	8.00 ±0.30

IMPORTANT NOTES AND DISCLAIMER

1. ROHS COMPLIANCE: The levels of RoHS restricted materials in this product are below the maximum concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an exempted application, in accordance with EU RoHS Directive (EU) 2015/863 EC (RoHS3). RoHS Test Report for this product can be obtained can be obtained at Download Center.
2. REACH COMPLIANCE: REACH substances of high concern (SVHCs) information is available for this product. Since the European Chemical Agency (ECHA) has published notice of their intent to frequently revise the SVHC listing for the foreseeable future, REACH Test Report for this product can be obtained can be obtained at Download Center.
3. All Product parametric performance is indicated in the Electrical Characteristics for the listed herein test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.
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8. *NextGen* requires that customers first obtain an RMA (Returned Merchandise Authorization) number prior to returning any products. Returns must be made within 30 days of the date of invoice, be in the original packaging, unused and like-new condition. At the time of quoting or purchasing, a product may say that it is Non-Cancelable/ Non-Returnable (NCNR). These products are not returnable and not refundable.