



BP1608X09-G0

SMD Type Blue Emitter

Features

- Small double-end package
- Viewing Angle = $\pm 30^\circ$
- High reliability
- Ultra bright Blue
- RoHS compliance

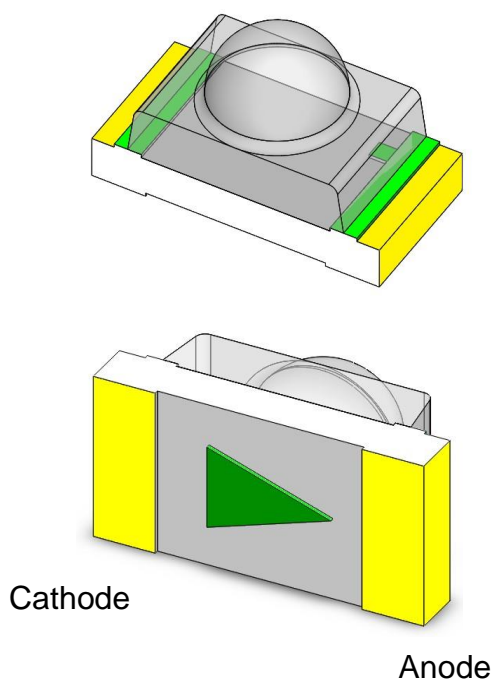
Applications

- LED sensor
- Indicator light
- General use

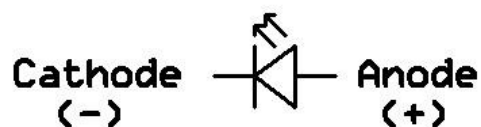
Description

The BP1608X09-G0 is an InGaN Blue LED housed in a miniature SMD package. The device has a peak wavelength of 452nm LED.

Package Outline



Schematic





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Absolute Maximum Rating at 25°C

Symbol	Parameters	Ratings	Units	Notes
I _F	Continuous Forward Current	30	mA	
V _R	Reverse Voltage	5	V	
T _{opr}	Operating Temperature	-40 ~ +85	°C	
T _{stg}	Storage Temperature	-40 ~ +100	°C	
T _{sol}	Soldering Temperature	260	°C	1
P _D	Power Dissipation at(or below) 25°C Free Air Temperature	114	mW	

Electro-Optical Characteristics *TA = 25°C (unless otherwise specified)*

Optical Characteristics

Symbol	Parameters	Test Conditions	Min	Typ	Max	Units	Notes
I _v	Luminous Intensity	I _F =5mA	110	165	-	mcd	2
		I _F =20mA	-	590	-		
I _e	Radiant Intensity	I _F =5mA	-	4.5	-	mW/sr	
λ _p	Peak Wavelength	I _F =5mA	-	452	-	nm	
λ _d	Dominant Wavelength	I _F =5mA	-	457	-	nm	
Δλ	Spectral Bandwidth	I _F =5mA	-	17	-	nm	
θ _{1/2}	Angle of Half Intensity	I _F =5mA	-	±30	-	deg	

Electrical Characteristics

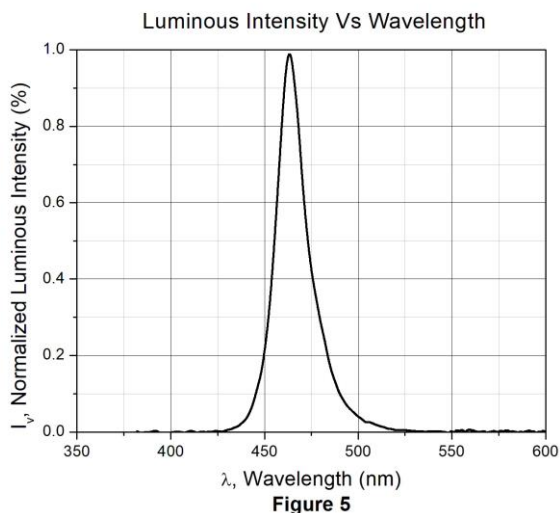
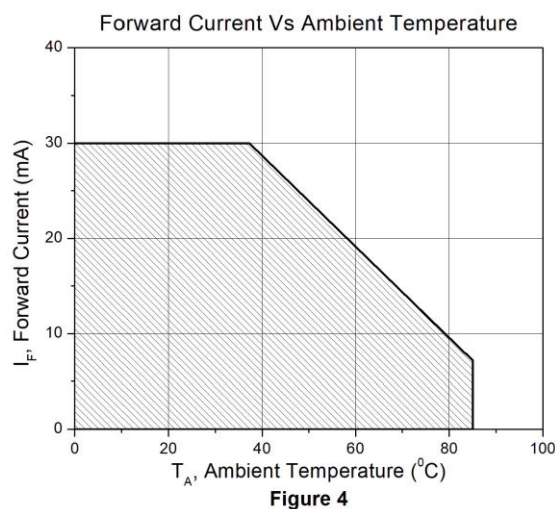
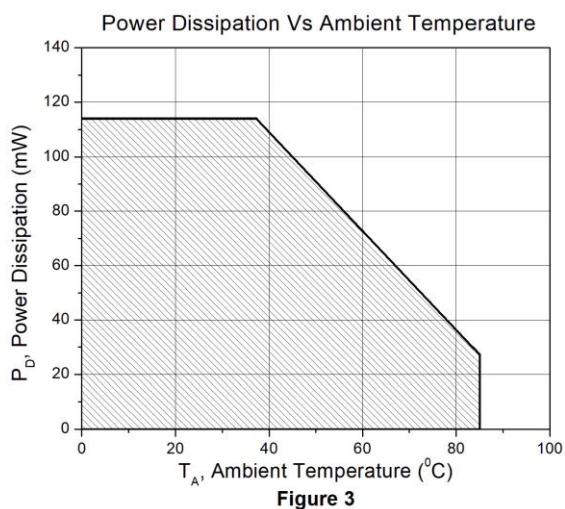
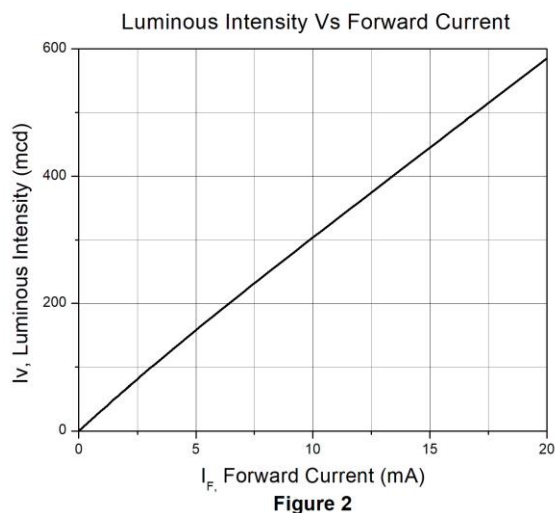
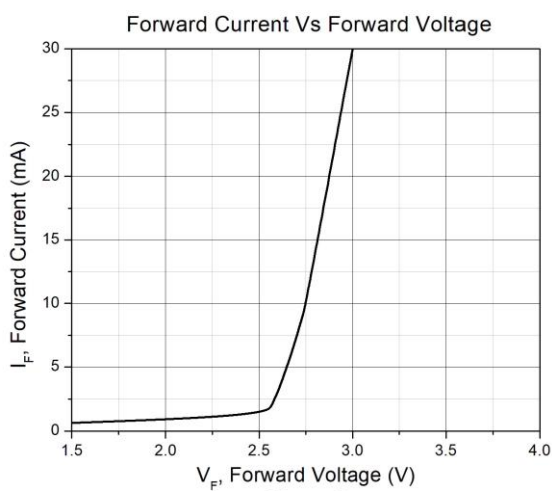
Symbol	Parameters	Test Conditions	Min	Typ	Max	Units	Notes
V _F	Blue LED Forward Voltage	I _F =5mA	2.4	2.65	3.2	V	
		I _F =30mA	2.6	-	3.8	V	

Notes:

1. Soldering time ≤ 5 seconds.
2. Tolerance of Luminous Intensity: ±10%.



Typical Characteristic Curves





Typical Characteristic Curves

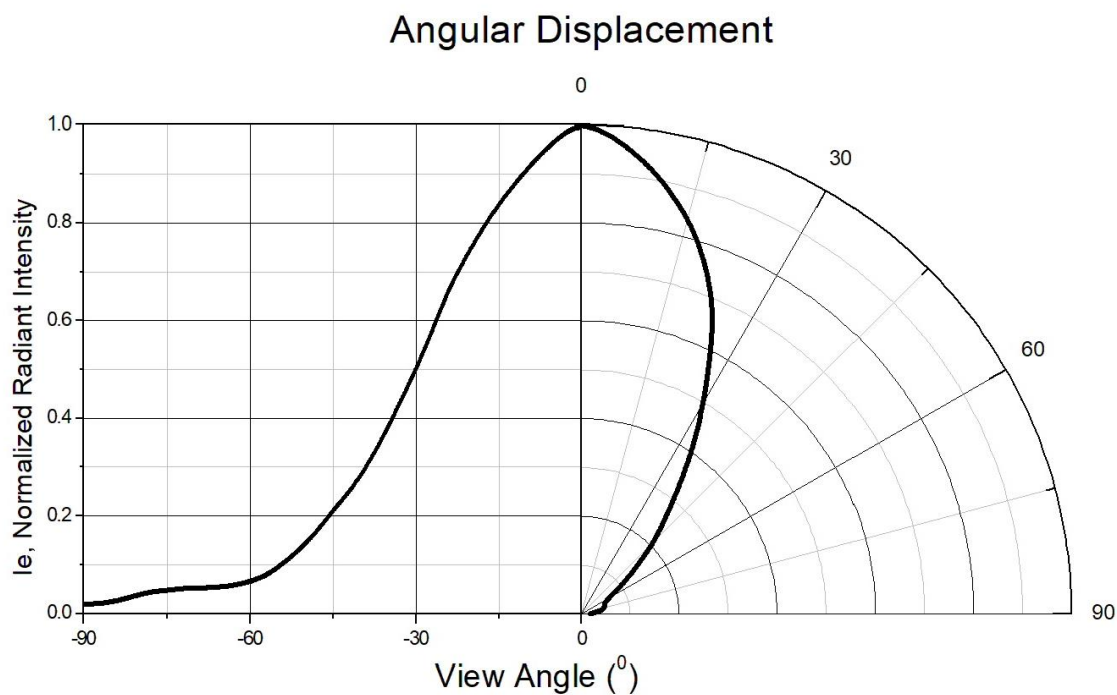


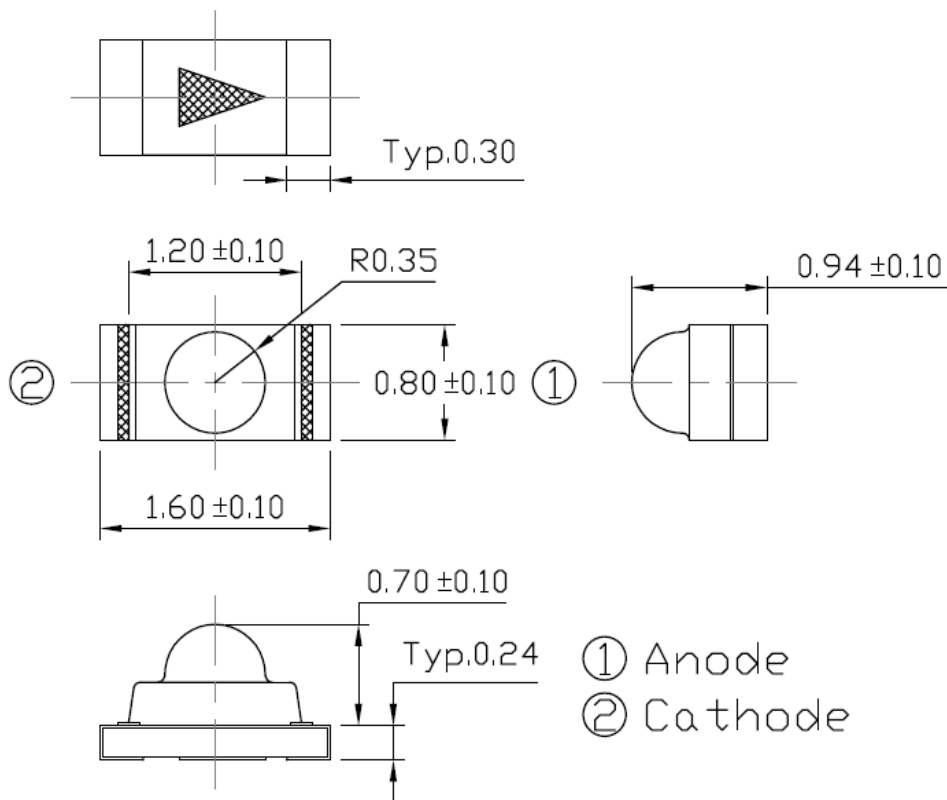
Figure 6



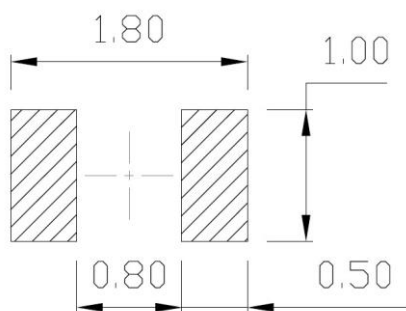
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Package Dimension *All dimensions are in mm, unless otherwise stated*



Recommended Soldering Mask *All dimensions are in mm, unless otherwise stated*



Ordering Information

Part Number	Description	Quantity
BP1608X09-G0	Tape & Reel	4000 pcs

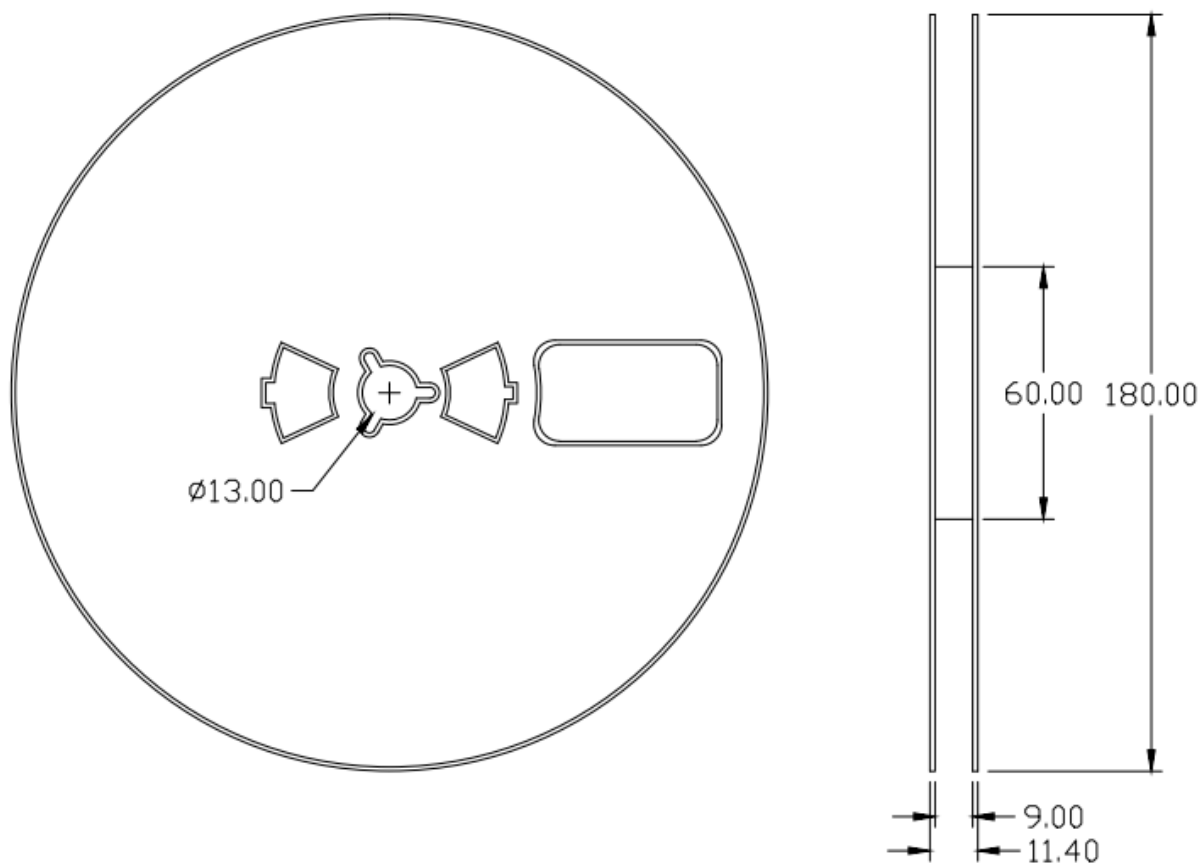


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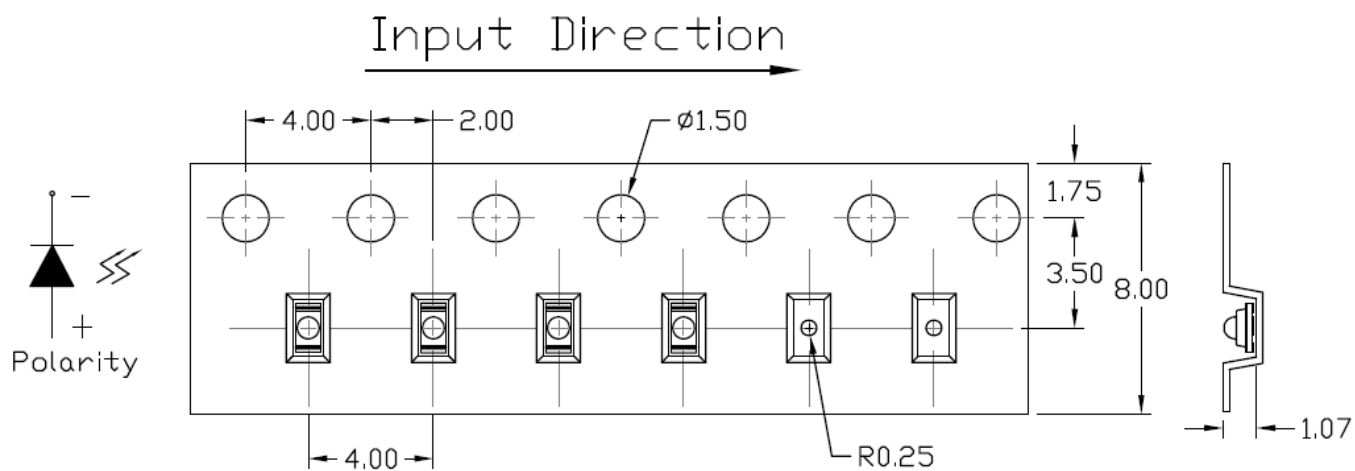
Reel Dimension

All dimensions are in mm, unless otherwise stated



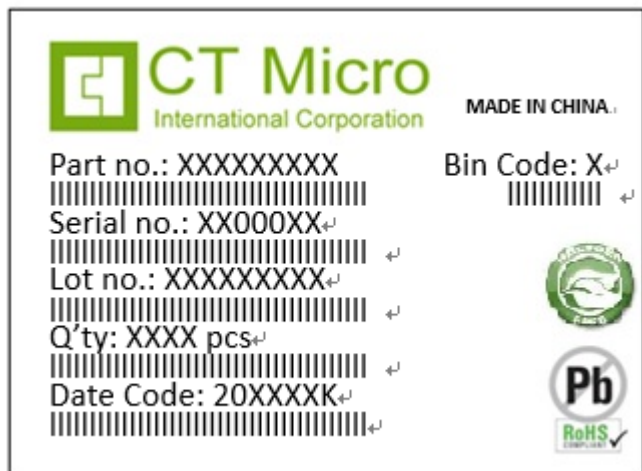
Tape Dimension

All dimensions are in mm, unless otherwise stated





Label Form Specification



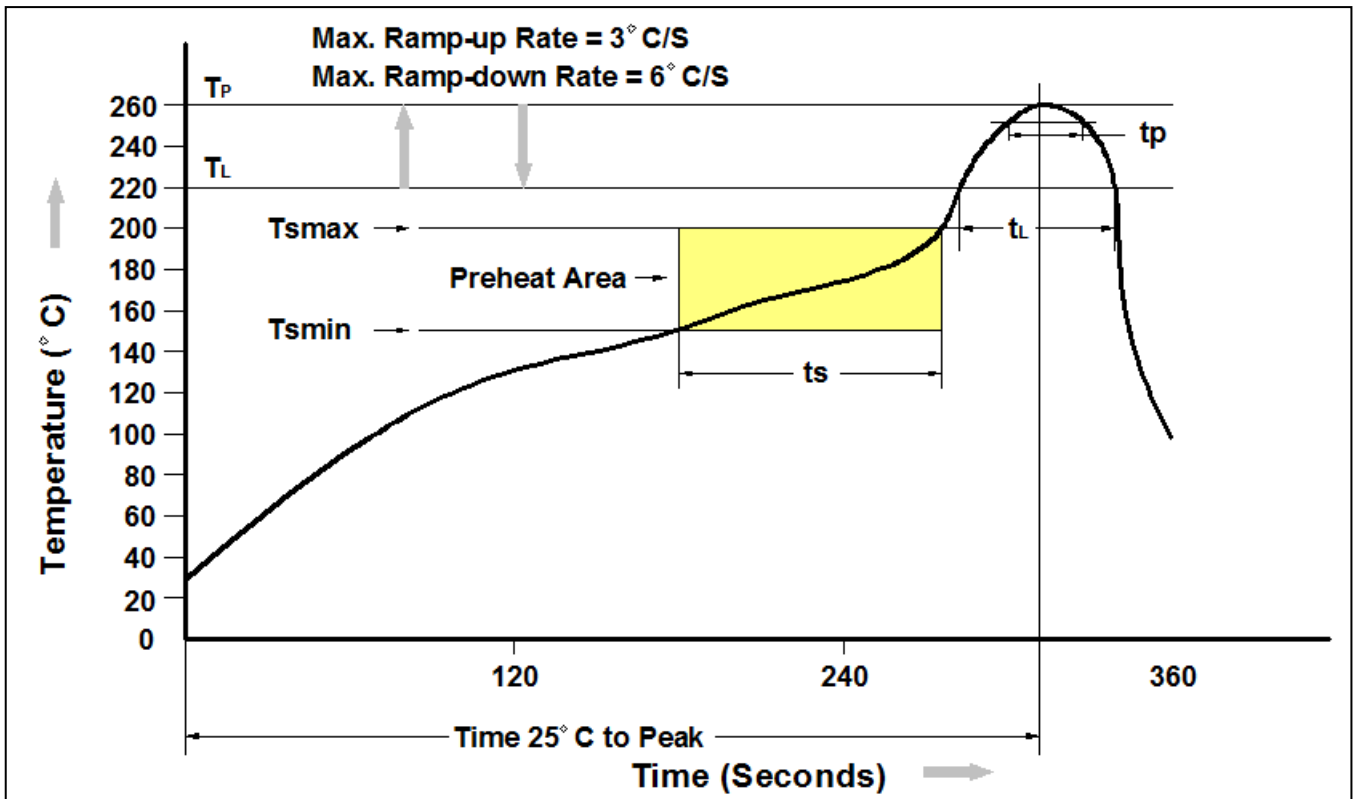
Part no: CTM Production Number
Serial no: Production Number
Lot no: Lot number
Q'ty: Packing Quantity
Date Code: Manufacture Date
Bin Code: Iv Ranks
MADE IN CHINA: Production Place

Storage Condition

1. Do not open moisture proof bag before the products are ready to use.
2. The moisture barrier bag should be stored at 30°C and 90%R.H. max. before opening.
Shelf life of non-opened bag is 12 months after the bag sealing date.
3. After opening the moisture barrier bag floor life is 168h at 30°C/60%RH. max. Unused LEDs should be resealed into moisture barrier bag. (Refer to J-STD-020 Standard)
4. If the moisture absorbent material has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the J-STD-033 Standard conditions.



Reflow Profile



Profile Feature	Pb-Free Assembly Profile
Temperature Min. (Tsmmin)	150°C
Temperature Max. (Tsmmax)	200°C
Time (ts) from (Tsmmin to Tsmmax)	60-120 seconds
Ramp-up Rate (tL to tP)	3°C/second max.
Liquidous Temperature (TL)	217°C
Time (tL) Maintained Above (TL)	60 – 150 seconds
Peak Body Package Temperature	260°C +0°C / -5°C
Time (tP) within 5°C of 260°C	30 seconds
Ramp-down Rate (TP to TL)	6°C/second max
Time 25°C to Peak Temperature	8 minutes max.



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