



RP201208-CTC3

SMD Type Red Emitter

Features

- Top view 0805 package
- Viewing Angle = $\pm 70^\circ$
- Compatible with infrared and vapor phase reflow solder process
- High reliability
- Ultra bright Red
- RoHS compliance

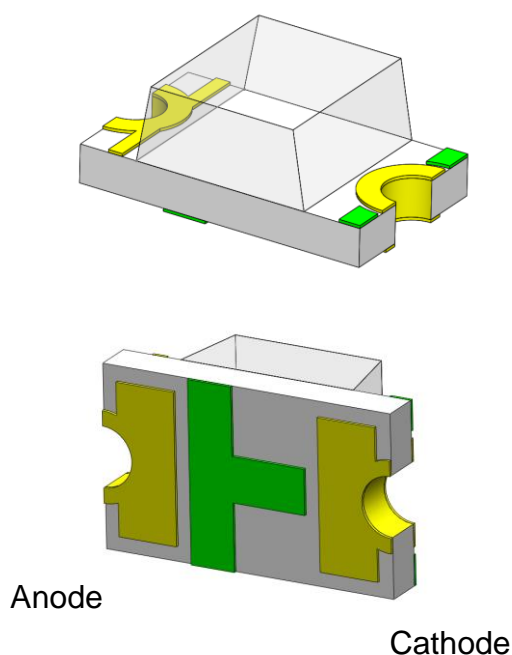
Applications

- Optical indicator.
- Switch and Symbol Display.

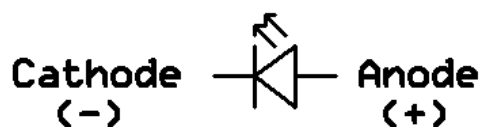
Description

The RP201208-CTC3 is an AlGaInP Red LED housed in a miniature SMD package. The device has a dominant wavelength of 620nm LED.

Package Outline



Schematic





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Absolute Maximum Rating at 25°C

Symbol	Parameters	Ratings	Units	Notes
I _F	Continuous Forward Current	25	mA	
I _{FP}	Peak Forward Current	60	mA	1
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	2
P _D	Power Dissipation at(or below) 25°C Free Air Temperature	65	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	22.5	-	45.0	mcd	3
λ _d	Dominant Wavelength	I _F =5mA	615	-	630	nm	4
θ _{1/2}	Angle of Half Intensity	I _F =5mA	-	±70	-	deg	

Electrical Characteristics

Symbol	Parameters	Test Conditions	Min	Typ	Max	Units	Notes
V _F	Forward Voltage	I _F =5mA	1.7	-	2.5	V	5
I _R	Reverse Current	V _R =5V	-	-	1	μA	

Notes:

1. I_{FP} Conditions--Pulse Width ≤ 100μs and Duty ≤ 10%.
2. Soldering time ≤ 10 seconds
3. Bin Range of Luminous Intensity

Bin Code	Min	Max	Unit	Condition
M2	22.5	28.5	mcd	I _F =5mA
N1	28.5	36.0		
N2	36.0	45.0		

Tolerance of: Luminous Intensity ±10%



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4. Bin Range of Dominant Wavelength

Bin Code	Min	Max	Unit	Condition
J1	615	620	nm	$I_F=5\text{mA}$
J2	620	625		
J3	625	630		

Tolerance of Dominant Wavelength: $\pm 1\text{nm}$.

5. Bin Range of Forward Voltage

Bin Code	Min	Max	Unit	Condition
V4	1.7	1.9	V	$I_F=5\text{mA}$
V5	1.9	2.1		
V6	2.1	2.3		
V7	2.3	2.5		

Tolerance of Forward Voltage $\pm 0.1\text{V}$.



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Typical Characteristic Curves

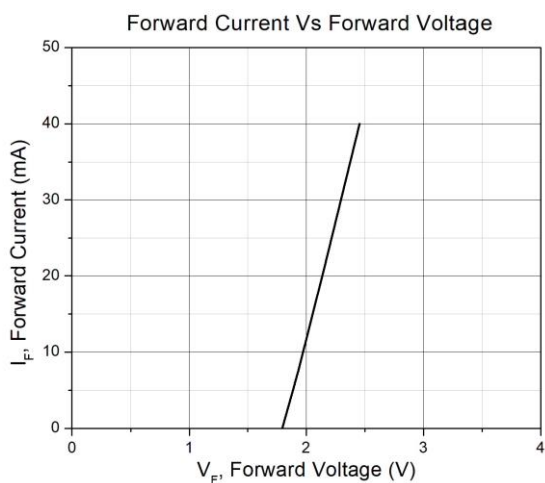


Figure 1

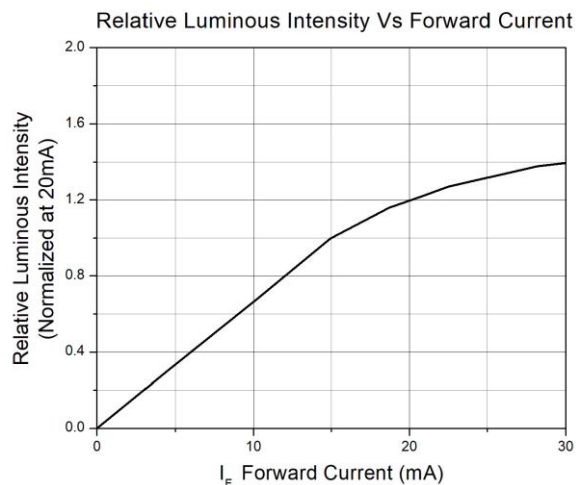


Figure 2

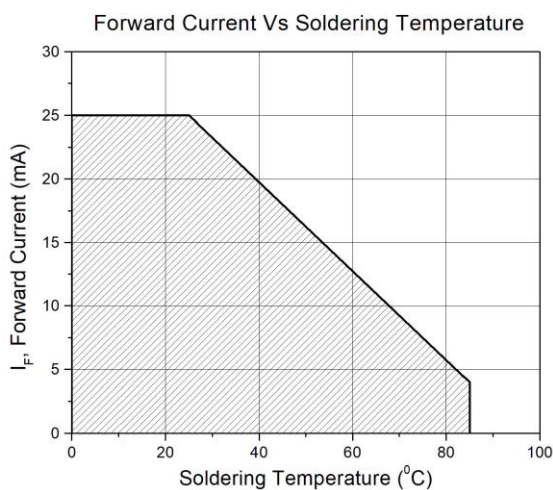


Figure 3

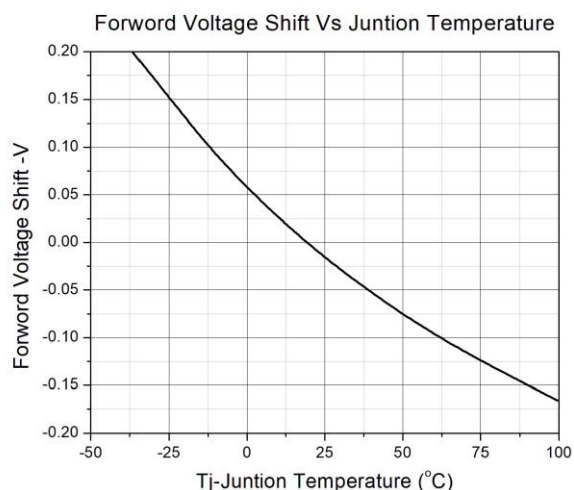


Figure 4

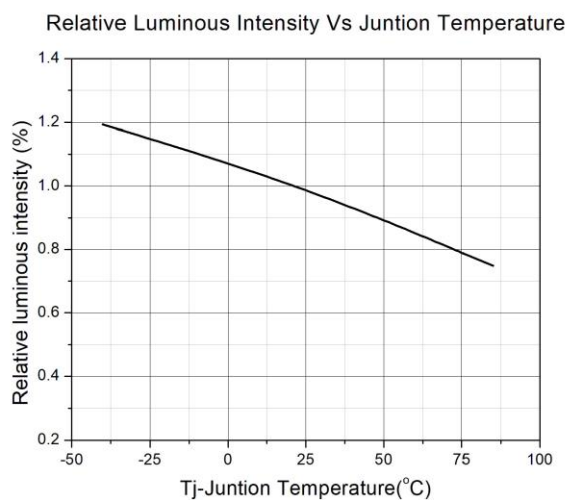


Figure 5

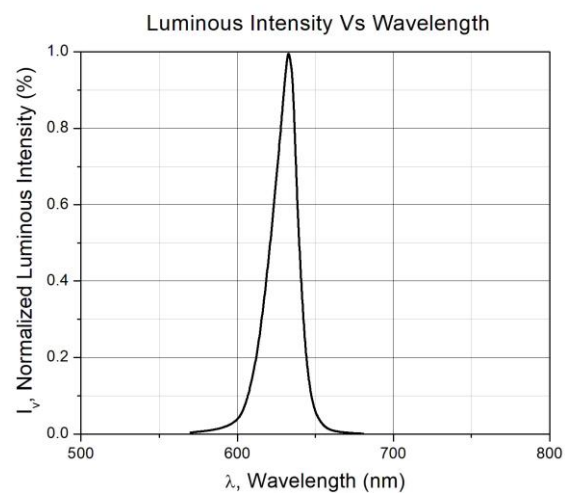


Figure 6



Typical Characteristic Curves

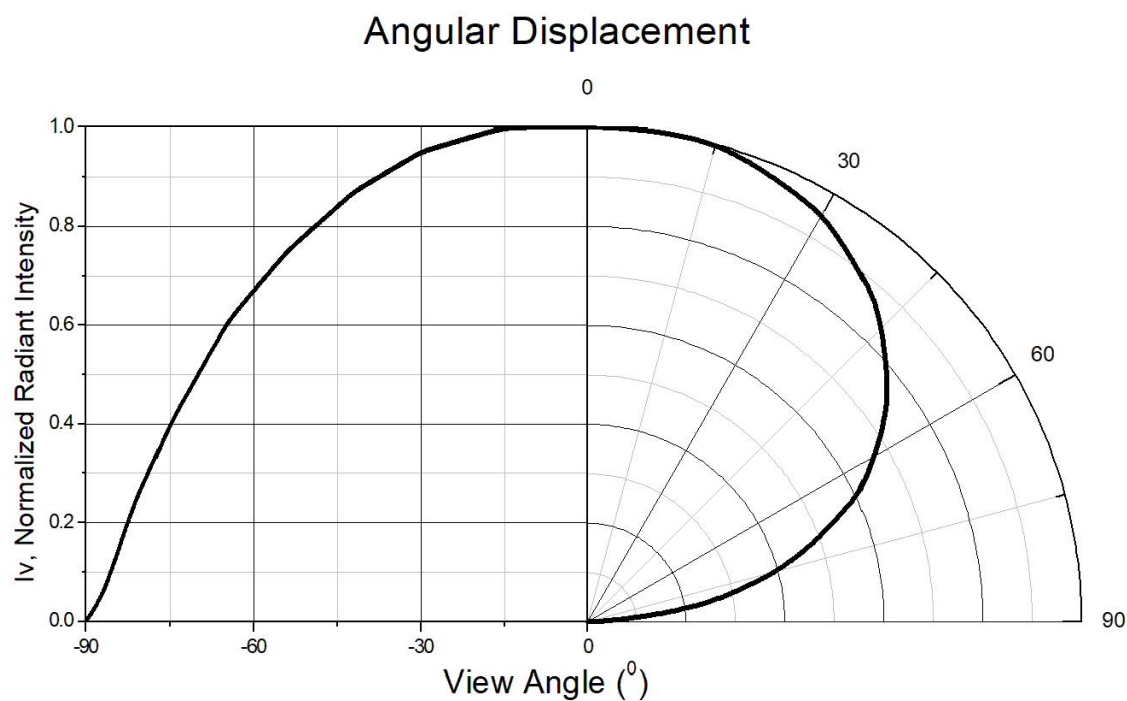
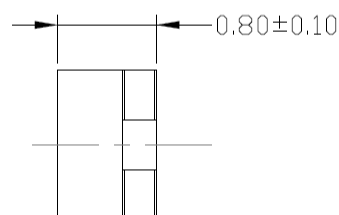


Figure 7

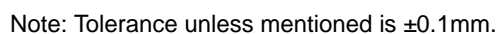


Technical drawing of a mechanical part with dimensions:

- Top horizontal dimension: 0.50 ± 0.10
- Left vertical dimension: 1.00 ± 0.10
- Bottom left horizontal dimension: 0.10 ± 0.10
- Bottom right horizontal dimension: 1.00 ± 0.10



Recommended Soldering Mask



<i>Part Number</i>	<i>Description</i>	<i>Quantity</i>
RP201208-CTC3	Tape & Reel	3000 pcs

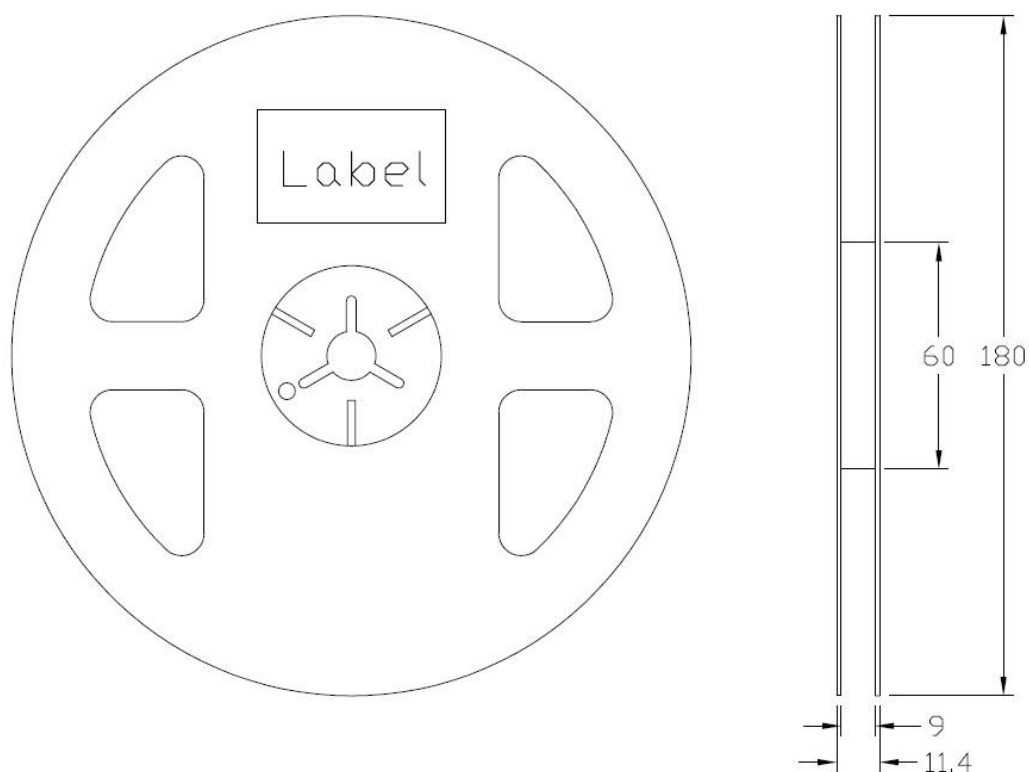


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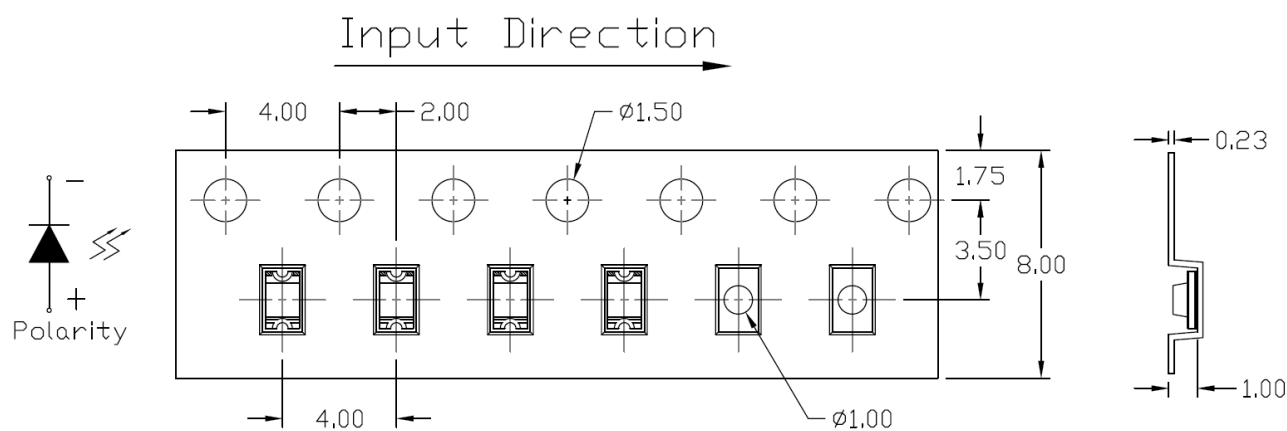
Reel Dimension

All dimensions are in mm, unless otherwise stated



Tape Dimension

All dimensions are in mm, unless otherwise stated



Note: Tolerance unless mentioned is ± 0.1 mm.



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Label Form Specification

MSL-X
MADE IN CHINA

CPN: XXXXXXXXXXXXXXXX
Part no: XXXXXXXXXXXXXXXX
Serial no: XXXXXXXX
Lot no: XXXXXXXX
Qty: XXXXXX Date Code: YWWJ
IV: XX WD:XX VF:XX

QR Code

Pb
RoHS

CPN : Customer Part Number
Part no: CTM Production Number
Serial no: Production Number
Lot no: Lot number
Q'ty: Packing Quantity
Date Code: Manufacture Date
IV : Bin Code of Luminous Intensity
WD : Bin Code of Dominant Wavelength
VF : Bin Code of Forward Voltage
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 1 year 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.



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Reflow Profile



Profile Feature	Pb-Free Assembly Profile
Temperature Min. (T_{smin})	150°C
Temperature Max. (T_{smax})	200°C
Time (t_s) from (T_{smin} to T_{smax})	60-120 seconds
Ramp-up Rate (t_L to t_P)	3°C/second max.
Liquidous Temperature (T_L)	217°C
Time (t_L) Maintained Above (T_L)	60 – 150 seconds
Peak Body Package Temperature	260°C +0°C / -5°C
Time (t_P) within 5°C of 260°C	30 seconds
Ramp-down Rate (T_P to T_L)	6°C/second max
Time 25°C to Peak Temperature	8 minutes max.



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