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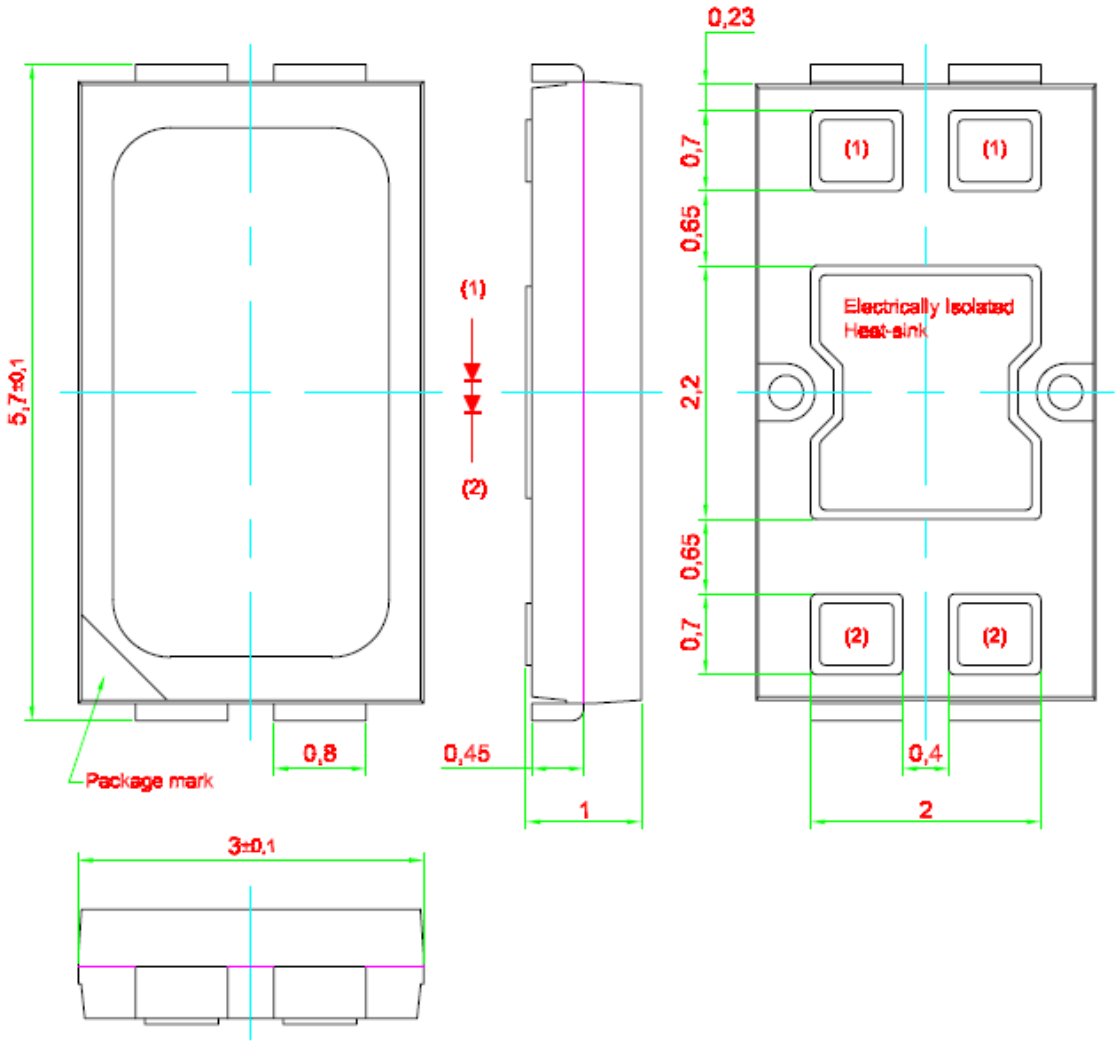
Primax5 150 (1W) InGaN White: NTWW-FSG



- Super high brightness surface mount LED.
- Excellent reliability with nitride phosphor system.
- Compact package outline (LxW) of 5.7 x 3.0 mm. Ultra low height profile – 1.0 mm.
- Low thermal resistance.
- Electrical and thermal isolated solder-pad design for better heat management.
- Compatible to IR reflow soldering.

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Material

	Material
Lead-frame.	Cu Alloy With Ag Plating.
Package.	High Temperature Resistant Plastic, PPA.
Encapsulant	Silicone Resin.
Soldering Leads.	Ag Plating.

Note: This product is Pb free.

Absolute Maximum Ratings

	Maximum Value	Unit
DC forward current	180	mA
Peak pulse current	200	mA
Reverse voltage.	10	V
LED junction temperature.	125	°C
Operating temperature.	-40 … +100	°C
Storage temperature.	-40 … +100	°C

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Optical Characteristics at Tj=25°C.

	Luminous Flux @ If=150mA (lm)			Viewing Angle
Part Number	Min	Typ.	Max	
NTWW-FSG-UV2-1	87.4	100.0	129.2	120

	Flux @ If = 150mA (lm)	
Flux Bin	Min	Max
U2	87.4	99.4
U3	99.4	113.6
V2	113.6	129.2

1. Luminous intensity is measured with an accuracy of ±11%.
2. Color binning is carried for all units as per the wavelength-binning table. Only one color group is allowed for each reel.
3. Typical CRI of 72.

Electrical Characteristics at Tj=25°C.

	Vf @ If = 150mA		
Part Number	Min. (V)	Typ. (V)	Max.(V)
NTWW-FSG	6.0	6.5	7.2

Forward voltages are tested using a current pulse of 1 ms and has an accuracy of ± 0.1V.

Vf Binning

Vf Bin	Forward voltage (V)
V1	6.00 … 6.20
V2	6.20 … 6.40
V3	6.40 … 6.60
V4	6.60 … 6.80

Vf Bin	Forward voltage (V)
V5	6.80 … 7.00
V6	7.00 … 7.20

Forward voltage, Vf is measured with an accuracy of ±0.1 V.

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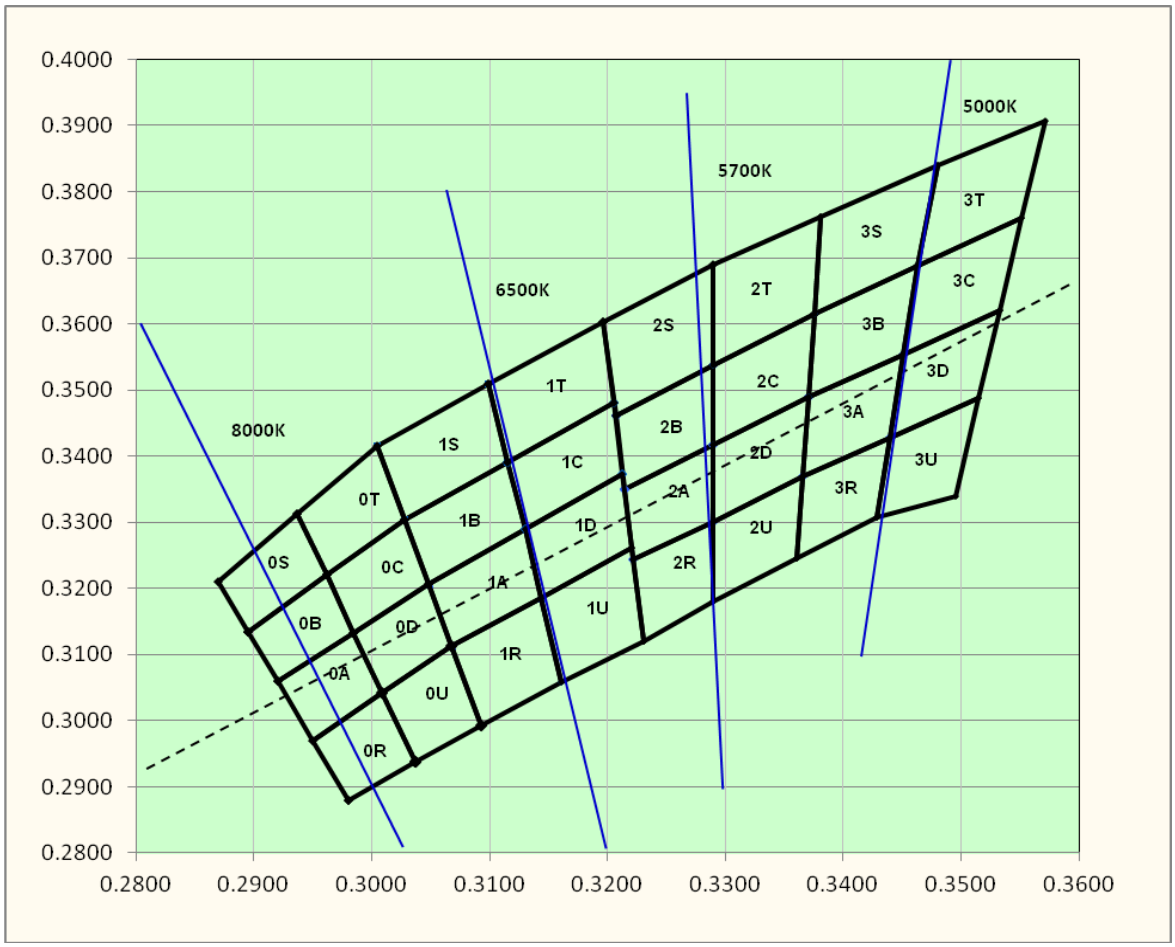
Color.



Chromaticity coordinate groups are measured with an accuracy of ±0.01.

		1	2	3	4
0A	Cx	0.2950	0.2920	0.2984	0.3009
	Cy	0.2970	0.3060	0.3133	0.3042
0R	Cx	0.2980	0.2950	0.3009	0.3037
	Cy	0.2880	0.2970	0.3042	0.2937
1A	Cx	0.3048	0.3130	0.3144	0.3068
	Cy	0.3207	0.3290	0.3186	0.3113
1R	Cx	0.3068	0.3144	0.3161	0.3093
	Cy	0.3113	0.3186	0.3059	0.2993
2A	Cx	0.3215	0.3290	0.3290	0.3222
	Cy	0.3350	0.3417	0.3300	0.3243
2R	Cx	0.3222	0.3290	0.3290	0.3231
	Cy	0.3243	0.3300	0.3180	0.3120

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3A	Cx	0.3371	0.3451	0.3440	0.3366
	Cy	0.3490	0.3554	0.3427	0.3369
3R	Cx	0.3366	0.3440	0.3429	0.3361
	Cy	0.3369	0.3428	0.3307	0.3245
0B	Cx	0.2920	0.2895	0.2962	0.2984
	Cy	0.3060	0.3135	0.3220	0.3133
0S	Cx	0.2895	0.2870	0.2937	0.2962
	Cy	0.3135	0.3210	0.3312	0.3220
1B	Cx	0.3028	0.3115	0.3130	0.3048
	Cy	0.3304	0.3391	0.3290	0.3207
1S	Cx	0.3005	0.3099	0.3115	0.3028
	Cy	0.3415	0.3509	0.3391	0.3304
2B	Cx	0.3207	0.3290	0.3290	0.3215
	Cy	0.3462	0.3538	0.3417	0.3350
2S	Cx	0.3196	0.3290	0.3290	0.3207
	Cy	0.3602	0.3690	0.3538	0.3462
3B	Cx	0.3376	0.3463	0.3451	0.3371
	Cy	0.3616	0.3687	0.3554	0.3490
3S	Cx	0.3381	0.3480	0.3463	0.3376
	Cy	0.3762	0.3840	0.3687	0.3616
0C	Cx	0.2984	0.2962	0.3028	0.3048
	Cy	0.3133	0.3220	0.3304	0.3207
0T	Cx	0.2962	0.2937	0.3005	0.3028
	Cy	0.3220	0.3312	0.3415	0.3304
1C	Cx	0.3115	0.3205	0.3213	0.3130
	Cy	0.3391	0.3481	0.3373	0.3290
1T	Cx	0.3099	0.3196	0.3205	0.3115
	Cy	0.3509	0.3602	0.3481	0.3391
2C	Cx	0.3290	0.3376	0.3371	0.3290
	Cy	0.3538	0.3616	0.3490	0.3417
2T	Cx	0.3290	0.3381	0.3376	0.3290
	Cy	0.3690	0.3762	0.3616	0.3538
3C	Cx	0.3463	0.3551	0.3533	0.3451
	Cy	0.3687	0.3760	0.3620	0.3554
3T	Cx	0.3480	0.3571	0.3551	0.3463
	Cy	0.3840	0.3907	0.3760	0.3687
0D	Cx	0.2984	0.3048	0.3068	0.3009
	Cy	0.3133	0.3207	0.3113	0.3042
0U	Cx	0.3037	0.3009	0.3068	0.3093
	Cy	0.2937	0.3042	0.3113	0.2993

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1D	Cx	0.3130	0.3213	0.3221	0.3144
	Cy	0.3290	0.3373	0.3261	0.3186
1U	Cx	0.3144	0.3221	0.3231	0.3161
	Cy	0.3186	0.3261	0.3120	0.3059
2D	Cx	0.3290	0.3371	0.3366	0.3290
	Cy	0.3417	0.3490	0.3369	0.3300
2U	Cx	0.3290	0.3366	0.3361	0.3290
	Cy	0.3300	0.3369	0.3245	0.3180
3D	Cx	0.3451	0.3533	0.3515	0.3440
	Cy	0.3554	0.3620	0.3487	0.3427
3U	Cx	0.3440	0.3515	0.3495	0.3429
	Cy	0.3428	0.3487	0.3339	0.3307

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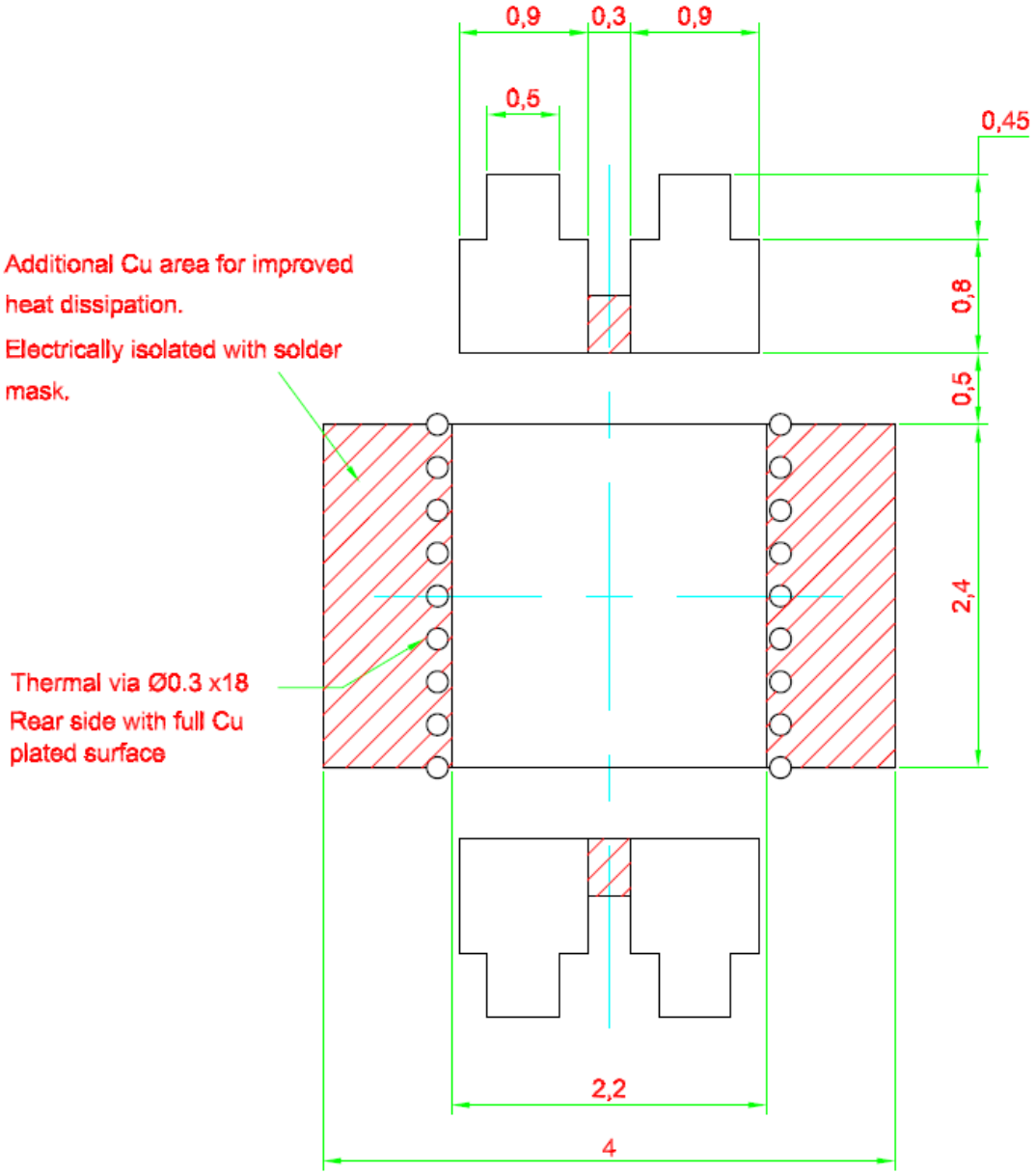
Solder Pad Design.



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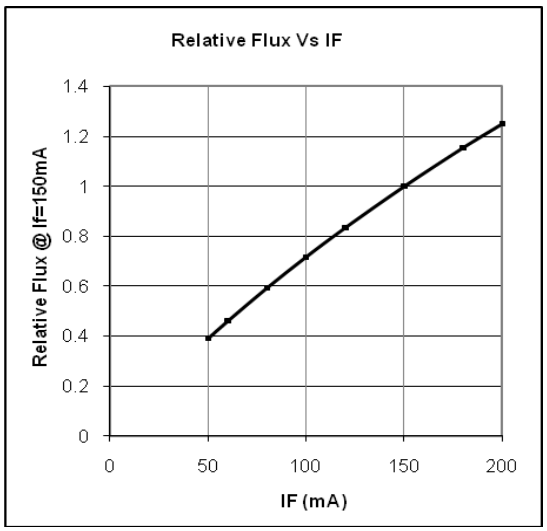
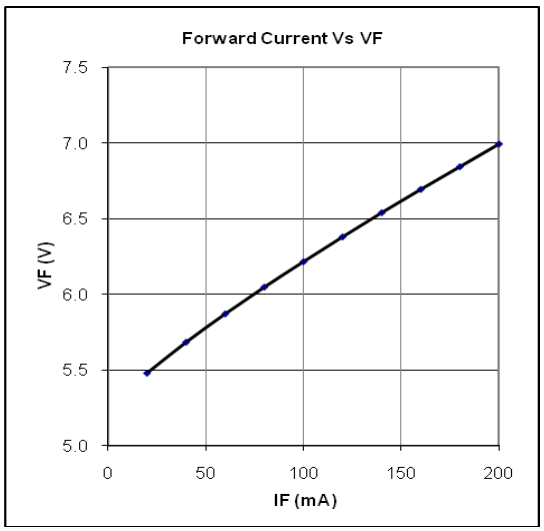
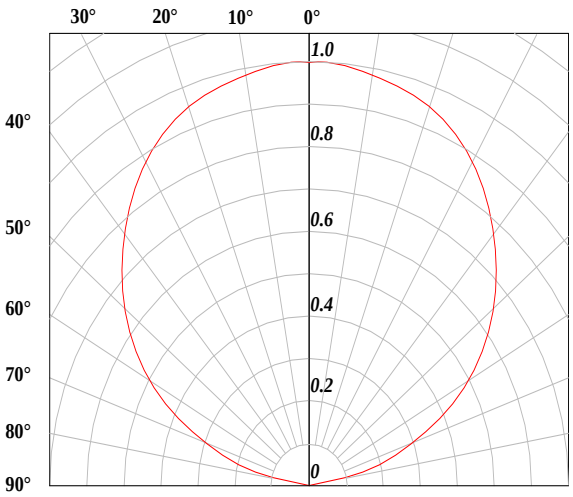
Relative flux vs. forward current



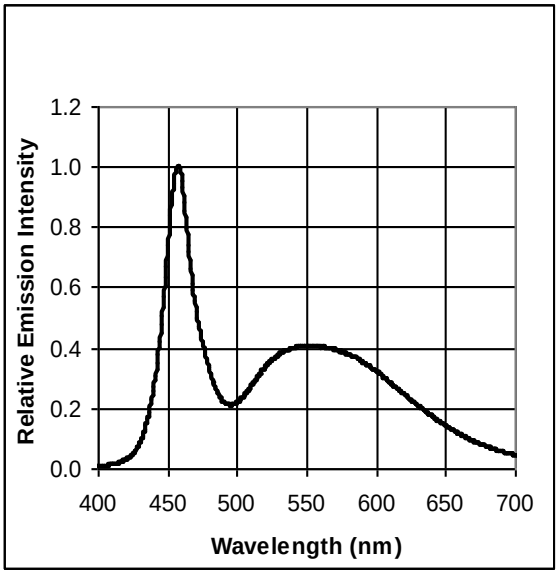
Forward voltage vs. forward current



Radiation pattern.



Color Spectrum.



Max current vs. Ambient Temperature

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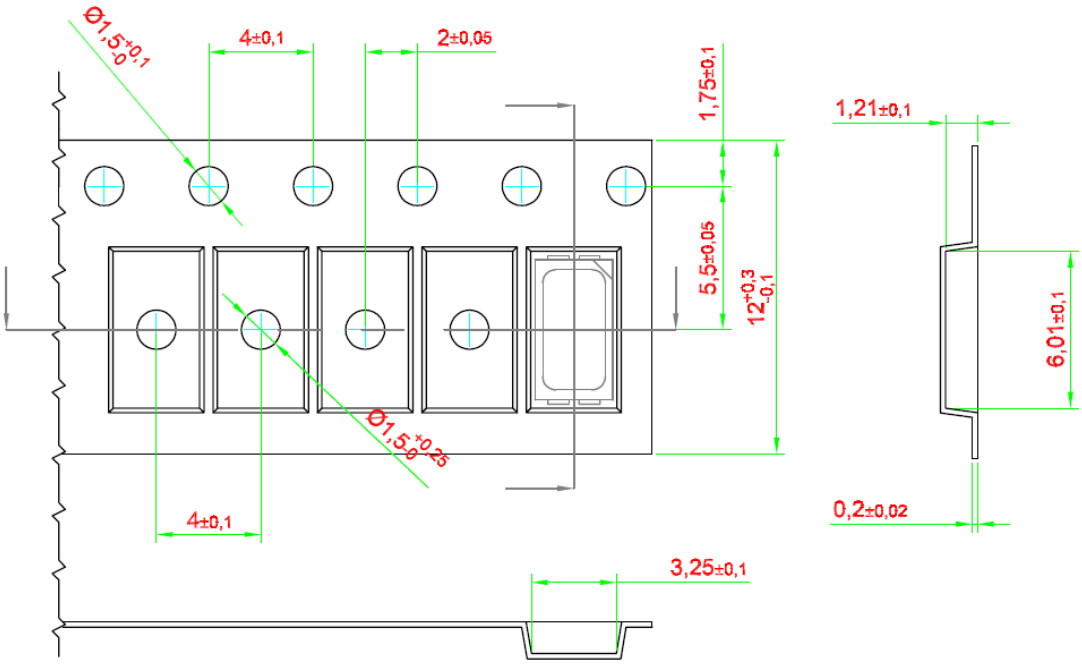
Taping And Orientation.

Reels come in quantity of 2000 units.

Reel diameters are 180 mm.



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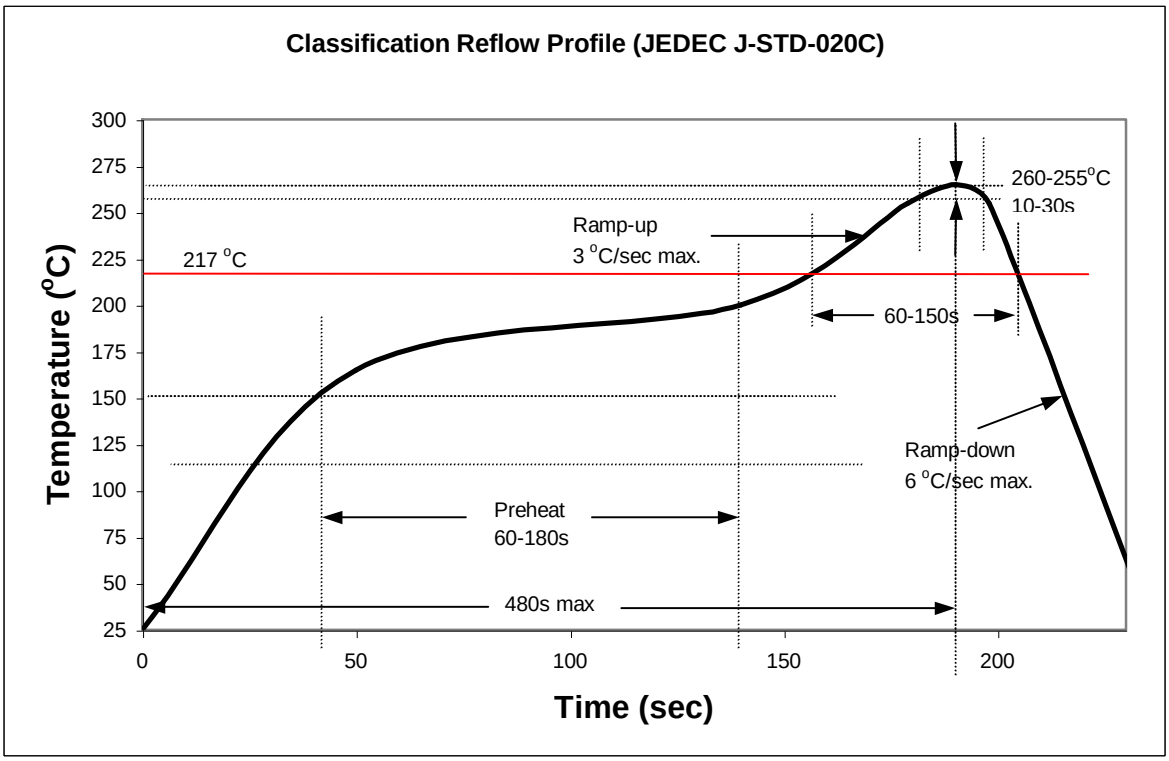
Recommended Pb Free IR-Reflow Soldering Profile.



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