

Power DomiLED[™]

With its significant power in terms brightness, viewing angle and variety of application possibilities, Power DomiLED[™] truly is a standout performer! Ideal for automotive interior lighting as well as home, office and industrial applications, it is also a proven performer in electronic signs and signals.



Features:

- > High brightness surface mount LED.
- > 120° viewing angle.
- > Small package outline (LxWxH) of 3.2 x 2.8 x 1.8mm.
- > Qualified according to JEDEC moisture sensitivity Level 2.
- > Compatible to IR reflow soldering.
- > Environmental friendly; RoHS compliance.
- > Built in ESD protection.



Applications:

- > Automotive:
Exterior applications, eg: signal lighting, Center High Mounted Stop Light (CHMSL)
- > Industrial: white goods (eg: Oven, microwave, etc.), light bar, illuminated advertising.
- > Lighting: architecture lighting, general lighting, garden light, channel light.



Optical Characteristics (Tj=25°C)

Part Ordering Number	Color	Viewing Angle°	Luminous Intensity @ 60mA IV (mcd)		
			Min.	Typ.	Max.
DWF-KZKG-Y2Z-1	Warm White	120	3550.0	5600.0	7150.0

NOTE

1. All part number above comes in a quantity of 2000 units per reel.
2. Luminous intensity is measured with an accuracy of ± 11%.
3. Wavelength binning is carried for all units as per the wavelength-binning table. Only one wavelength group is allowed for each reel.
4. InGaN wavelength is very sensitive to drive current. Operating at lower current is not recommended and may yield unpredictable performance. Current pulsing should be used for dimming purposes.

Electrical Characteristics at Tj=25°C

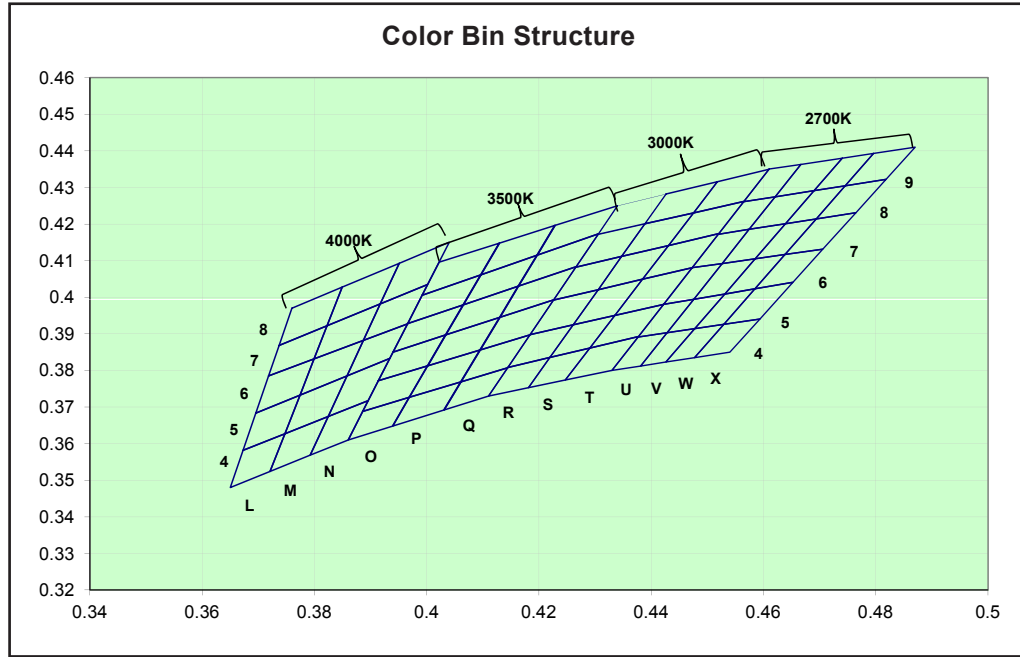
Part Number	Vf @ If = 60mA		
	Min. (V)	Typ. (V)	Max. (V)
DWF-KZKG	2.90	3.10	3.50

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

Absolute Maximum Ratings

	Maximum Value	Unit
DC forward current	80	mA
Peak pulse current; (tp ≤ 10µs, Duty cycle = 0.1)	120	mA
Reverse voltage; Ir (max) = 10µA	Not designed for reverse bias	V
ESD threshold (HBM)	4000	V
LED junction temperature	150	°C
Operating temperature	-40 ... +110	°C
Storage temperature	-40 ... +125	°C
Power dissipation (at room temperature)	300	mW
Thermal resistance		
- Junction / ambient, Rth JA	280	K/W
- Junction / solder point, Rth JS	130	K/W
(Mounting on DOMINANT standard PCB)		

DWF, Warm White Color Grouping



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

Bin		1	2	3	4
4U	Cx	0.4330	0.4370	0.4430	0.4380
	Cy	0.3800	0.3890	0.3910	0.3810
5U	Cx	0.4370	0.4420	0.4480	0.4430
	Cy	0.3890	0.3980	0.4000	0.3910
6U	Cx	0.4420	0.4470	0.4530	0.4480
	Cy	0.3980	0.4080	0.4090	0.4000
7U	Cx	0.4470	0.4510	0.4580	0.4530
	Cy	0.4080	0.4170	0.4180	0.4090
8U	Cx	0.4510	0.4560	0.4620	0.4580
	Cy	0.4170	0.4260	0.4270	0.4180
9U	Cx	0.4560	0.4610	0.4670	0.4620
	Cy	0.4260	0.4350	0.4370	0.4270
4V	Cx	0.4380	0.4430	0.4480	0.4430
	Cy	0.3810	0.3910	0.3920	0.3830
5V	Cx	0.4430	0.4480	0.4530	0.4480
	Cy	0.3910	0.4000	0.4010	0.3920
6V	Cx	0.4480	0.4530	0.4590	0.4530
	Cy	0.4000	0.4090	0.4100	0.4010
7V	Cx	0.4530	0.4580	0.4640	0.4590
	Cy	0.4090	0.4180	0.4200	0.4100
8V	Cx	0.4580	0.4620	0.4690	0.4640
	Cy	0.4180	0.4270	0.4290	0.4200
9V	Cx	0.4620	0.4670	0.4740	0.4690
	Cy	0.4270	0.4370	0.4380	0.4290

Bin		1	2	3	4
4W	Cx	0.4430	0.4480	0.4540	0.4480
	Cy	0.3830	0.3920	0.3930	0.3840
5W	Cx	0.4480	0.4530	0.4590	0.4540
	Cy	0.3920	0.4010	0.4020	0.3930
6W	Cx	0.4530	0.4590	0.4640	0.4590
	Cy	0.4010	0.4100	0.4120	0.4020
7W	Cx	0.4590	0.4640	0.4700	0.4640
	Cy	0.4100	0.4200	0.4210	0.4120
8W	Cx	0.4640	0.4690	0.4750	0.4700
	Cy	0.4200	0.4290	0.4300	0.4210
9W	Cx	0.4690	0.4740	0.4800	0.4750
	Cy	0.4290	0.4380	0.4400	0.4300
4X	Cx	0.4480	0.4540	0.4590	0.4540
	Cy	0.3840	0.3930	0.3940	0.3850
5X	Cx	0.4540	0.4590	0.4650	0.4590
	Cy	0.3930	0.4020	0.4040	0.3940
6X	Cx	0.4590	0.4640	0.4700	0.4650
	Cy	0.4020	0.4120	0.4130	0.4040
7X	Cx	0.4640	0.4700	0.4760	0.4700
	Cy	0.4120	0.4210	0.4230	0.4130
8X	Cx	0.4700	0.4750	0.4810	0.4760
	Cy	0.4210	0.4300	0.4320	0.4230
9X	Cx	0.4750	0.4800	0.4870	0.4810
	Cy	0.4300	0.4400	0.4410	0.4320
4R	Cx	0.4110	0.4150	0.4220	0.4180
	Cy	0.3730	0.3810	0.3840	0.3750
5R	Cx	0.4150	0.4190	0.4260	0.4220
	Cy	0.3810	0.3900	0.3930	0.3840
6R	Cx	0.4190	0.4220	0.4300	0.4260
	Cy	0.3900	0.3990	0.4020	0.3930
7R	Cx	0.4220	0.4260	0.4350	0.4300
	Cy	0.3990	0.4080	0.4110	0.4020
8R	Cx	0.4260	0.4300	0.4390	0.4350
	Cy	0.4080	0.4170	0.4200	0.4110
9R	Cx	0.4300	0.4340	0.4430	0.4390
	Cy	0.4170	0.4250	0.4290	0.4200
4S	Cx	0.4180	0.4220	0.4300	0.4250
	Cy	0.3750	0.3840	0.3870	0.3780
5S	Cx	0.4220	0.4260	0.4340	0.4300
	Cy	0.3840	0.3930	0.3960	0.3870
6S	Cx	0.4260	0.4300	0.4390	0.4340
	Cy	0.3930	0.4020	0.4050	0.3960
7S	Cx	0.4300	0.4350	0.4430	0.4390
	Cy	0.4020	0.4110	0.4140	0.4050
8S	Cx	0.4350	0.4390	0.4470	0.4430
	Cy	0.4110	0.4200	0.4230	0.4140
9S	Cx	0.4390	0.4430	0.4520	0.4470
	Cy	0.4200	0.4290	0.4320	0.4230
4T	Cx	0.4250	0.4300	0.4370	0.4330
	Cy	0.3780	0.3870	0.3890	0.3800

Bin		1	2	3	4
5T	Cx	0.4300	0.4340	0.4420	0.4370
	Cy	0.3870	0.3960	0.3980	0.3890
6T	Cx	0.4340	0.4390	0.4470	0.4420
	Cy	0.3960	0.4050	0.4080	0.3980
7T	Cx	0.4390	0.4430	0.4510	0.4470
	Cy	0.4050	0.4140	0.4170	0.4080
8T	Cx	0.4430	0.4470	0.4560	0.4510
	Cy	0.4140	0.4230	0.4260	0.4170
9T	Cx	0.4470	0.4520	0.4610	0.4560
	Cy	0.4230	0.4320	0.4350	0.4260
4O	Cx	0.3860	0.3890	0.3980	0.3940
	Cy	0.3610	0.3690	0.3730	0.3650
5O	Cx	0.3890	0.3910	0.4010	0.3980
	Cy	0.3690	0.3770	0.3810	0.3730
6O	Cx	0.3910	0.3940	0.4040	0.4010
	Cy	0.3770	0.3850	0.3900	0.3810
7O	Cx	0.3940	0.3970	0.4070	0.4040
	Cy	0.3850	0.3930	0.3980	0.3900
8O	Cx	0.3970	0.4000	0.4100	0.4070
	Cy	0.3930	0.4010	0.4060	0.3980
9O	Cx	0.4000	0.4030	0.4130	0.4100
	Cy	0.4010	0.4100	0.4150	0.4060
4P	Cx	0.3940	0.3980	0.4060	0.4030
	Cy	0.3650	0.3730	0.3770	0.3690
5P	Cx	0.3980	0.4010	0.4100	0.4060
	Cy	0.3730	0.3810	0.3860	0.3770
6P	Cx	0.4010	0.4040	0.4130	0.4100
	Cy	0.3810	0.3900	0.3940	0.3860
7P	Cx	0.4040	0.4070	0.4160	0.4130
	Cy	0.3900	0.3980	0.4030	0.3940
8P	Cx	0.4070	0.4100	0.4200	0.4160
	Cy	0.3980	0.4060	0.4120	0.4030
9P	Cx	0.4100	0.4130	0.4230	0.4200
	Cy	0.4060	0.4150	0.4200	0.4120
4Q	Cx	0.4030	0.4060	0.4150	0.4110
	Cy	0.3690	0.3770	0.3810	0.3730
5Q	Cx	0.4060	0.4100	0.4190	0.4150
	Cy	0.3770	0.3860	0.3900	0.3810
6Q	Cx	0.4100	0.4130	0.4220	0.4190
	Cy	0.3860	0.3940	0.3990	0.3900
7Q	Cx	0.4130	0.4160	0.4260	0.4220
	Cy	0.3940	0.4030	0.4080	0.3990
8Q	Cx	0.4160	0.4200	0.4300	0.4260
	Cy	0.4030	0.4120	0.4170	0.4080
9Q	Cx	0.4200	0.4230	0.4340	0.4300
	Cy	0.4120	0.4200	0.4250	0.4170
4L	Cx	0.3650	0.3670	0.3750	0.3720
	Cy	0.3480	0.3580	0.3620	0.3520
5L	Cx	0.3670	0.3690	0.3770	0.3750
	Cy	0.3580	0.3680	0.3730	0.3620

Bin		1	2	3	4
6L	Cx	0.3690	0.3710	0.3800	0.3770
	Cy	0.3680	0.3780	0.3830	0.3730
7L	Cx	0.3710	0.3740	0.3830	0.3800
	Cy	0.3780	0.3870	0.3930	0.3830
8L	Cx	0.3740	0.3760	0.3850	0.3830
	Cy	0.3870	0.3970	0.4030	0.3930
4M	Cx	0.3720	0.3750	0.3820	0.3790
	Cy	0.3520	0.3620	0.3670	0.3560
5M	Cx	0.3750	0.3770	0.3850	0.3820
	Cy	0.3620	0.3730	0.3780	0.3670
6M	Cx	0.3770	0.3800	0.3880	0.3850
	Cy	0.3730	0.3830	0.3880	0.3780
7M	Cx	0.3800	0.3830	0.3920	0.3880
	Cy	0.3830	0.3930	0.3990	0.3880
8M	Cx	0.3830	0.3850	0.3950	0.3920
	Cy	0.3930	0.4030	0.4090	0.3990
4N	Cx	0.3790	0.3820	0.3900	0.3860
	Cy	0.3560	0.3670	0.3720	0.3610
5N	Cx	0.3820	0.3850	0.3930	0.3900
	Cy	0.3670	0.3780	0.3830	0.3720
6N	Cx	0.3850	0.3880	0.3970	0.3930
	Cy	0.3780	0.3880	0.3930	0.3830
7N	Cx	0.3880	0.3920	0.4010	0.3970
	Cy	0.3880	0.3990	0.4040	0.3930
8N	Cx	0.3920	0.3950	0.4040	0.4010
	Cy	0.3990	0.4090	0.4150	0.4040

InGaN wavelength is very sensitive to drive current. Operating at lower current is not recommended and may yield unpredictable performance current pulsing should be used for dimming purposed.

Luminous Intensity Group at Tj=25°C

Brightness Group	Luminous Intensity IV (mcd)
Y2	3550.0 ... 4500.0
Z1	4500.0 ... 5600.0
Z2	5600.0 ... 7150.0

Luminous intensity is measured with an accuracy of ± 11%.

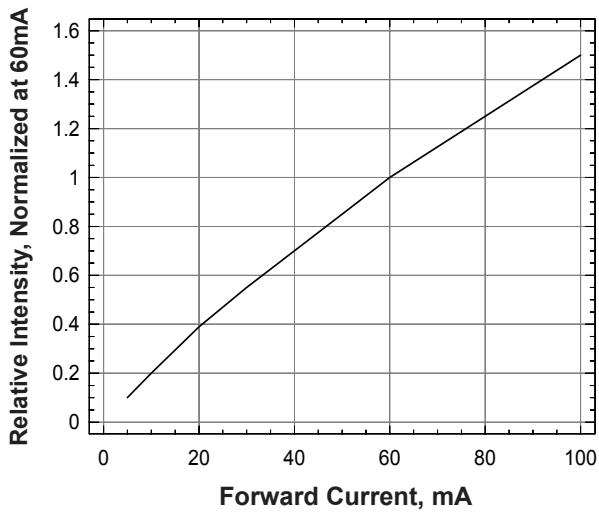
Vf Bining (Optional)

Vf Bin @ 60 mA	Forward Voltage (V)
V0	2.70 ... 3.00
V1	3.00 ... 3.30
V2	3.30 ... 3.60

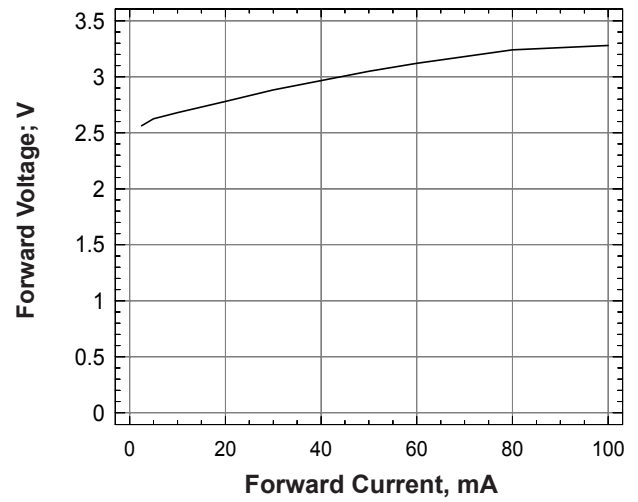
Forward Voltage, Vf is measured with an accuracy of ± 0.1 V.

Please consult sales and marketing for special part number to incorporate Vf binning.

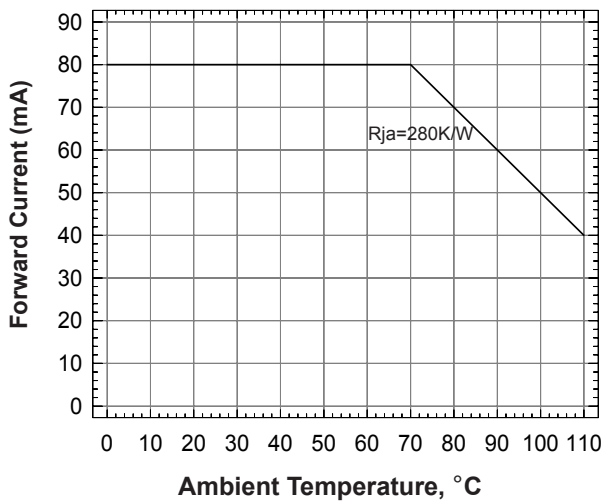
Relative Intensity Vs Forward Current



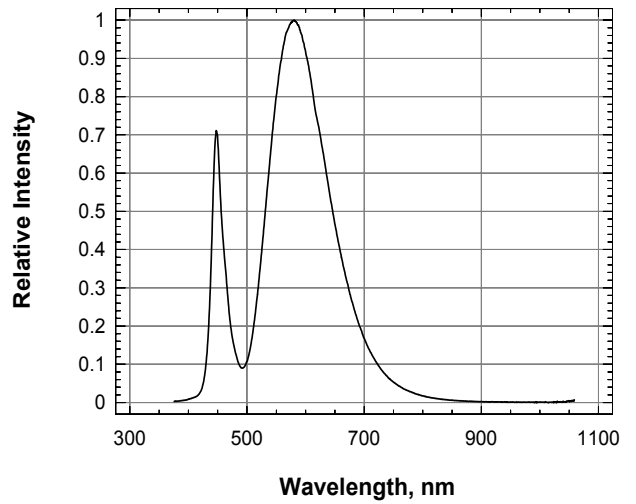
Forward Voltage Vs Forward Current



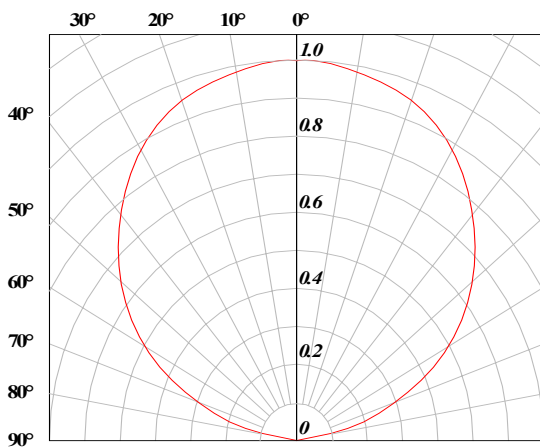
Maximum Current Vs Ambient Temperature



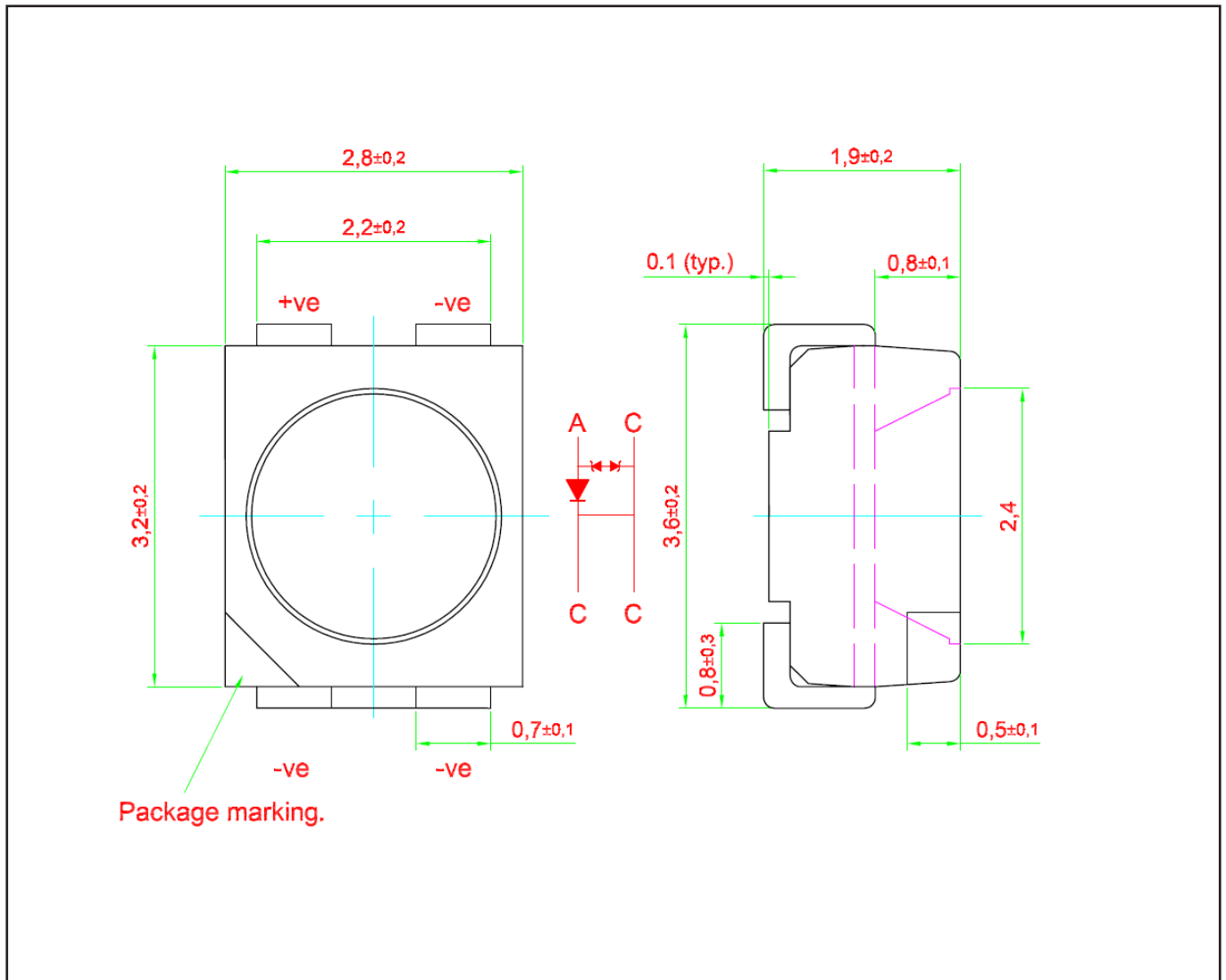
Relative Intensity Vs Wavelength



Radiation Pattern



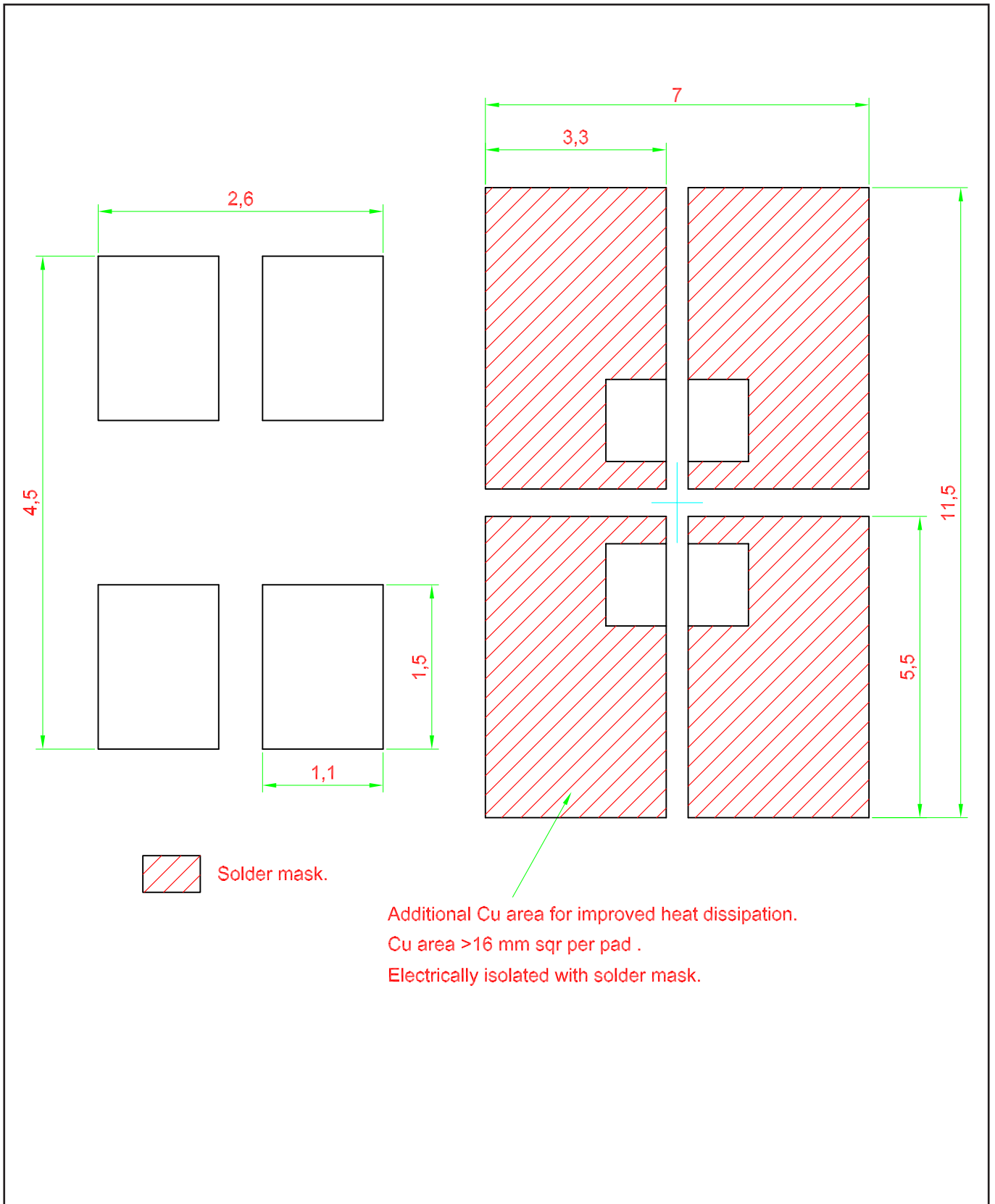
Power DomiLED™ • InGaN Warm White : DWF-DZKG Package Outlines



Material

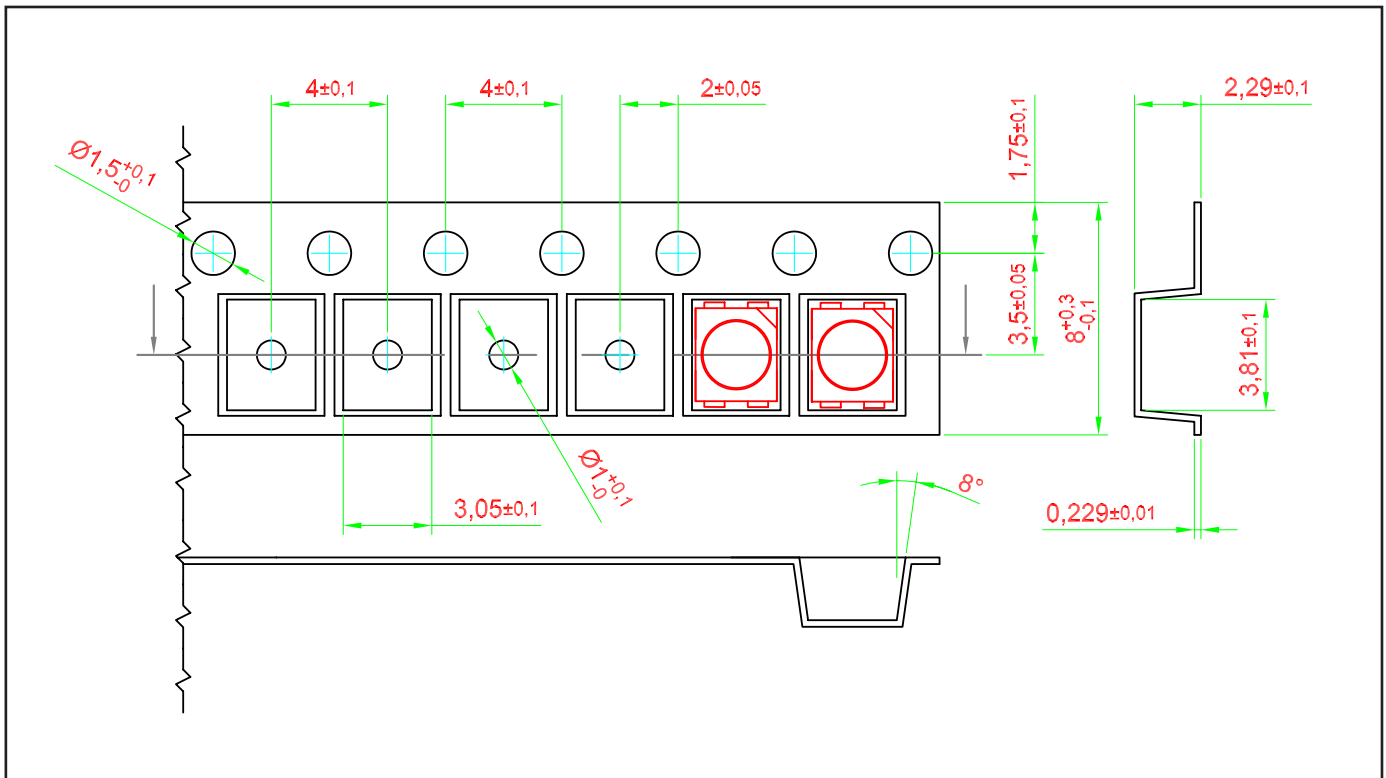
	Material
Lead-frame	Cu Alloy With Au Plating
Package	High Temperature Resistant Plastic, PPA
Encapsulant	Silicone Resin
Soldering Leads	Au Plating

Recommended Solder Pad

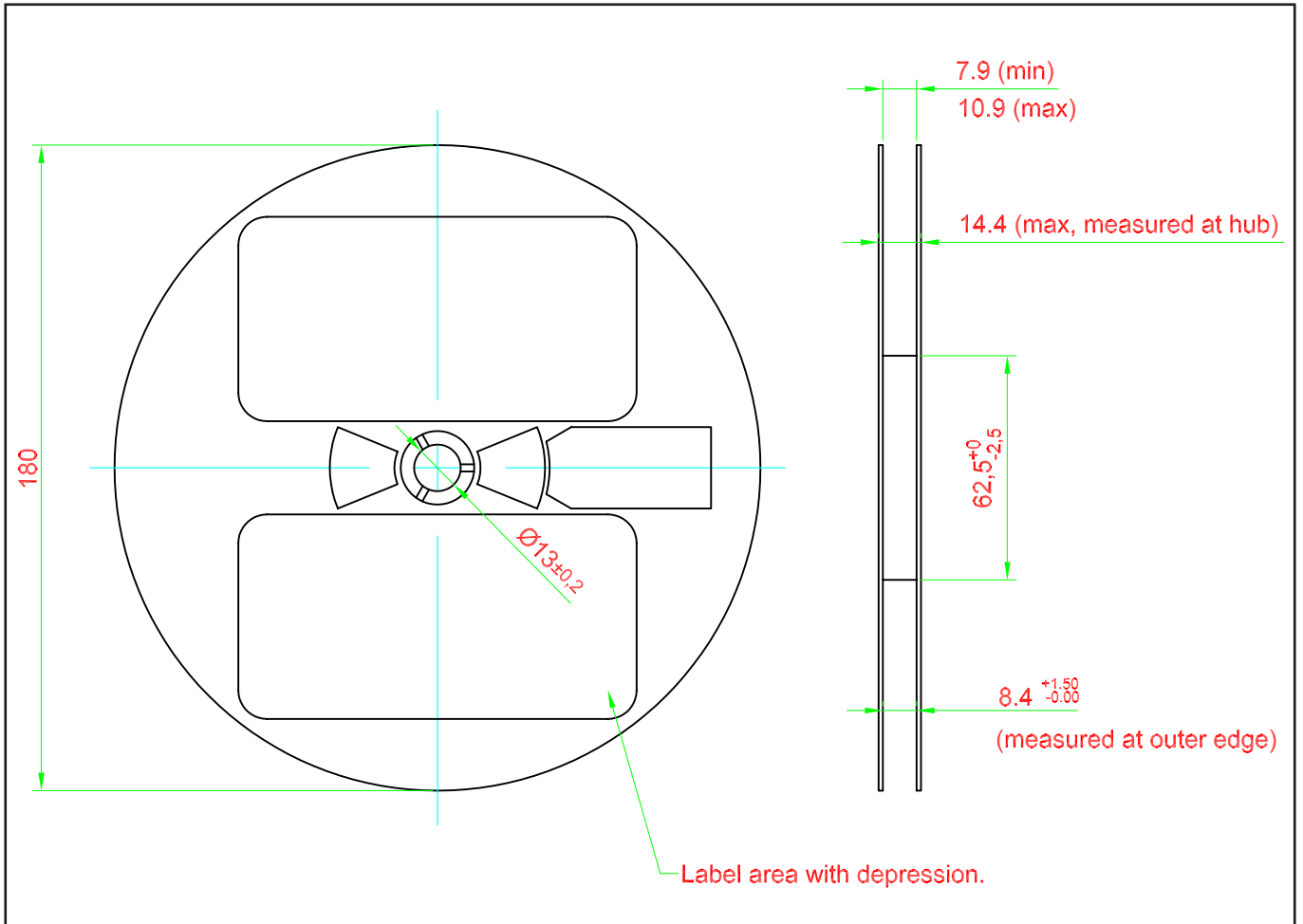


Taping and orientation

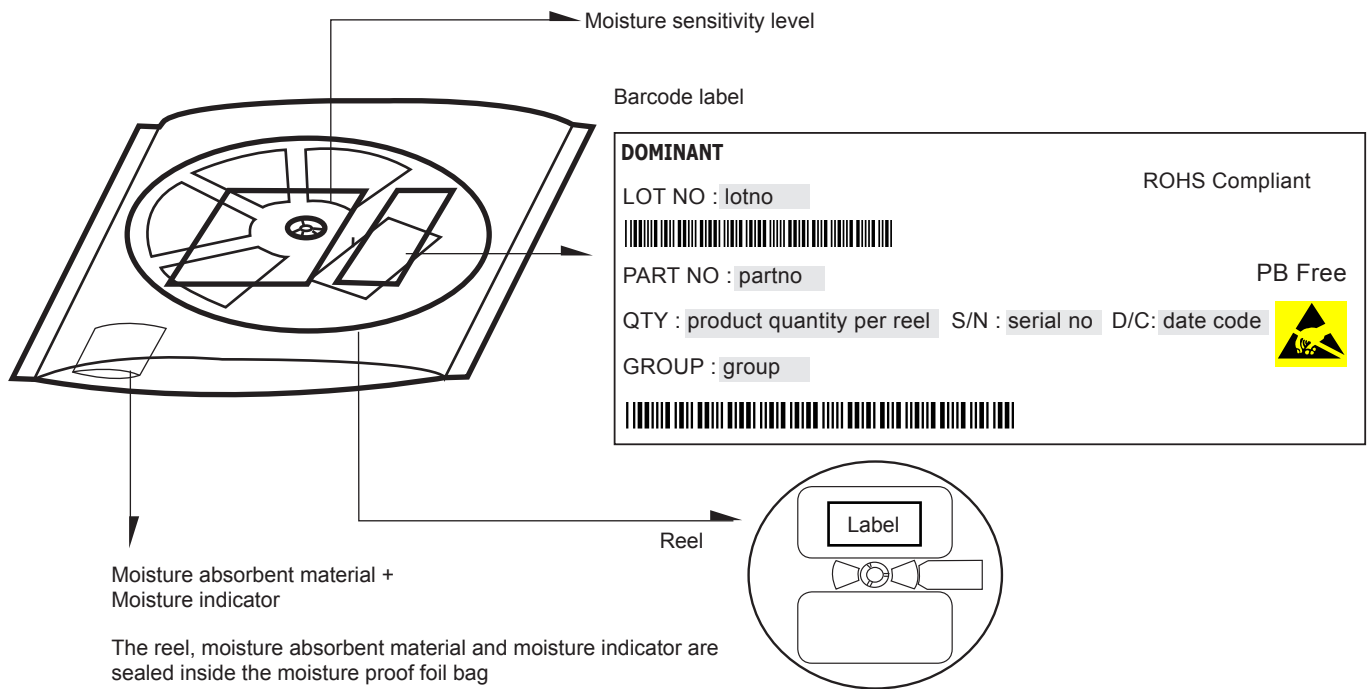
- Reels come in quantity of 2000 units.
- Reel diameter is 180 mm.



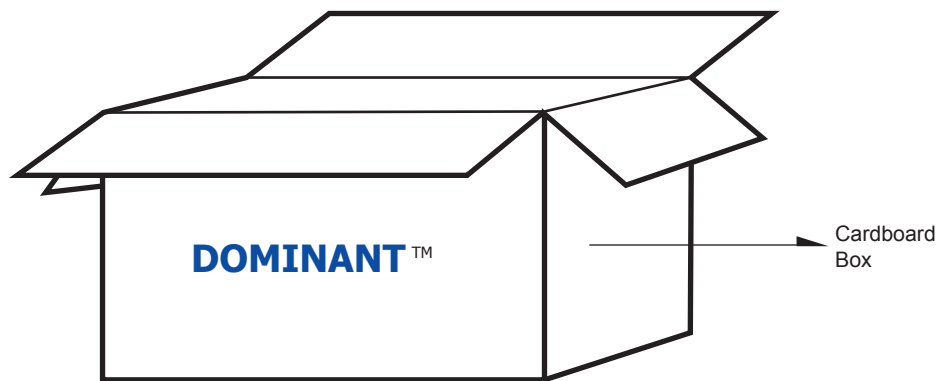
Packaging Specification



Packaging Specification



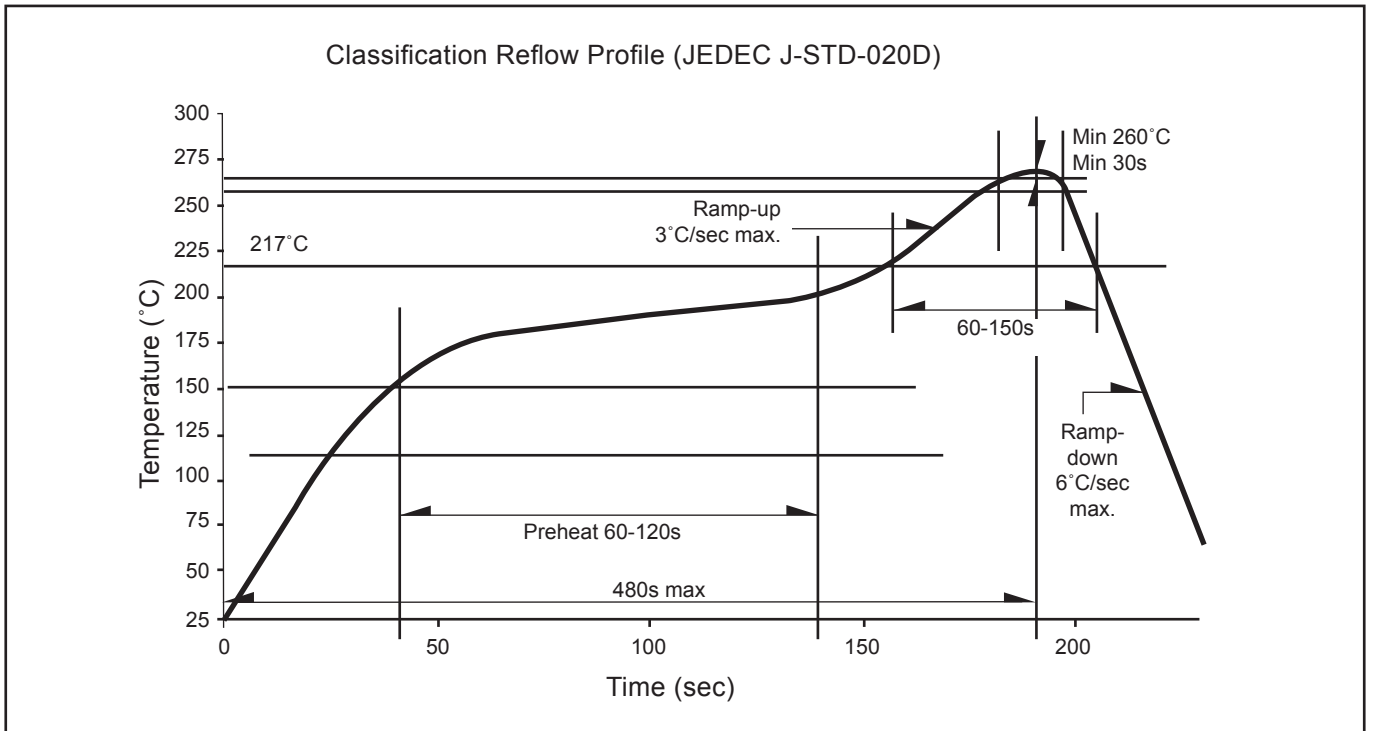
	Average 1pc Power Domiled	1 completed bag (2000pcs)
Weight (gram)	0.034	190 ± 10



For Power Domiled™

Cardboard Box Size	Dimensions (mm)	Empty Box Weight (kg)	Reel / Box	Quantity / Box (pcs)
Small	300 x 250 x 250	0.58	15 reels MAX	30,000 MAX
Large	416 x 516 x 476	1.74	96 reels MAX	192,000 MAX

Recommended Pb-free Soldering Profile



About Us

DOMINANT Opto Technologies is a dynamic Malaysian Corporation that is among the world's leading SMT LED Manufacturers. An excellence – driven organization, it offers a comprehensive product range for diverse industries and applications. Featuring an internationally certified quality assurance acclaim, DOMINANT's extra bright LEDs are perfectly suited for various lighting applications in the automotive, consumer and communications as well as industrial sectors. With extensive industry experience and relentless pursuit of innovation, DOMINANT's state-of-art manufacturing, research and testing capabilities have become a trusted and reliable brand across the globe. More information about DOMINANT Opto Technologies can be found on the Internet at <http://www.dominant-semi.com>.

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