

DomiLED[™]

With the intense colors that seem to glow with energy and its significant brightness, DomiLED[™] white LED is a highly reliable design device. Its dynamic nature makes it perfect choice for lighthing applications, office and home applications and standard industrial applications.

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 both IR reflow soldering.
- > Environmental friendly; RoHS compliance.



Preliminary Draft
This specification does not constitute a final offer

Optical Characteristics at Tj=25°C

Part Ordering Number	Color	Viewing Angle°	Luminous Intensity @ 20mA IV (mcd)		
			Min.	Typ.	Max.
DDW-WJG-XaXc-R-CS0482	White	120	2200.0	2500.0	2800.0

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. Color binning is carried for all units as per the color binning table. Only one color group is allowed for each reel.
4. High color rendering index (CRI). Minimum CRI of 70.

Electrical Characteristics at Tj=25°C

Part Number	Vf @ If = 20 mA			Vr @ Ir = 10 µA
	Min. (V)	Typ. (V)	Max. (V)	Min. (V)
DDW-WJG-XaXc-R-CS0482	2.9	3.2	3.5	5.0

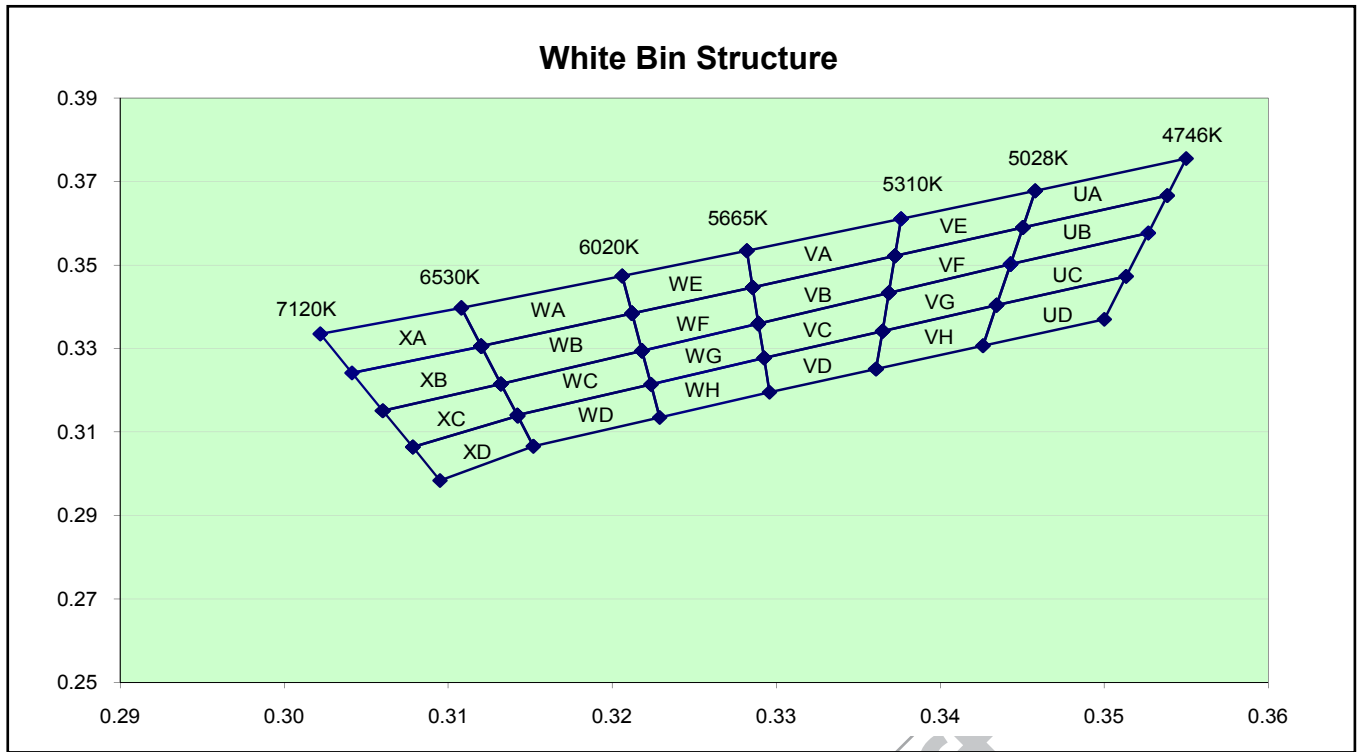
Forward Voltage, Vf is measured with an accuracy of ± 0.1 V.

Absolute Maximum Ratings

	Maximum Value	Unit
DC forward current	30	mA
Peak pulse current; (tp ≤ 10µs, Duty cycle = 0.005)	100	mA
Reverse Voltage; Ir max = 10µA	5	V
ESD threshold (HBM)	500	V
LED junction temperature	125	°C
Operating temperature	-40 ... +100	°C
Storage temperature	-40 ... +100	°C ^{WH}
Power dissipation (at room temperature)	80	mW
Thermal resistance		
- Junction / ambient, R _{th JA}	340	K/W
- Junction / solder point, R _{th JS}	180	K/W

(Mounting on double sided FR4 PCB with copper plated through

DDW, White Color Grouping



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

Bin		1	2	3	4
XA	Cx	0.3022	0.3041	0.3120	0.3108
	Cy	0.3335	0.3242	0.3305	0.3397
XB	Cx	0.3041	0.3060	0.3132	0.3120
	Cy	0.3242	0.3151	0.3215	0.3305
XC	Cx	0.3060	0.3078	0.3142	0.3132
	Cy	0.3151	0.3064	0.3138	0.3215
XD	Cx	0.3078	0.3095	0.3152	0.3142
	Cy	0.3064	0.2984	0.3066	0.3138
WA	Cx	0.3108	0.3120	0.3212	0.3206
	Cy	0.3397	0.3305	0.3384	0.3474
WB	Cx	0.3120	0.3132	0.3218	0.3212
	Cy	0.3305	0.3215	0.3294	0.3384
WC	Cx	0.3132	0.3142	0.3224	0.3218
	Cy	0.3215	0.3141	0.3215	0.3294
WD	Cx	0.3142	0.3152	0.3229	0.3224
	Cy	0.3141	0.3066	0.3135	0.3215
WE	Cx	0.3206	0.3212	0.3286	0.3282
	Cy	0.3474	0.3384	0.3446	0.3534
WF	Cx	0.3212	0.3218	0.3289	0.3286
	Cy	0.3384	0.3294	0.3359	0.3446
WG	Cx	0.3218	0.3224	0.3293	0.3289
	Cy	0.3294	0.3215	0.3277	0.3359
WH	Cx	0.3224	0.3229	0.3296	0.3293
	Cy	0.3215	0.3135	0.3195	0.3277

Bin		1	2	3	4
VA	Cx	0.3282	0.3286	0.3372	0.3376
	Cy	0.3534	0.3446	0.3522	0.3611
VB	Cx	0.3286	0.3289	0.3369	0.3372
	Cy	0.3446	0.3359	0.3433	0.3522
VC	Cx	0.3289	0.3293	0.3365	0.3369
	Cy	0.3359	0.3277	0.3342	0.3433
VD	Cx	0.3293	0.3296	0.3361	0.3365
	Cy	0.3277	0.3195	0.3251	0.3342
VE	Cx	0.3376	0.3372	0.3450	0.3458
	Cy	0.3611	0.3522	0.3590	0.3678
VF	Cx	0.3372	0.3369	0.3443	0.3450
	Cy	0.3522	0.3433	0.3502	0.3590
VG	Cx	0.3369	0.3365	0.3434	0.3443
	Cy	0.3433	0.3342	0.3404	0.3502
VH	Cx	0.3365	0.3361	0.3426	0.3434
	Cy	0.3342	0.3251	0.3307	0.3404
UA	Cx	0.3458	0.3450	0.3538	0.3550
	Cy	0.3678	0.3590	0.3666	0.3755
UB	Cx	0.3450	0.3443	0.3527	0.3538
	Cy	0.3590	0.3502	0.3577	0.3666
UC	Cx	0.3443	0.3434	0.3513	0.3527
	Cy	0.3502	0.3404	0.3473	0.3577
UD	Cx	0.3434	0.3426	0.3500	0.3513
	Cy	0.3404	0.3307	0.3370	0.3473

Luminous Intensity Group at Tj=25°C

Brightness Group	Luminous Intensity IV (mcd)
Xa	2200.0...2400.0
Xb	2400.0...2600.0
Xc	2600.0...2800.0

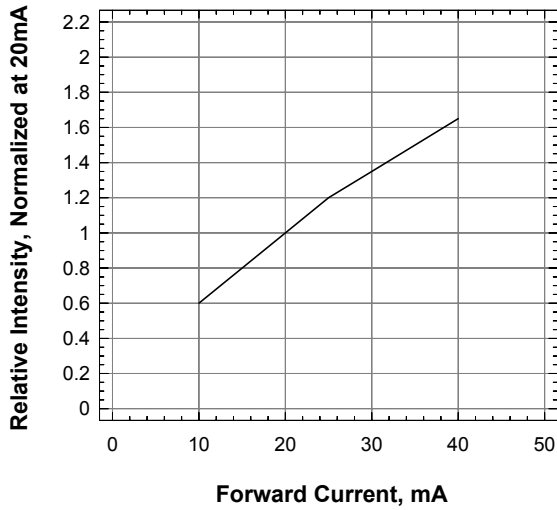
Luminous intensity is measured with an accuracy of ± 11%.

Vf Binning

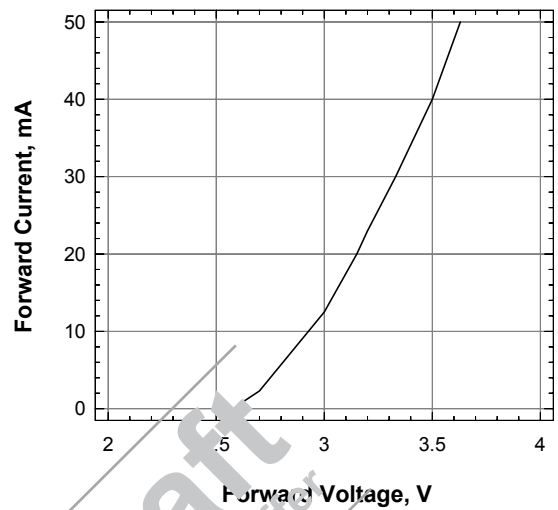
Vf Bin	Forward Voltage (V)
V1	2.90 ... 3.00
V2	3.00 ... 3.10
V3	3.10 ... 3.20
V4	3.20 ... 3.30
V5	3.30 ... 3.40
V6	3.40 ... 3.50

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

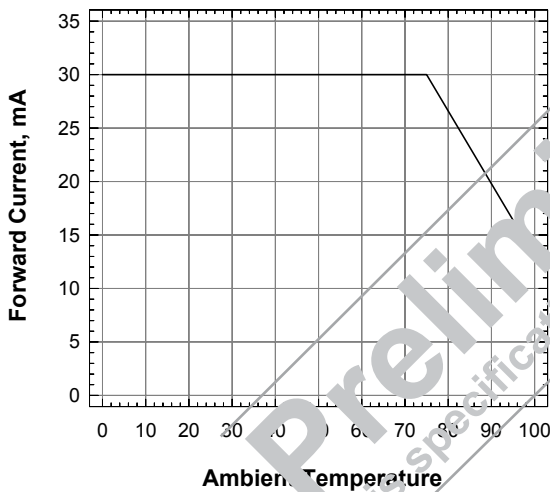
Relative Intensity Vs Forward Current



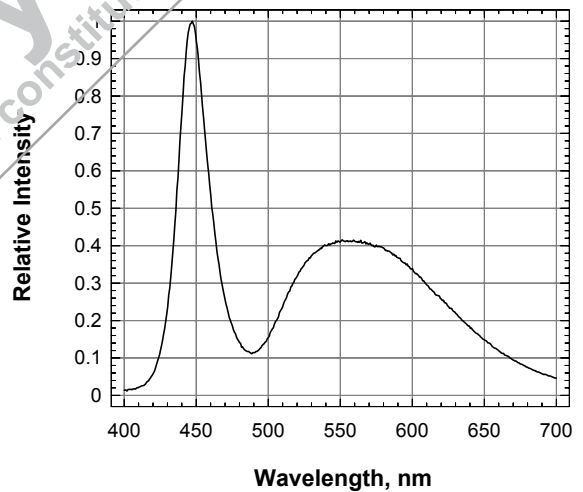
Forward Current Vs Forward Voltage



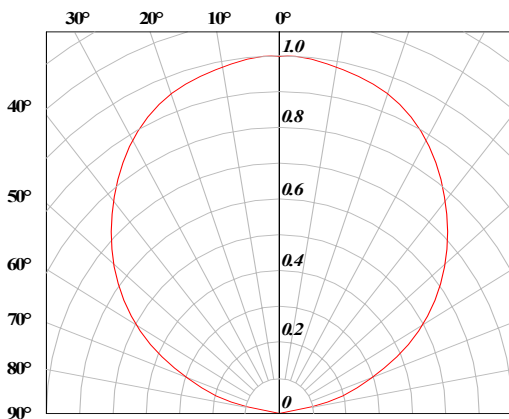
Maximum Forward Current Vs Ambient Temperature



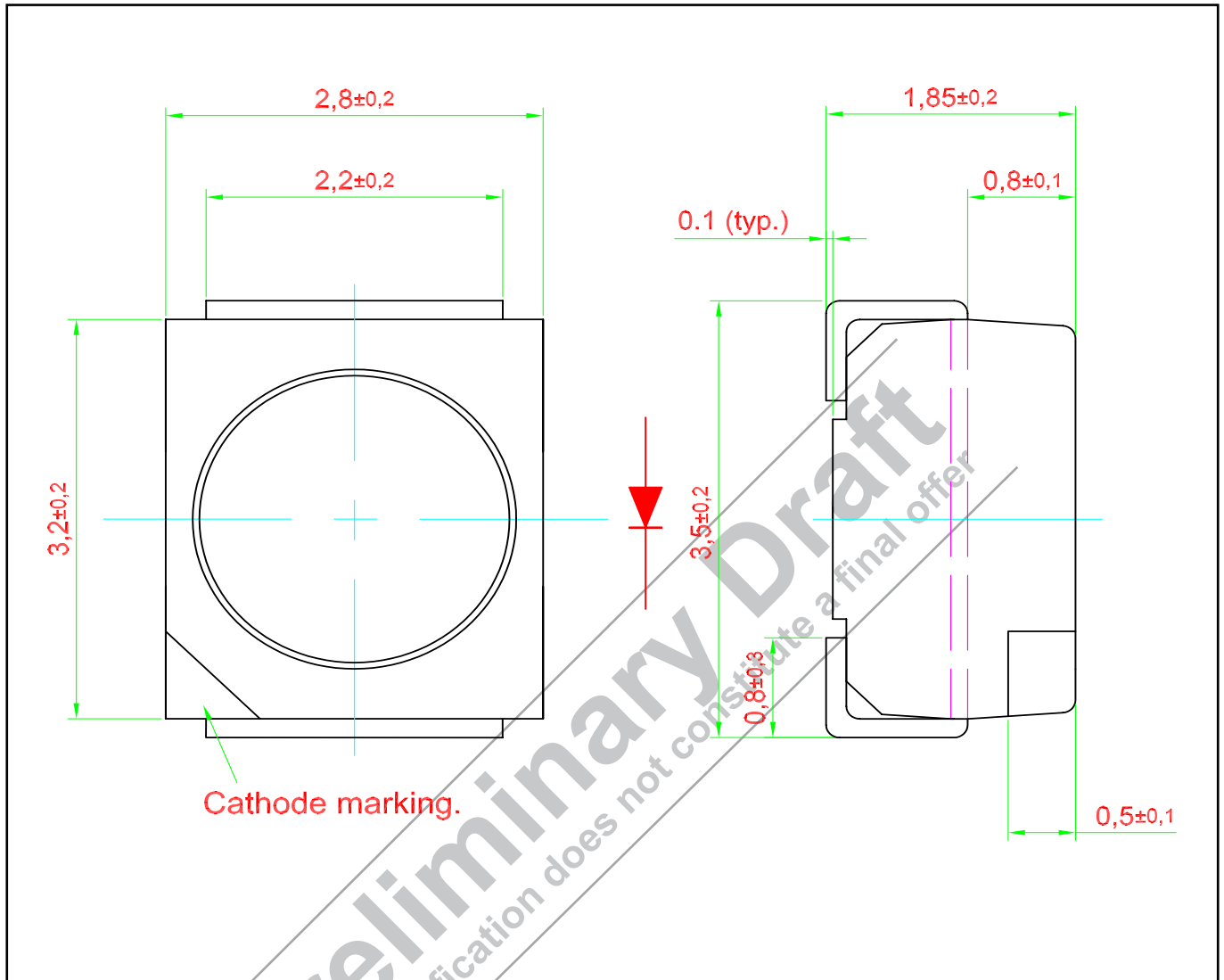
Relative Intensity Vs Wavelength



Radiation Pattern



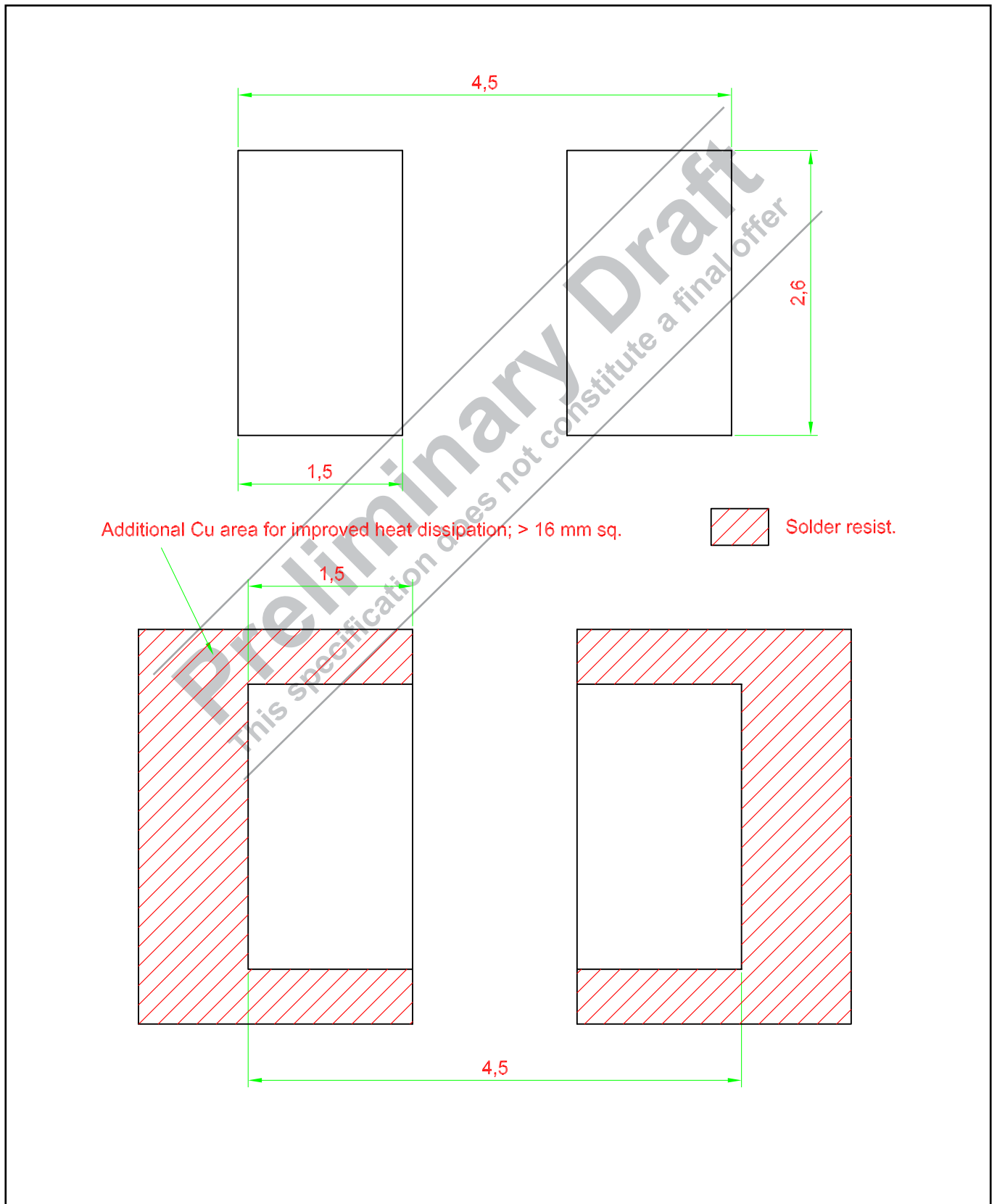
DomiLED™ • InGaN White : DDW-WJG-XaXc-R-CS0482 Package Outlines



Material

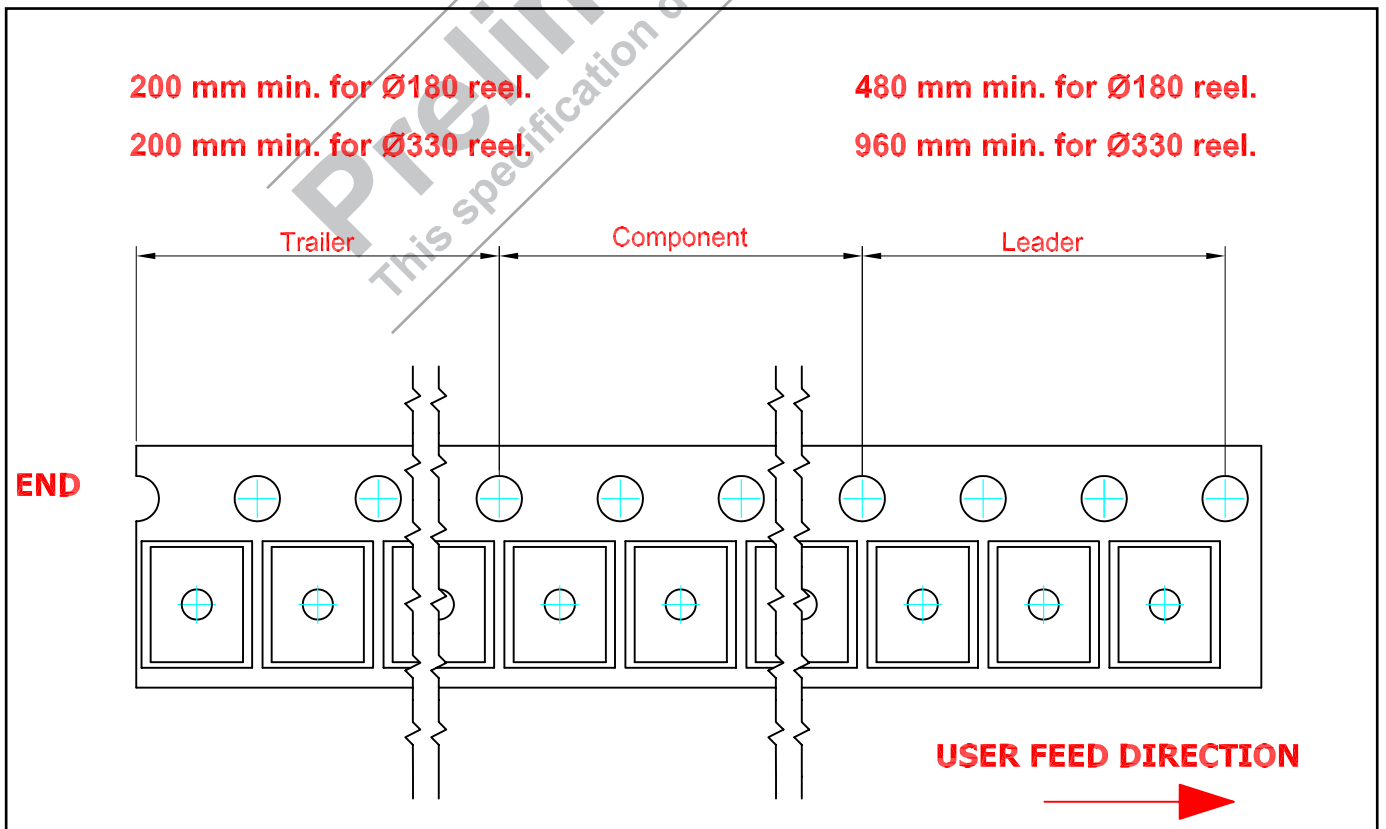
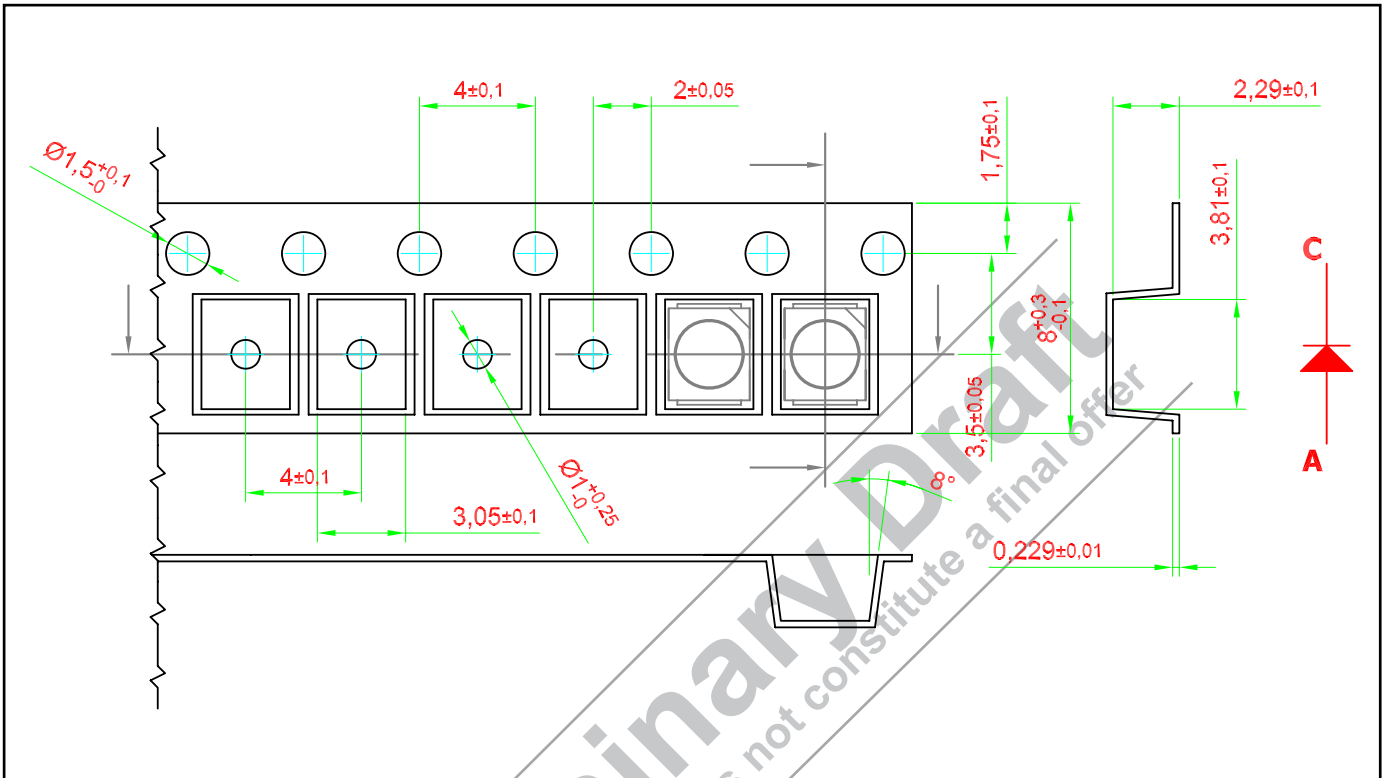
Material	
Lead-frame	Cu Alloy With Ag Plating
Package	High Temperature Resistant Plastic, PPA
Encapsulant	Silicone Resin
Soldering Leads	Ag Plating

Recommended Solder Pad

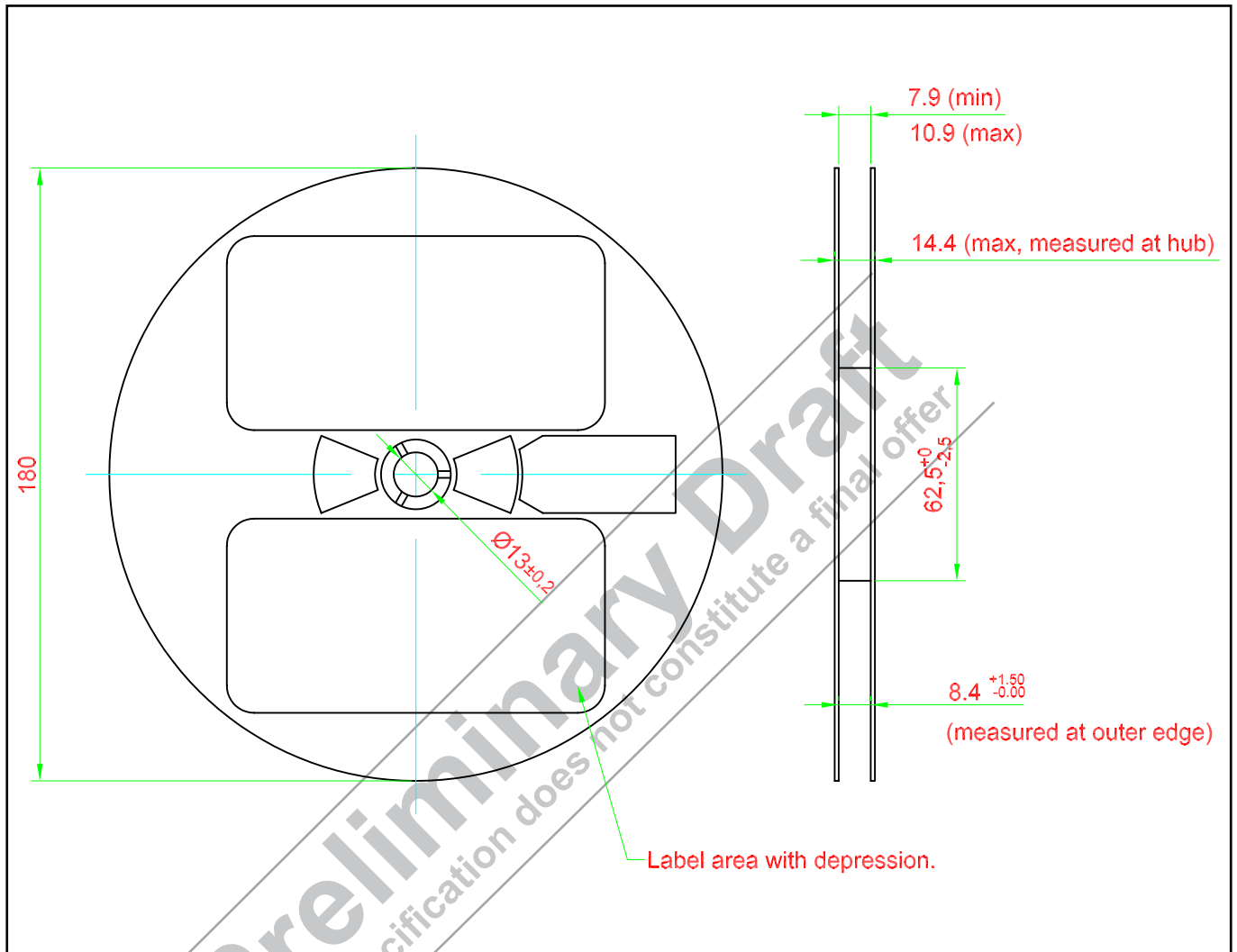


Taping and orientation

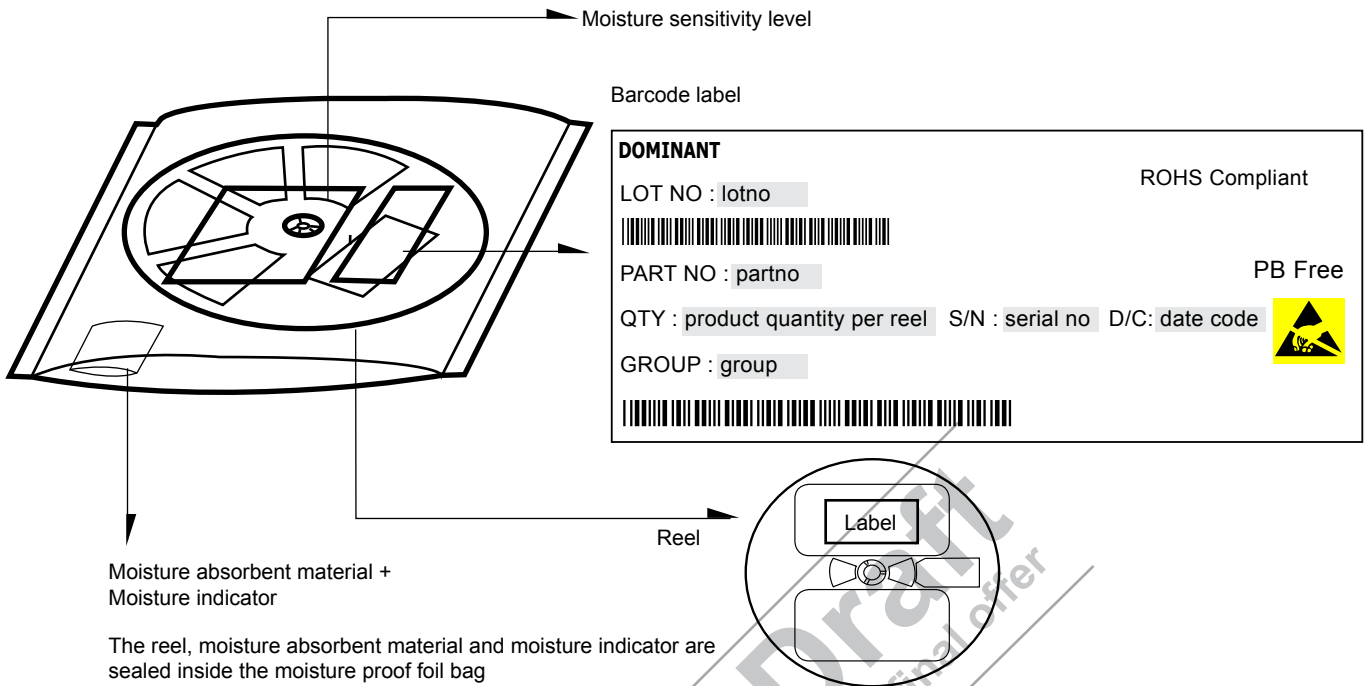
- Reels come in quantity of 2000 units.
- Reel diameter is 180 mm.



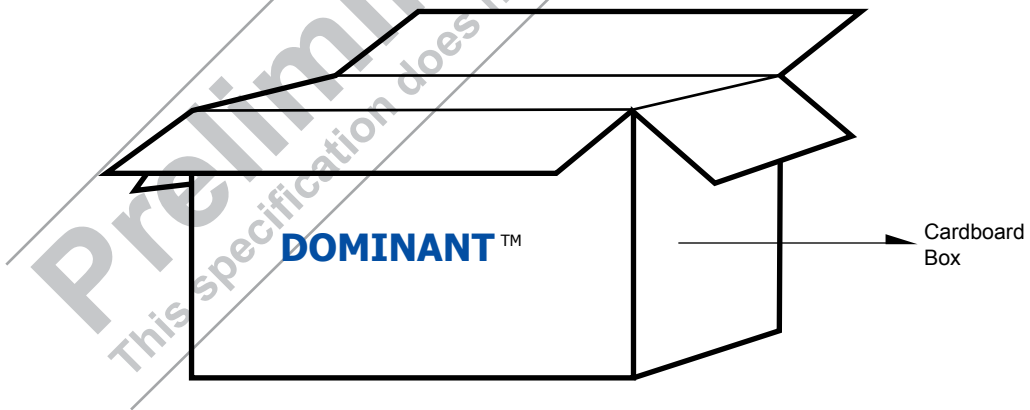
Packaging Specification



Packaging Specification



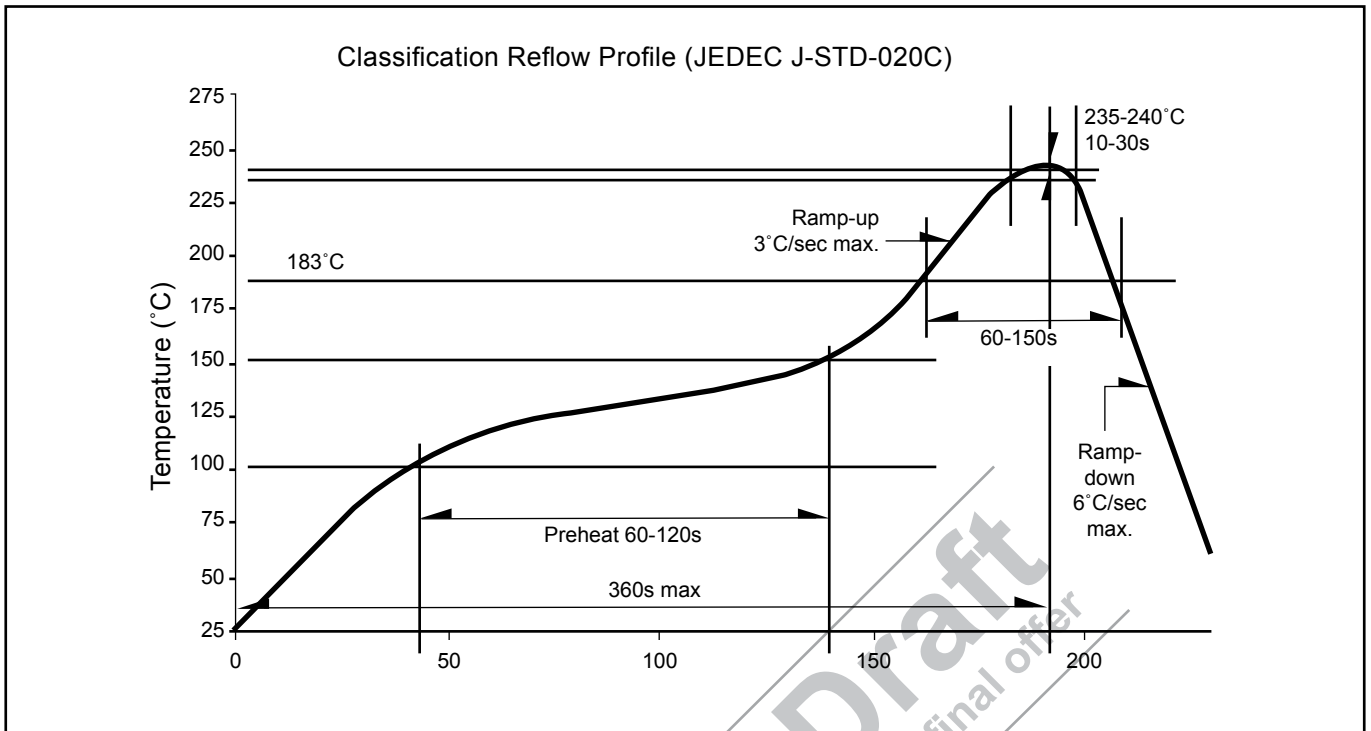
	Average 1pc DomiLED/Multi DomiLED	1 completed bag (2000pcs)
Weight (gram)	0.034	190 ± 10



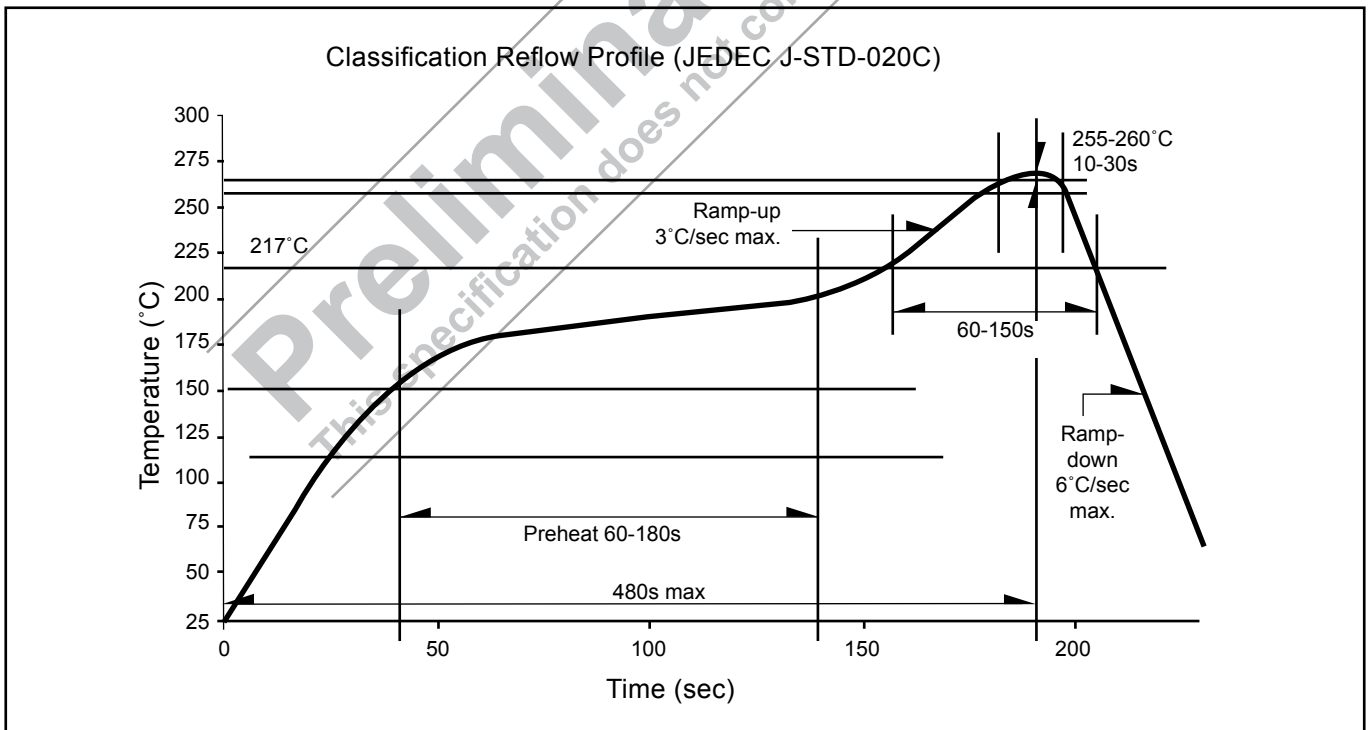
For DomiLED™

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 Sn-Pb IR-Reflow Soldering Profile



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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