Everred 愉進

LED Lighting | Embeded System | Thermoelectric Modules **Part No.: SRGB120**

HIGH POWE LED EMITTER Series

Features:

Super high flux output and high luminance

More energy efficient than incandescent and most halogen lamps

Available in Green, Blue, Red, Amber, Orange Cold White and Warm White,

Designed for high current operation

Low voltage operation

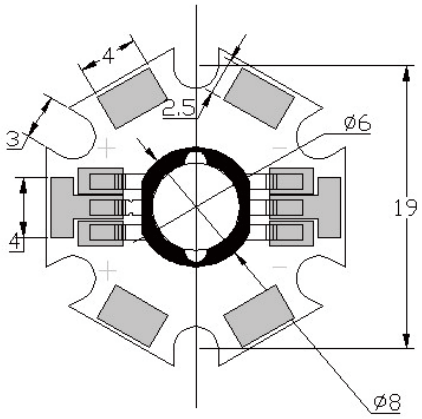
Low thermal resistance

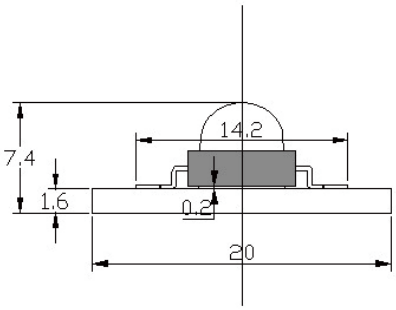
Instant on(less than 100 ns)

Long life(up to 100K hours)

Lead free product

RoHS compliant





Typical Applications:

Reading lights

Portable flashlight

Up-lights and Down-lights

General lights

Contour lights

Ceiling lights

Garden lights

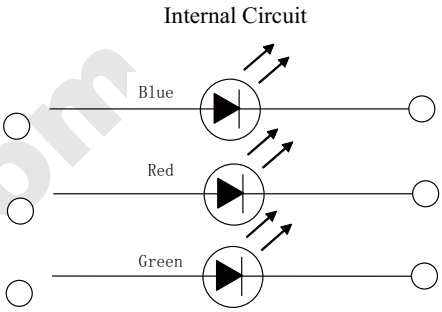
Streetlights

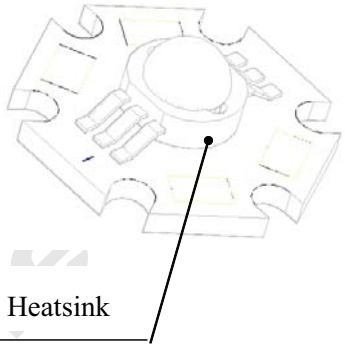
Mining lights

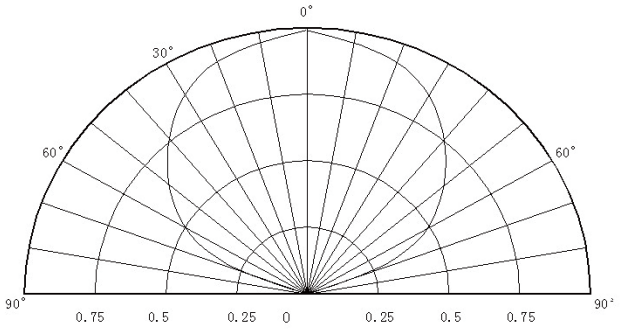
Decoration lights

Architectural lighting

Beacon light







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LED Lighting | Embeded System | Thermoelectric Modules **Part No.: SRGB120**

1. Absolute Maximum Ratings

(Ta=25℃)

Item	Symbol	Absolute Maximum Rating	Unit
Forward Current	IF	350	mA
Pulse Forward Current	IFP	700	mA
Allowable Reverse Current	IR	30	uA
Power Dissipation	PD	1.0	W
Operating Temperature	Topr	-30~+85	℃
Dice Temperature	Tstg	-40~+100	℃
Soldering Temperature	Tsod	260	℃

✧ IFP Conditions : Pulse Width ≤10msec. and Duty ≤1/10

✧ Soldering Time : ≤5 sec.

2. Electrical/Optical Characteristics

(Ta=25℃)

Item	Symbol		Condition	Min	Typ	Max	Unit
Forward Voltage	VF		IF=350[mA]	2.0		3.6	V
Allowable Reverse Current	IR		VR=5[V]	0		30	uA
Luminous Flux	Φv	Red	IF=350[mA]	25	---	40	lm
		Green		50	---	70	
		Blue		10	---	18	
Wave Length	λD	Red	IF=350[mA]	620	---	630	nm
		Green		520	---	530	
		Blue		460	---	470	
Viewing Angle	2θ1/2		IF=350[mA]		120		

＊ Please refer to CIE 1931 chromaticity diagram

＊ Viewing Angle Measurement allowance is ±5%

3. Ranking

(Ta=25℃)

Item	Symbol	Condition	BIN CODE	Min	Max	Unit
Forward Voltage	VF	IF=350[mA]	E	2.8	3.0	V
			F	3.0	3.2	
			G	3.2	3.4	
			H	3.4	3.6	
			I	3.6	3.8	
			J	3.8	4.0	
Luminous Flux	Φv	IF=350[mA]	P	60	70	lm
			Q	70	80	
			R	80	90	
			S	90	100	
			T	100	120	

✧ Forward Voltage Measurement allowance is ±3%

✧ Luminous Intensity Measurement allowance is ±10%

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RELIABILITY ITEMS AND FAILURE MEASURES

Reliability test

Test Item	Test Conditions	Note	Failure Criteria	Number of Damaged
Resistance to Soldering Heat(Reflow Soldering)	Tsld=235±5℃, 10sec (Pre treatment 30℃,70%,168hrs)	2 times	No catastrophics	0/22
Thermal Shock	0℃ ~~~ 100℃ 15sec. 15sec	20 cycles	No catastrophics	0/50
Temperature Cycle	-40℃ ~ 25℃ ~ 100℃ ~ 25℃ 30min 5min 30min 5min	100cycles	Note 2	0/50
High Temperature Storage	Ta=100℃	1000hrs	Note 2	0/22
Temperature Humidity Storage	Ta=60℃,RH=90%	1000hrs	Note 2	0/22
Low Temperature Storage	Ta=-40℃	1000hrs	Note 2	0/22
Steady State Operating Life	Ta=25℃, IF=350mA Tested with standard circuit board. *	1000hrs	Note 2	0/22
Steady State Operating Life of High Temperature	Ta=85℃, IF=350mA Tested with standard circuit board. *	1000hrs	Note 2	0/22
Steady State Operating Life of High Humidity Heat	60℃,RH=90%, IF=350mA Tested with standard circuit board. *	500hrs	Note 2	0/22
Steady State Operating Life of Low Temperature	Ta=-30℃, IF=350mA Tested with standard circuit board. *	1000hrs	Note 2	0/22
Vibration	100~2000~100Hz Sweep 4min. 200m/s² 3directions, 4cycles	48min	Note 2	0/22
Adhesion Strength	5N, 10±1sec.	1time	No catastrophics	0/22

*Thermal resistance of LED with iEverreed standard circuit board: Rja=8℃/W ~14℃/W

Notes:

1. Depending on the maximum derating curve.
2. Failure Criteria:

*Electrical and light output failures:

Item	symbol	Test Conditions	Failure Criteria Min	Failure Criteria Max
Forward Voltage	VF	IF=350mA	-	Initial Level× 1.1
Luminous Flux	ΦV	IF=350mA	Initial Level× 0.7	-

* The test is performed after the board is cooled down to the room temperature.

* Broken or damaged package or lead:
  Solderability＜95% wetting
* Dimension out of tolerance

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