

EDCON-COMPONENTS



The Power of LED Light



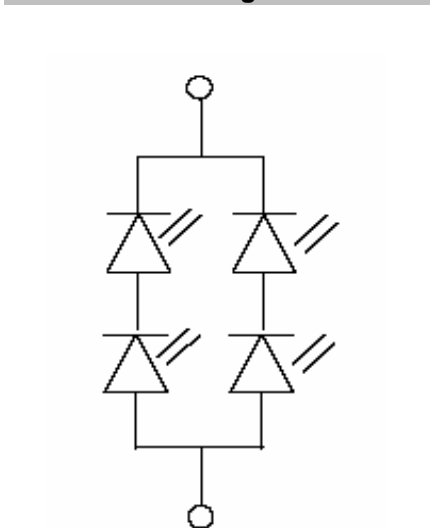
Specifications

Based on Ceramic with low thermal resistance,
Diamond Emitter provides a breakthrough solution ultra diamond POWER LED
applications.
With high luminous flux, Diamond high power handling capability and excellent thermal
management.
Diamond emitter enables you to make the general lighting possible

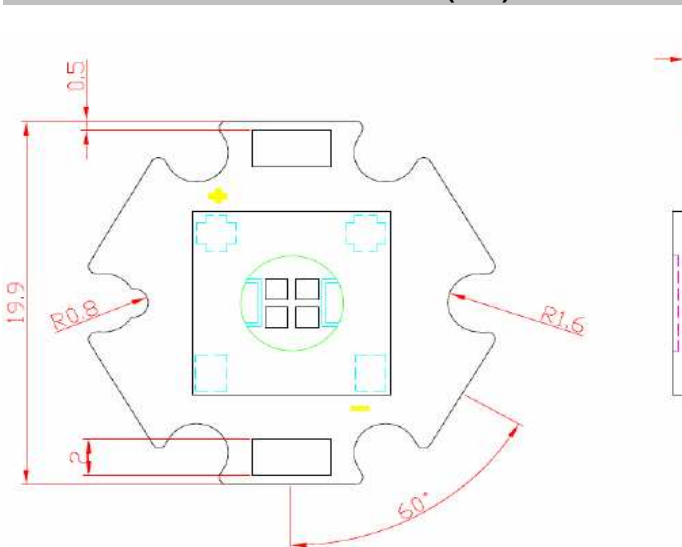
Features

- LED Light Engine
- High Power Operation
- Long Life Operation
- Superior Thermal Performance
- Decorative Lighting
- Architectural Lightning
- General Lightning

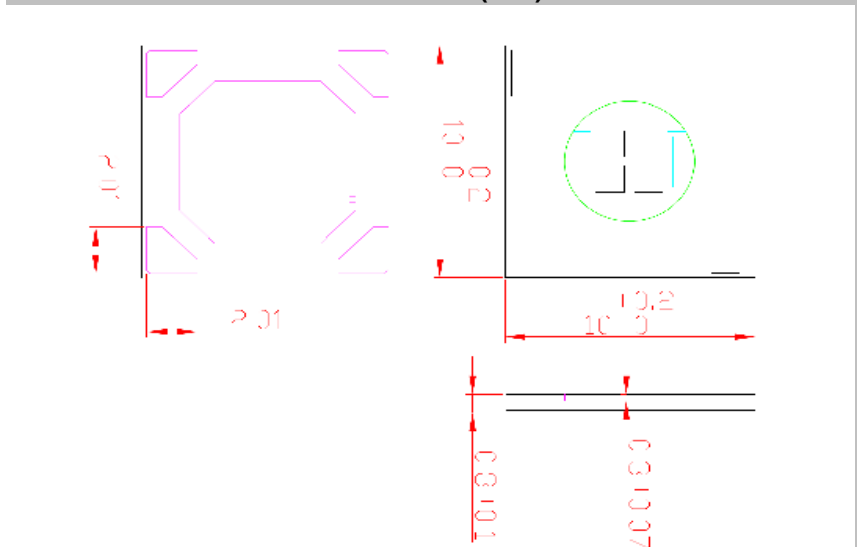
Circuit Diagramm



PCB Star Dimension (mm)



Dimensions (mm)



1. Slots in aluminium-core PCB for M3 mounting screw
2. Drawings are not to scale
3. Electrical interconnection pads labeled on the aluminium PCB with + and - to denote positiv and negative respectively.

5 Watt Diamond Power of LED

Part No.:	M15011
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Customer:

DRW:	Jason	CHKD	Wilson	MATL:	Wilson	TOLERANCE	Mason	DATE	10.04.2009
APPD:	Schumi			FINISH	Jamy		Sheet No.		1 from 6

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Characteristics at If=700mA (Ta=25°C)

Parameter	Symbol	Value			Unit
		Min	Typ.	Max.	
Luminous flux	$\Phi_v(2)$	200	260		lm
CRI	Ra		70		
View Angle	$2\theta_{1/2}$		120		degree
Correlated color temperat.	CCT	5000		5650	K
Forward Voltage	Vf	6,4		7,8	V
Power Dissipation	Pd	4,48		5,46	W
Junction Temperature	Tj	----		120	Deg.
Operation Temperature	Top	-40°C ~ + 105			°C
Storage Temperature	Tst	-40°C ~ + 120			°C

1. The typical luminous flux of diamond Led will be upgraded per season
2. Φ minimum luminous flux performance guaranted within published operating conditions. EDCON maintains a tolerance of +/-10% luminous flux measurements.
3. The correlated color temperature of Diamond is divided into three main bins
In case of customized CCT, this detail informations will be discussed in meeting.
The tester tolerance of CCT is +/- 5%.
4. EDCON maintains a tolerance of +/- 0,06V on forward voltage measurements.

Characteristics at If=700mA (Ta=25°C)

Parameter	Symbol	Value			Unit
		Min	Typ.	Max.	
Luminous flux	$\Phi_v(2)$	140	200		lm
CRI	Ra		53		
View Angle	$2\theta_{1/2}$		120		degree
Correlated color temperat.	CCT	2850		3250	K
Forward Voltage	Vf	6,4		7,8	V
Power Dissipation	Pd	4,48		5,46	W
Junction Temperature	Tj			120	Deg.
Operation Temperature	Top	-40°C ~ + 105			°C
Storage Temperature	Tst	-40°C ~ + 120			°C

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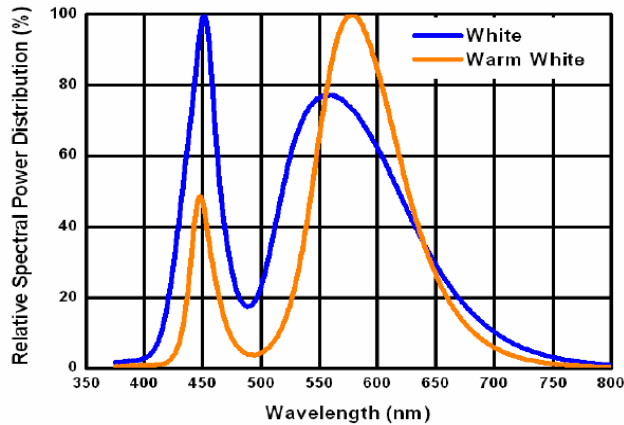


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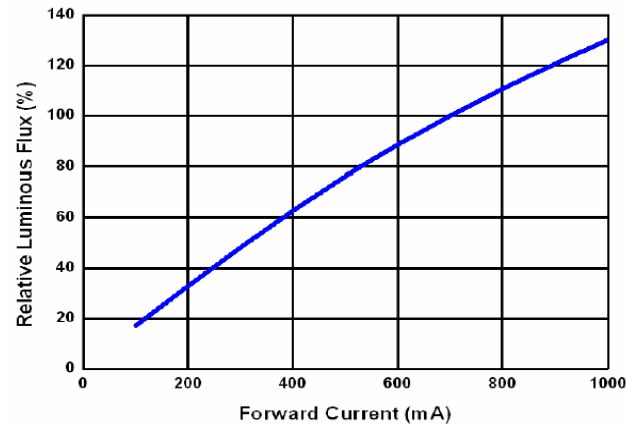


Characteristics

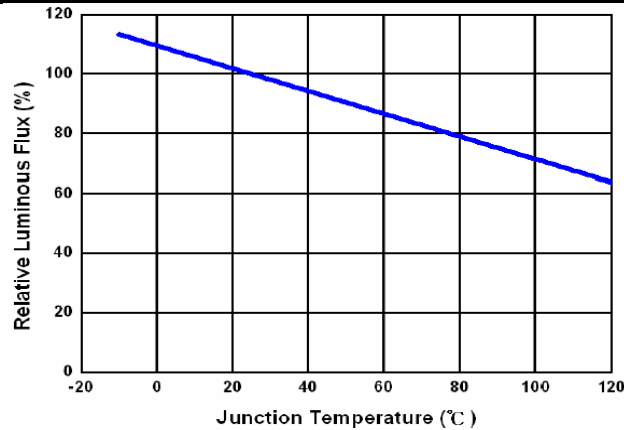
White and Warm White Color Spectrum of typical CCT,
Junction Temperature at 25°C



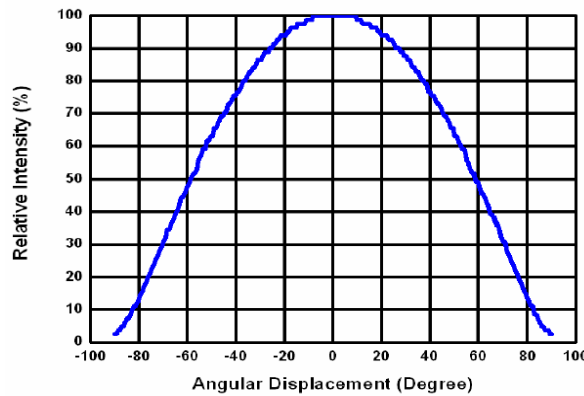
White and Warm White, Junction Temperature at 25°C



Typical Light Output Characteristics over Temperature



Typical Representative Spatial Radiation Pattern for
White and Warm White Lambertian



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Handling Informations

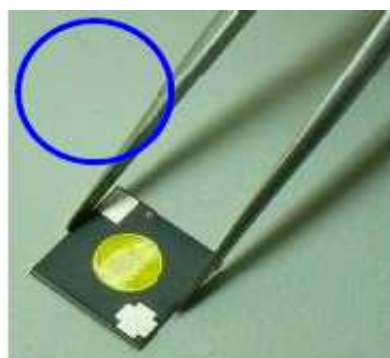
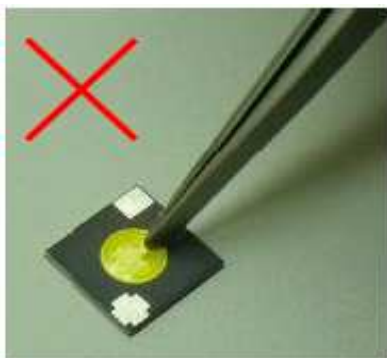
The softness and dust affinity of silicone constrain the handling of LED. Thus some handling indications of DIAMOND LED are presented for possible damage preventions and excellent reliability.

Do not use sharp tools to touch the encapsulated silicone resin parts because scratches will influence the brightness and light pattern

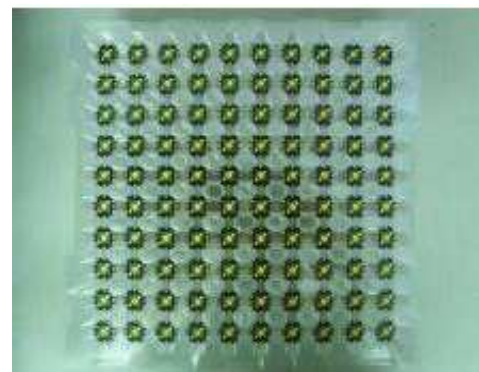
The DIAMOND LEDs should only be picked up by marking contact with the sides of the LED body.

Avoiding dropping LEDs without the MCPCB protection or forcing impact on the ceramic parts.

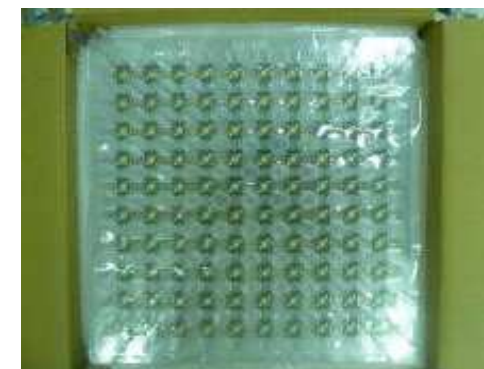
When populating in SMT production, the pick and place nozzle pressure on the silicone resin parts should be prevented.



Packing Informations



Tray Packing



Antistatic Bag



Box Packing

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Ordering Informations

Serie	Color Tone	P.C.B.	ROHS	Packing						
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M15011	CW	N	R	TY						
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CW = Cool White	N = without STAR PCB	R = ROHS Conform	TY = Tray Packing
WW = Warm White	S = with STAR PCB	N = NON ROHS	

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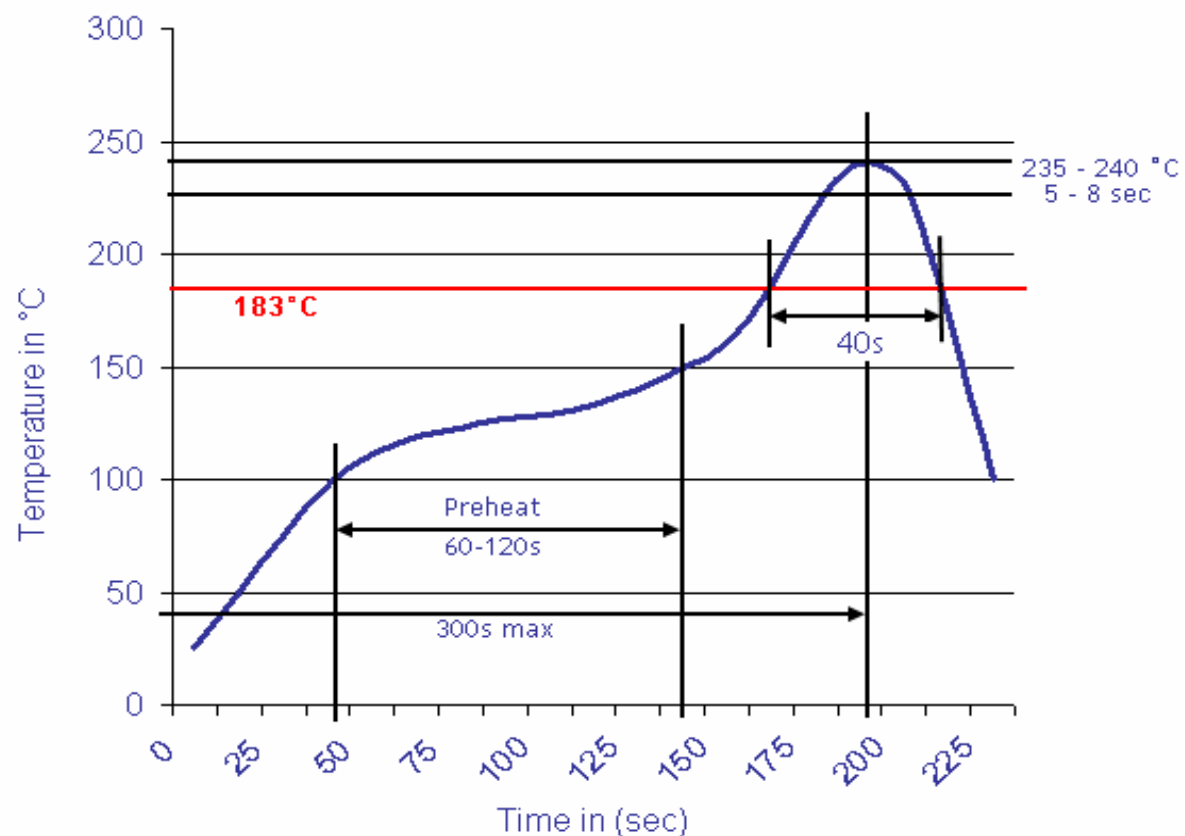


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Soldering Profile Curve

Classification Reflow Profile (JEDEC J-STD-020C)


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