

Features

- Super high Flux output and high Luminance
- Very long operating life (up to 50k hours)
- Designed for high current operation
- Low thermal resistance
- SMT solder bility
- Lead Free product
- RoHS compliant
- No UV
- Superior ESD protection

Applications

- Mobile phone flash
- Automotive interior / exterior lighting
- Automotive signal lighting
- Automotive forward lighting
- General Torch
- Architectural lighting
- LCD TV / Monitor Backlight
- Projector light source
- Traffic signals
- Task lighting
- Decorative / Pathway lighting
- Remote / Solar powered lighting
- Household appliances

Notes:

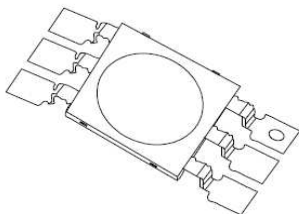
All dimensions in mm tolerance is $\pm 0.1\text{mm}$ unless otherwise noted.

**3 Watt Power LED
RED / GREEN / BLUE**

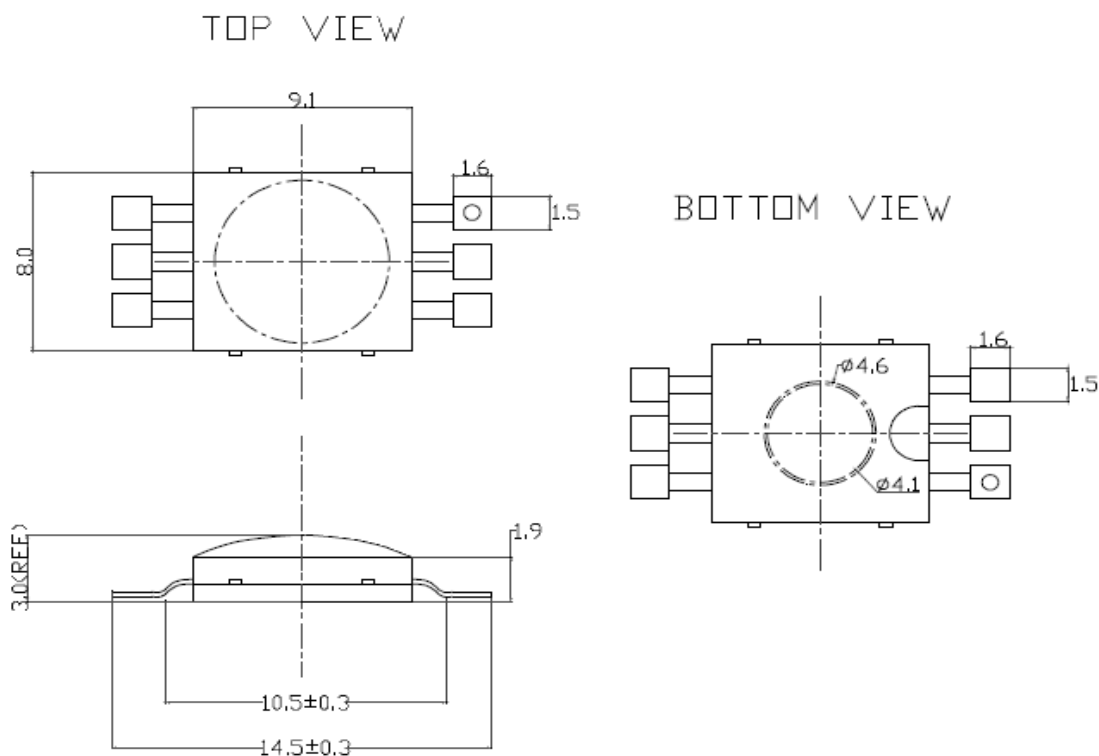
Part No.: **M15002**

Customer:

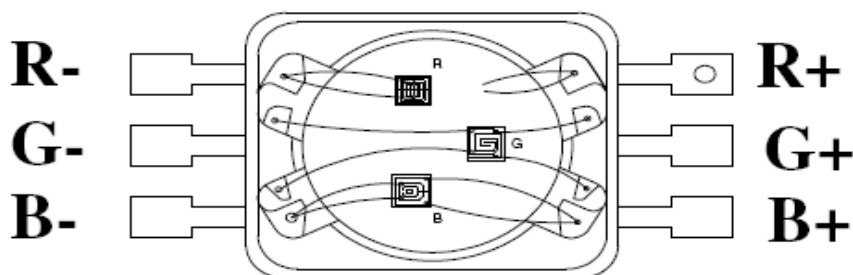
DRW:	Harry	CHKD	Dustin	MATL	Wilson	TOLERANCE	Mason	DATE 24.08.2009
APPD:	Jason			FINISH	John		Sheet No.	1 from 11



Package Dimensions



Colour sequence



Notes:

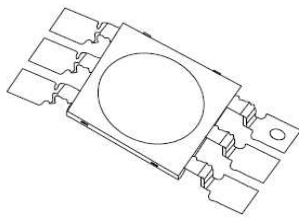
1. All dimensions are in millimeter.
2. The anode side of the device is denoted by a hole in the lead frame.
Electrical insulation between the case and the board is required-slug of device is not electrically neutral. Do not electrically connect either the anode or cathode to the slug.
3. All dimensions without tolerances are for reference only.
4. Caution must be used in handling this device to avoid damage to the lens surfaces that will reduce optical efficiency.

**3 Watt Power LED
RED / GREEN / BLUE**

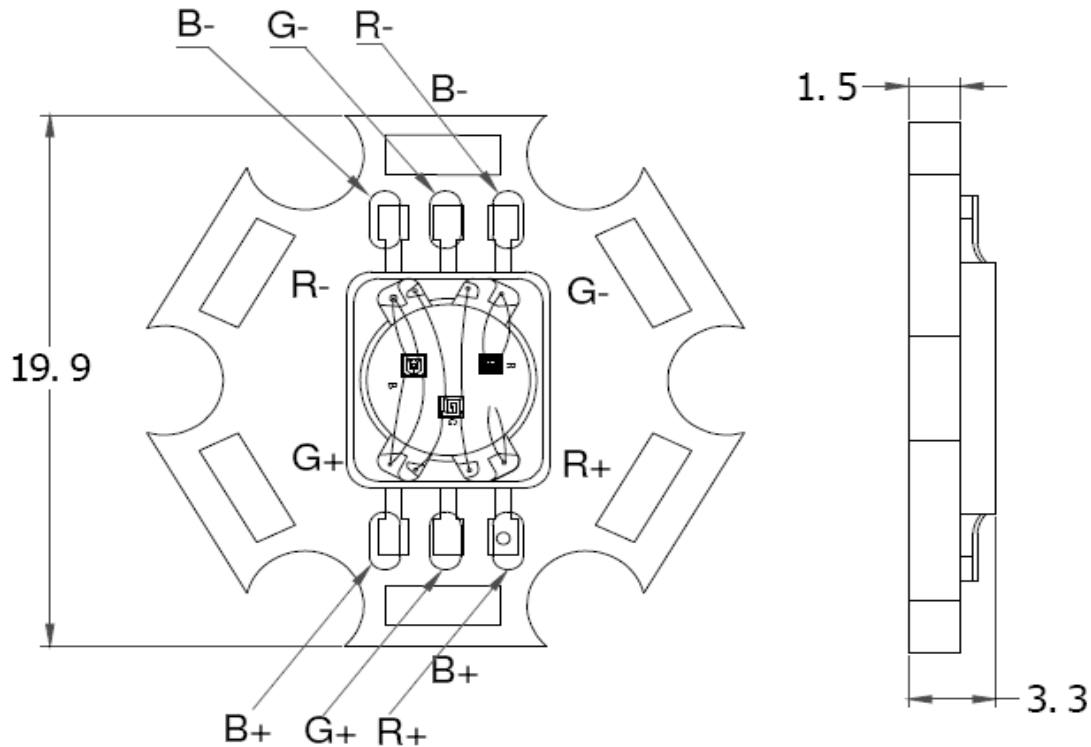
Part No.: **M15002**

Customer:

DRW:	Harry	CHKD	Dustin	MATL	Wilson	TOLERANCE	Mason	DATE 24.08.2009
APPD:	Jason			FINISH	John		Sheet No.	2 from 11



Recommended Solder pad



Note:

1. All dimensions are in millimeters
2. Scale noe
3. This drawing without tolerances are for reference on

**3 Watt Power LED
RED / GREEN / BLUE**

Part No.: **M15002**

Customer:

DRW:	Harry	CHKD	Dustin	MATL	Wilson	TOLERANCE	Mason	DATE 24.08.2009
APPD:	Jason			FINISH	John		Sheet No.	3 from 11

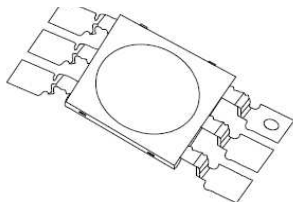
www.edcon-components.com

email: info@edcon-components.com

© by EDCON-COMPONENTS

EDCON-COMPONENTS





Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Value	Unit
Forward Current	I _F	0.5	A
Power Dissipation	P _D	1.6	W
Junction Temperature	T _j	125	°C
Operating Temperature	T _{opr}	-30 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~ +120	°C

Typical Electrical & Optical Characteristics (IF=350mA and Ta = 25°C)

Part No.	Parameter	Color	Symbol	Value			Unit
				Min	Typ	Max	
M15002	Luminous Flux	Red	Ø V	27	36	--	lm
		Green		46	60	--	
		Blue		9	12	--	
	Dominant Wave Length	Red	λ D	620	--	630	nm
		Green		515	--	525	
		Blue		460	--	470	
	Forward Voltage	Red	V F	--	2.0	2.8	V
		Green		--	3.2	4.5	
		Blue		--	3.2	4.5	

1. WW maintains a tolerance of ±10% of flux and power measurements.
2. A tolerance of ±1nm on wave length measurements.
3. A tolerance of ±0.1V on forward voltage measurements.
4. View Angle maintains a tolerance of ±20°.

**3 Watt Power LED
RED / GREEN / BLUE**

Part No.: **M15002**

Customer:

DRW:	Harry	CHKD	Dustin	MATL	Wilson	TOLERANCE	Mason	DATE 24.08.2009
APPD:	Jason			FINISH	John		Sheet No.	4 from 11

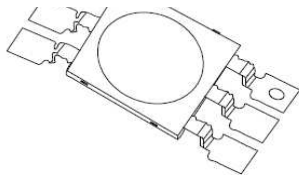
www.edcon-components.com

email: info@edcon-components.com

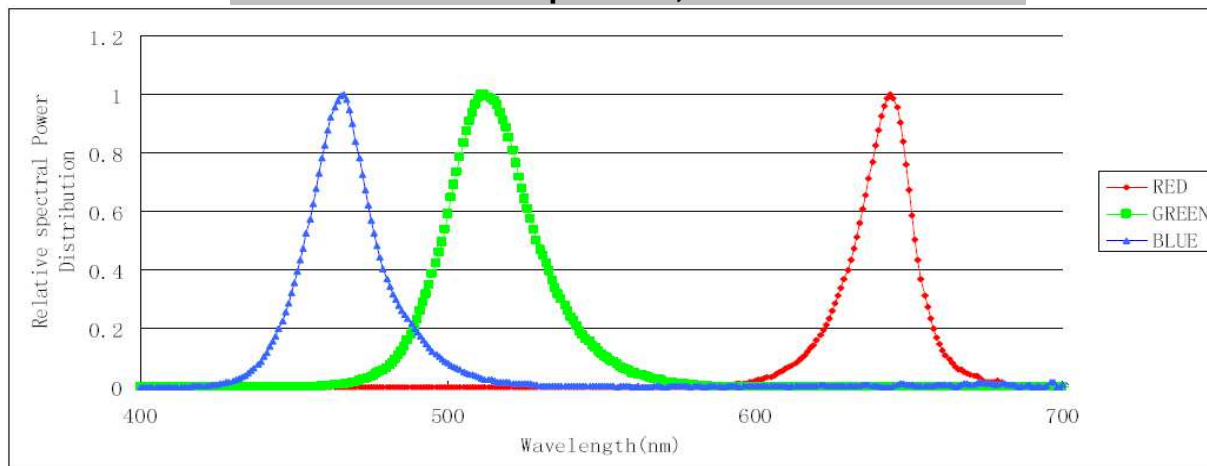
© by EDCON-COMPONENTS

EDCON-COMPONENTS





R/G/B spectrum, TA=25°C



**3 Watt Power LED
RED / GREEN / BLUE**

Part No.: **M15002**

Customer:

DRW:	Harry	CHKD	Dustin	MATL	Wilson	TOLERANCE	Mason	DATE 24.08.2009
APPD:	Jason			FINISH	John		Sheet No.	5 from 11

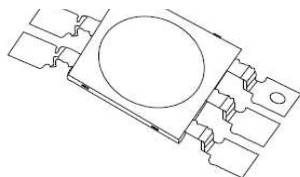
www.edcon-components.com

email: info@edcon-components.com

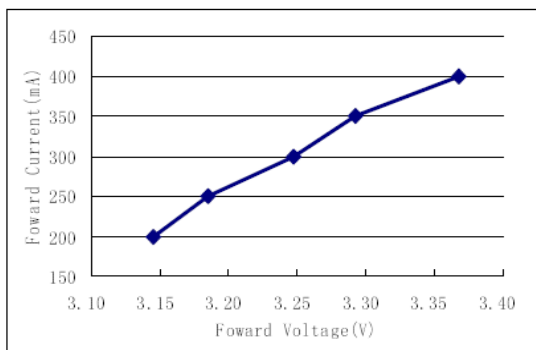
© by EDCON-COMPONENTS

EDCON-COMPONENTS

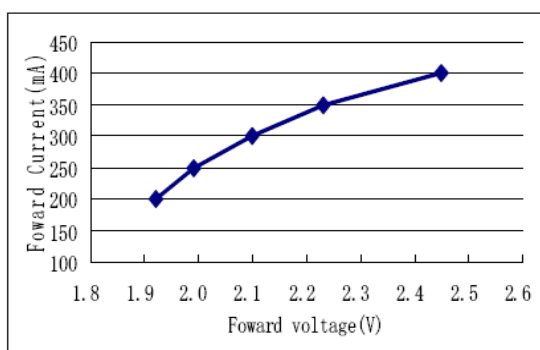




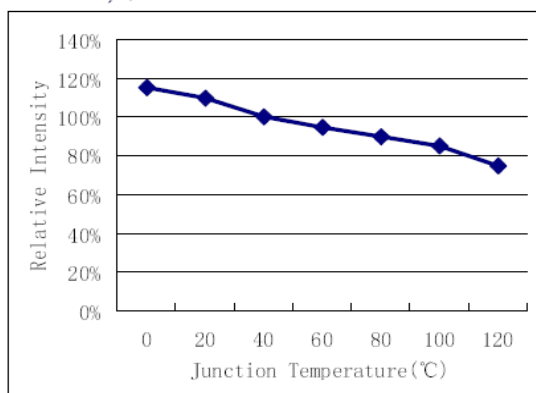
**Forward Voltage vs. Forward Current, TA=25°C
(Blue Green)**



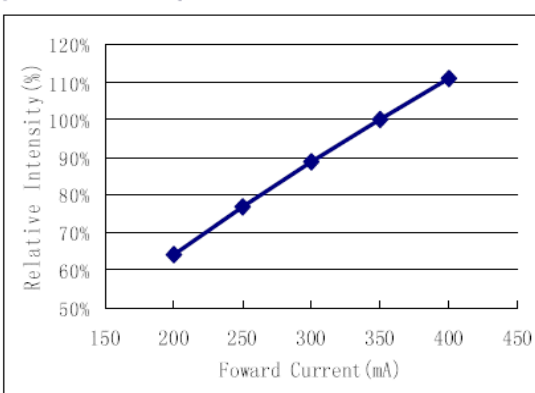
**Forward Voltage vs. Forward Current, TA=25°C
(Red)**



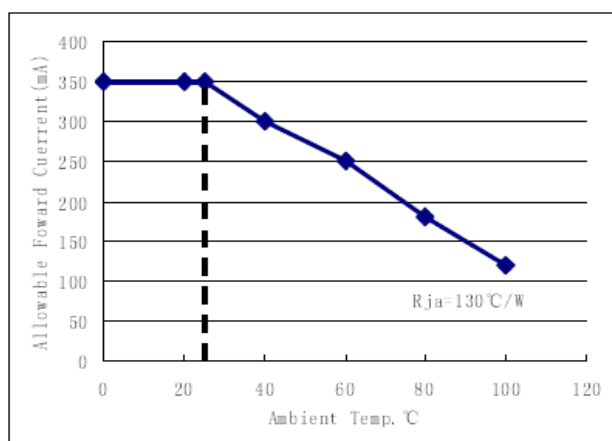
**Relative Light Output vs. Junction Temperature
IF=350mA, at TA=25°C**



**Forward Current VS Relative Luminosity TA=25°C
(Blue Green Red)**



**Ambient Temperature. VS Allowable Forward Current
(Blue Green Red)**



**3 Watt Power LED
RED / GREEN / BLUE**

Part No.: **M15002**

Customer:

DRW:	Harry	CHKD	Dustin	MATL	Wilson	TOLERANCE	Mason	DATE 24.08.2009
APPD:	Jason			FINISH	John		Sheet No.	6 from 11

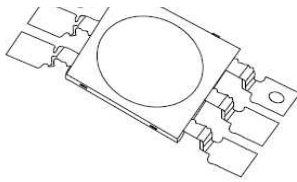
www.edcon-components.com

email: info@edcon-components.com

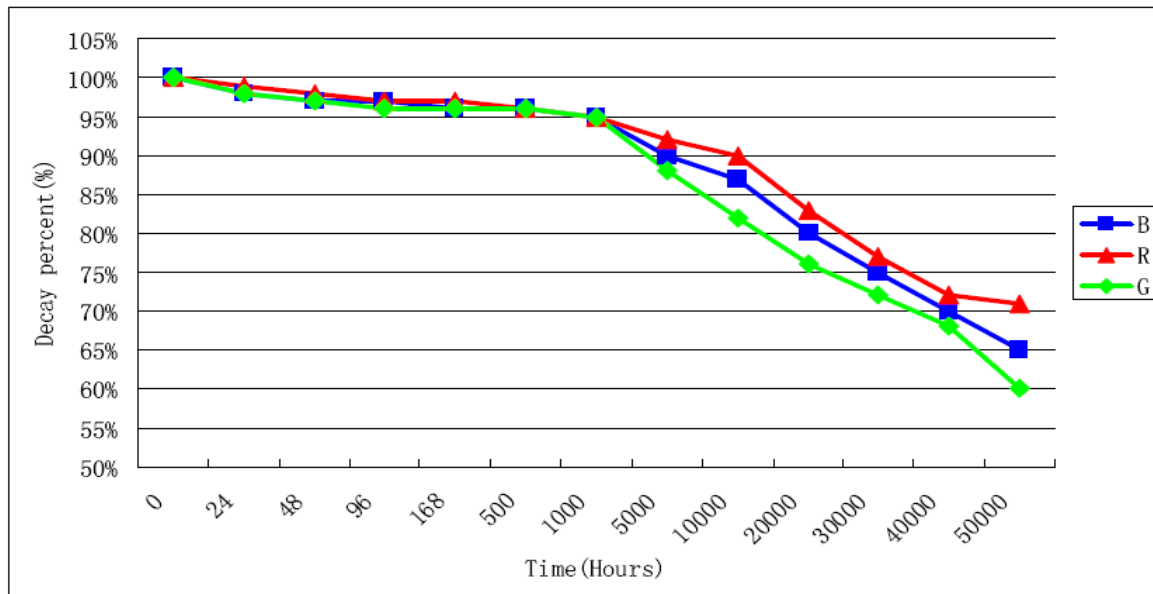
© by EDCON-COMPONENTS

EDCON-COMPONENTS





Life Test decay: IF=350mA TA=25°C Heat sink: 30*30 aluminum board with thermal conductivity ($\lambda=30$ w/mk)



**3 Watt Power LED
RED / GREEN / BLUE**

Part No.: **M15002**

Customer:

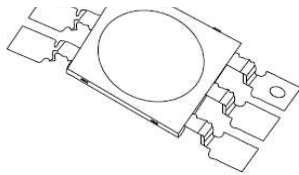
DRW:	Harry	CHKD	Dustin	MATL	Wilson	TOLERANCE	Mason	DATE 24.08.2009
APPD:	Jason			FINISH	John		Sheet No.	7 from 11

www.edcon-components.com

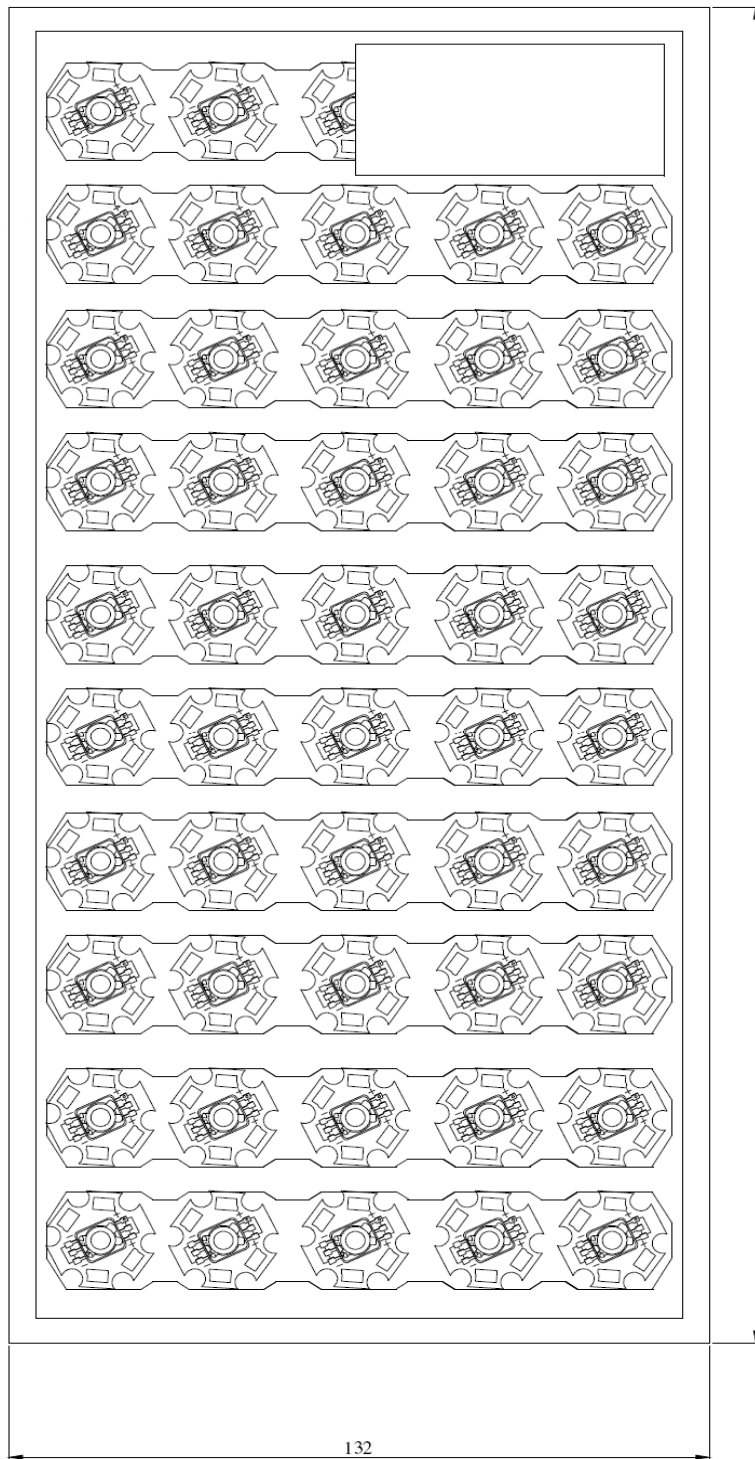
email: info@edcon-components.com

© by EDCON-COMPONENTS
EDCON-COMPONENTS





Package with heart sink LED (50pcs/tray)



3 Watt Power LED RED / GREEN / BLUE	
Part No.:	M15002
Customer:	

DRW:	Harry	CHKD	Dustin	MATL	Wilson	TOLERANCE	Mason	DATE 24.08.2009
APPD:	Jason			FINISH	John		Sheet No.	8 from 11

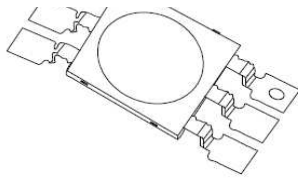
www.edcon-components.com

email: info@edcon-components.com

© by EDCON-COMPONENTS

EDCON-COMPONENTS





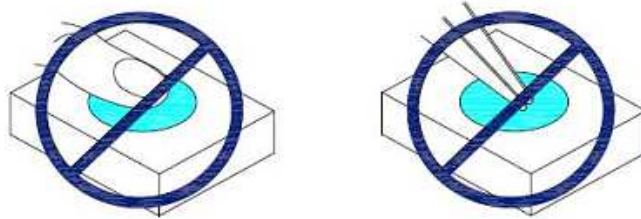
Handling Precautions

Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force. As a result, special handling precautions need to be observed during assembly using silicone encapsulated LED products. Failure to comply might leads to damage and premature failure of the LED.

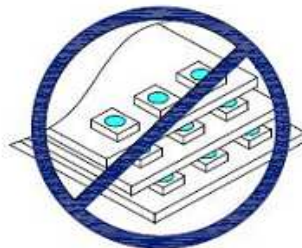
1. Handle the component along the side surfaces by using forceps or appropriate tools.



2. Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.



3. Do not stack together assembled PCBs containing exposed LEDs. Outside impact may scratch the silicone lens or damage the internal circuitry.



4. The outer diameter of the TOP LED pickup nozzle should not exceed the size of the LED to prevent air leaks. The inner diameter of the nozzle should be as large as possible.

**3 Watt Power LED
RED / GREEN / BLUE**

Part No.: **M15002**

Customer:

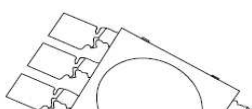
DRW:	Harry	CHKD	Dustin	MATL	Wilson	TOLERANCE	Mason	DATE 24.08.2009
APPD:	Jason			FINISH	John		Sheet No.	9 from 11

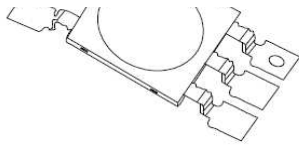
www.edcon-components.com

email: info@edcon-components.com

© by EDCON-COMPONENTS

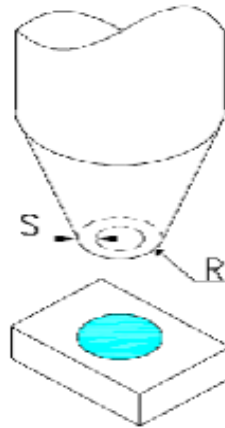
EDCON-COMPONENTS





5. A pliable material is suggested for the nozzle tip to avoid scratching or damaging the LED surface during pickup.

6. The dimensions of the component must be accurately programmed in the pick-and-place machine to insure precise pickup and avoid damage during production.



**3 Watt Power LED
RED / GREEN / BLUE**

Part No.: **M15002**

Customer:

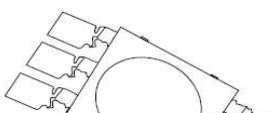
DRW:	Harry	CHKD	Dustin	MATL	Wilson	TOLERANCE	Mason	DATE 24.08.2009
APPD:	Jason			FINISH	John		Sheet No.	10 from 11

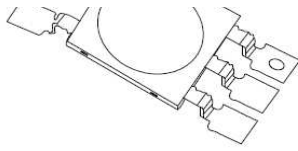
www.edcon-components.com

email: info@edcon-components.com

© by EDCON-COMPONENTS

EDCON-COMPONENTS





Precaution for use

- **Storage**
In order to avoid the absorption of moisture, it is recommended to store in the dry box (or desiccator) with a desiccant . Otherwise, to store them in the following environment is recommended. Temperature : 5℃~30℃ Humidity : 60%HR max.
- **Attention after opened**
However LED is correspond SMD, when LED be soldered dip, interfacial separation may affect the light transmission efficiency, causing the light intensity to drop. Attention in followed.
 - a. After opened and mounted, the soldering shall be quickly.
 - b. Keeping of a fraction
Temperature : 5 ~ 40℃ Humidity : less than 30%
- In case of more than 1 week passed after opening or change color of indicator on desiccant components shall be dried 10-12hr. at 60±5℃ .
- In case of supposed the components is humid, shall be dried dip-solder just before. 100Hr at 80±5℃ or 12Hr at 100±5℃ .
- Any mechanical force or any excess vibration shall not be accepted to apply during cooling process to normal temp. after soldering.
- Quick cooling shall avoid.
- Components shall not be mounted on warped direction of PCB.
- Anti radioactive ray design is not considered for the products listed here in.
- Gallium arsenide is used in some of the products listed in this publication. These products are dangerous if they are burned or smashed in the process of disposal. It is also dangerous to drink the liquid or inhale the gas generated by such products when chemically disposed.
- This device should not be used in any type of fluid such as water, oil, organic solvent and etc. When washing is required, IPA should be used.
- When the LEDs are illuminating, operating current should be decided after considering the package maximum temperature.
- LEDs must be stored to maintain a clean atmosphere. If the LEDs are stored for 3 months or more after being shipped from SSC, a sealed container with a nitrogen atmosphere should be used for storage.
- The LEDs must be soldered within seven days after opening the moisture-proof packing.
- Repack unused products with anti-moisture packing, fold to close any opening and then store in a dry place.
- The appearance and specifications of the product may be modified for improvement without notice.
- Long time exposure of sunlight or UV occasions discolorment of PKG

**3 Watt Power LED
RED / GREEN / BLUE**

Part No.: **M15002**

Customer:

DRW:	Harry	CHKD	Dustin	MATL	Wilson	TOLERANCE	Mason	DATE 24.08.2009
APPD:	Jason			FINISH	John		Sheet No.	10 from 11

www.edcon-components.com

email: info@edcon-components.com

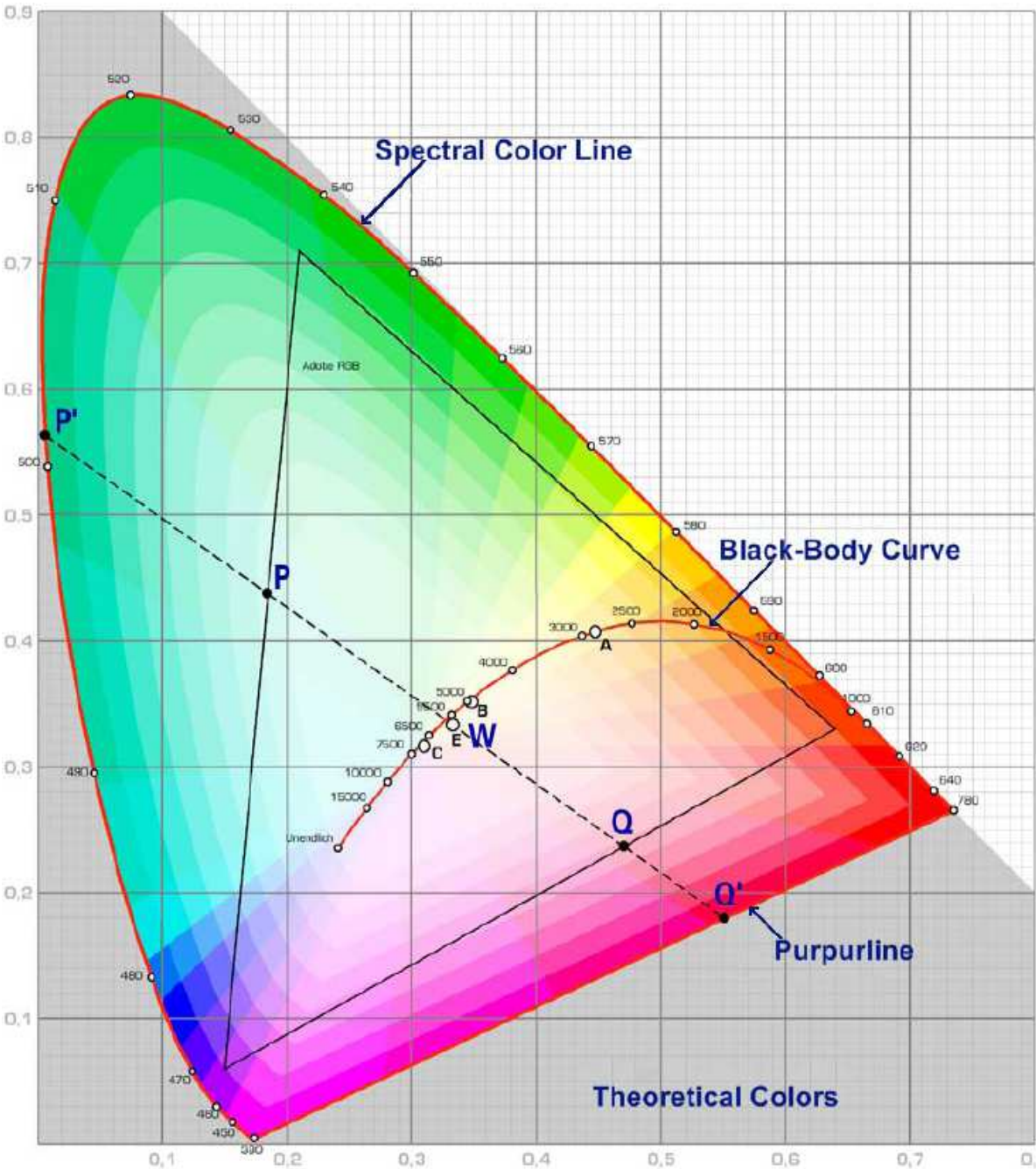
© by EDCON-COMPONENTS

EDCON-COMPONENTS





Color table curve



3 Watt Power LED RED / GREEN / BLUE	
Part No.:	M15002
Customer:	

Customer:

Mason	DATE 24.08.2009
Sheet No.	11 from 11

DRW:	Harry	CHKD	Dustin	MATL	Wilson	TOLERANCE	Mason	DATE 24.08.2009
APPD:	Jason			FINISH	John		Sheet No.	11 from 11

email: info@edcon-components.com

© by EDCON-COMPONENTS