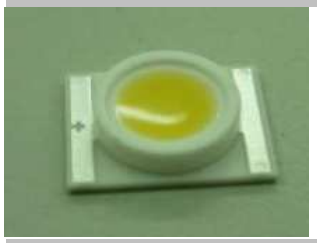
EDCON-COMPONENTS



The Power of LED Light

EDCON COMPONENTS
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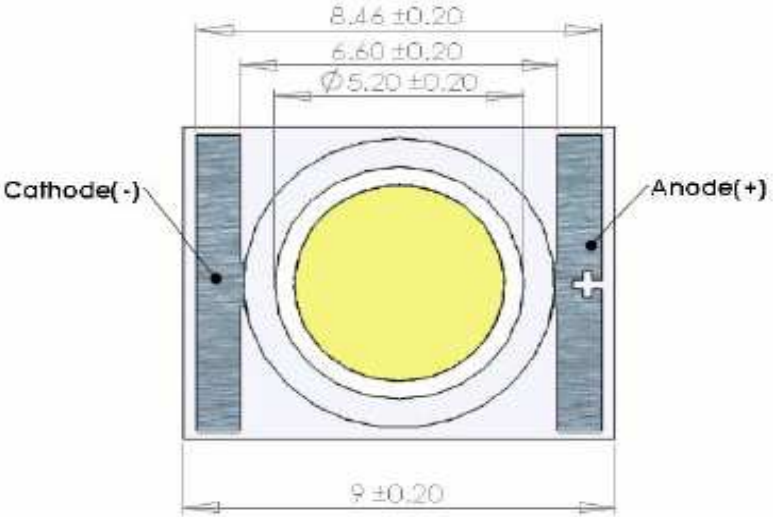
Specifications

Diamond Flat Lens LED, a solid-state technology lighting device, provides high luminous flux output with high efficiency for the illumination applications. Diamond Flat Lens can be encapsulated by the technology of silicone molding too. It has characteristics of UV resistance and better heat loading. Also Diamond Flat Lens LED is capable of standard lead free solder reflow process.

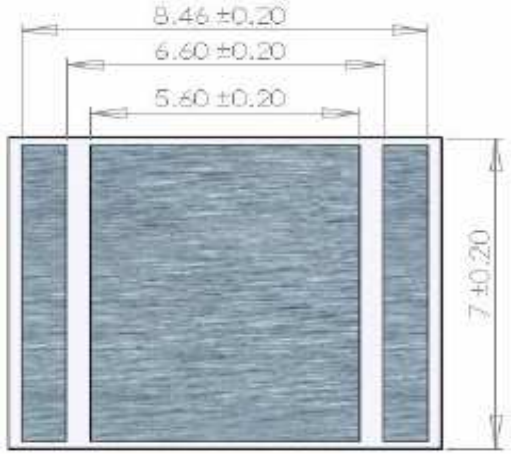
Features

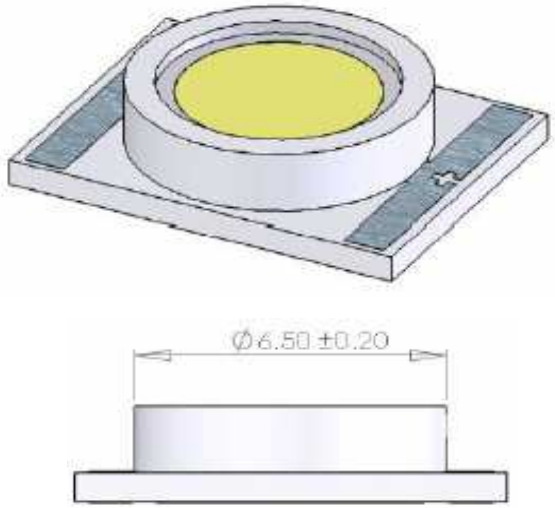
High luminous flux output
Silicone molding lens
Standard lead free solder reflow process JEDEC 020C
General Lightning
Par Lamp
Brightness compensation
Torch Lightning

PCB Solder Pad Dimension



Dimensions (mm)





Drawings are not to scale
All dimensions without tolerance are for reference only
Specifications are subject to change without notice

1 Watt Diamond Flat Lens LED

Part No.: **M15007**

DRW:	Jason	CHKD	Wilson	MATL:	Wilson	TOLERANCE	Mason	DATE	10.04.2009
APPD:	Schumi			FINISH	Jamy		Sheet No.		1 from 10

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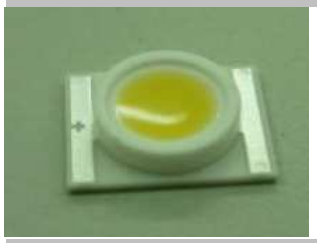

The Power of LED Light

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Characteristics

Characteristics at If=350mA (Ta=25℃)

Parameter	Symbol	Value			Unit
		Min	Typ.	Max.	
Luminous flux	Ø v (2)	77,3	85		lm
CRI	Ra		65		
View Angle	2Ø 1/2		120		degree
Correlated color temperat.	CCT	5000		8000	K
Forward Voltage	Vf	3,0		3,8	V
Power dissipation	Pd	1,05		1,33	W
Junction Temperature	Tj	----		120	Deg.
Operation Temperature	Top	. -40℃ ~ + 105			℃
Storage Temperature	Tst	. -40℃ ~ + 120			℃

Bin Code

Luminous Flux (lm)	Rank (BIN)	Color temperatur	Rank (BIN)
67,2~ 87,4	T0	4745~5410	3
87,4~113,6	U0	5310~6020	2
113,6~147,7	V0	6020~7040	1
147,7~192	W0		

1. The typical luminous flux of diamond Led will be upgraded per season

2. Ø minimum luminous flux performance guaranted within published operating conditions. EDCON maintains a tolerance of +/-10% luminous flux measurements.

3. The dominant wavelength is derived from CIE1931 chromaticity diagramm and presents the perceived color.
The tester tolerance of dominant Wavelength +/- 1nm.

4. EDCON maintains a tolerance of +/- 0,06V on forward voltage measurements.

Characteristics at If=350mA (Ta=25℃)

Parameter	Symbol	Value			Unit
		Min	Typ.	Max.	
Luminous flux	Ø v (2)	55	65	80	lm
CRI	Ra		80		
View Angle	2Ø 1/2		120		degree
Correlated color temperat.	CCT	3500		5000	K
Forward Voltage	Vf	3,0		3,8	V
Power dissipation	Pd	1,05		1,33	W
Junction Temperature	Tj	----		120	Deg.
Operation Temperature	Top	. -40℃ ~ + 105			℃
Storage Temperature	Tst	. -40℃ ~ + 120			℃

Bin Code

Luminous Flux (lm)	Rank (BIN)	Color temperatur	Rank (BIN)
51,7~67,2	S0	3220~3710	6
67,2~87,4	T0	3710~4260	5
87,4~113,6	U0		
113,6~147,7	V0		

1 Watt Diamond Flat Lens LED

Part No.: **M15007**

Customer:

DRW:	Jason	CHKD	Wilson	MATL:	Wilson	TOLERANCE	Mason	DATE	10.04.2009
APPD:	Schumi			FINISH	Jamy		Sheet No.		2 from 10

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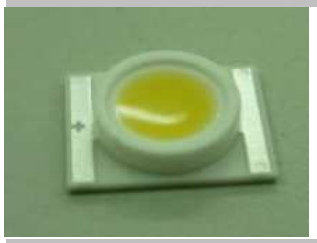

The Power of LED Light

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Characteristics Curve

Characteristics at If=350mA (Ta=25℃)

Parameter	Symbol	Value			Unit
		Min	Typ.	Max.	
Luminous flux	Ø v (2)	46	55	70	lm
CRI	Ra		85		
View Angle	2Ø 1/2		120		degree
Correlated color temperat.	CCT	2500		3500	K
Forward Voltage	Vf	3,0		3,8	V
Power dissipation	Pd	1,05		1,33	W
Junction Temperature	Tj	----		120	Deg.
Operation Temperature	Top	. -40℃ ~ + 105			℃
Storage Temperature	Tst	. -40℃ ~ + 120			℃

Bin Code

Luminous Flux (lm)	Rank (BIN)	Color temperatur	Rank (BIN)
39,8~51,7	R0	2555~2870	8
51,7~67,2	S0	2880~3220	7
67,2~87,4	T0		
87,4~113,6	U0		

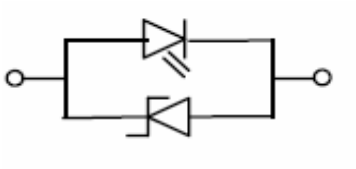
1. The typical luminous flux of diamond Led will be upgraded per season

2. Ø minimum luminous flux performance guaranted within published operating conditions. EDCON maintains a tolerance of +/-10% luminous flux measurements.

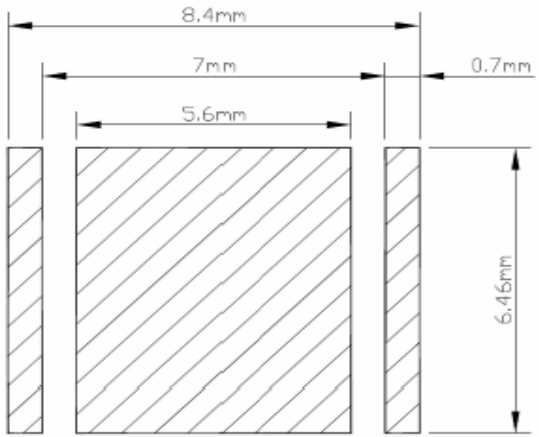
3. The dominant wavelength is derived from CIE1931 chromaticity diagramm and presents the perceived color.
The tester tolerance of dominant Wavelength +/- 1nm.

4. EDCON maintains a tolerance of +/- 0,06V on forward voltage measurements.

Circuit Diagramm



PCB Layout



1 Watt Diamond Flat Lens LED

Part No.: **M15007**

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APPD:	Schumi			FINISH	Jamy		Sheet No.		3 from 10

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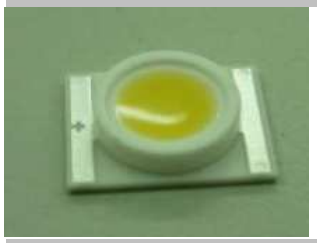

The Power of LED Light

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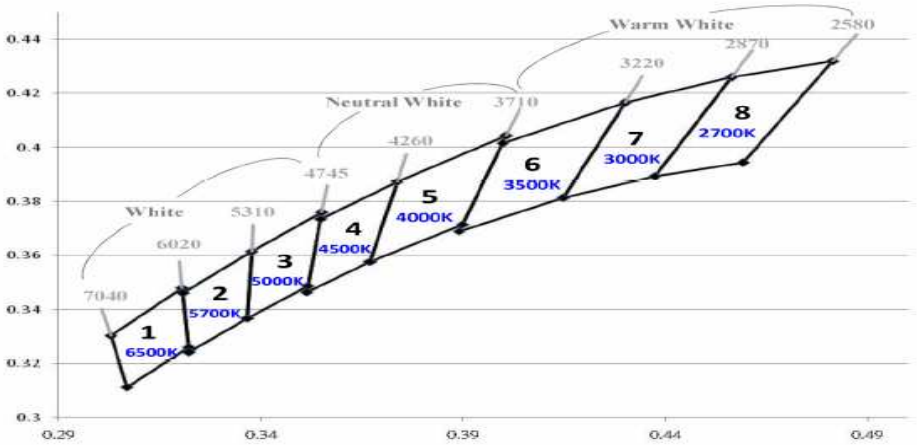
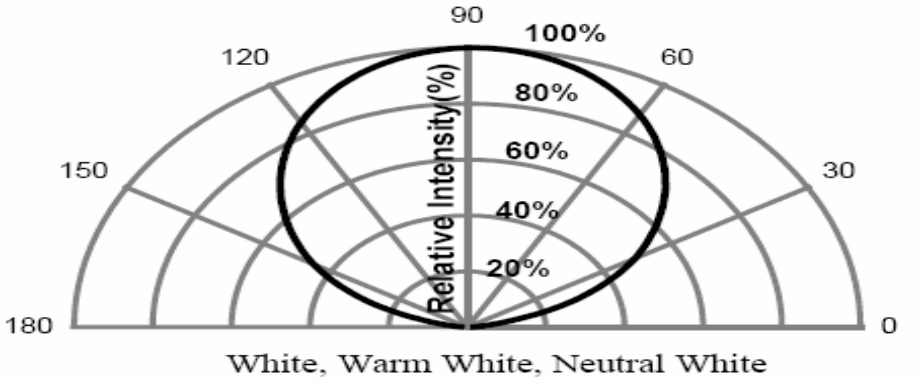
Characteristics Curve

White ANSI Bin Structure

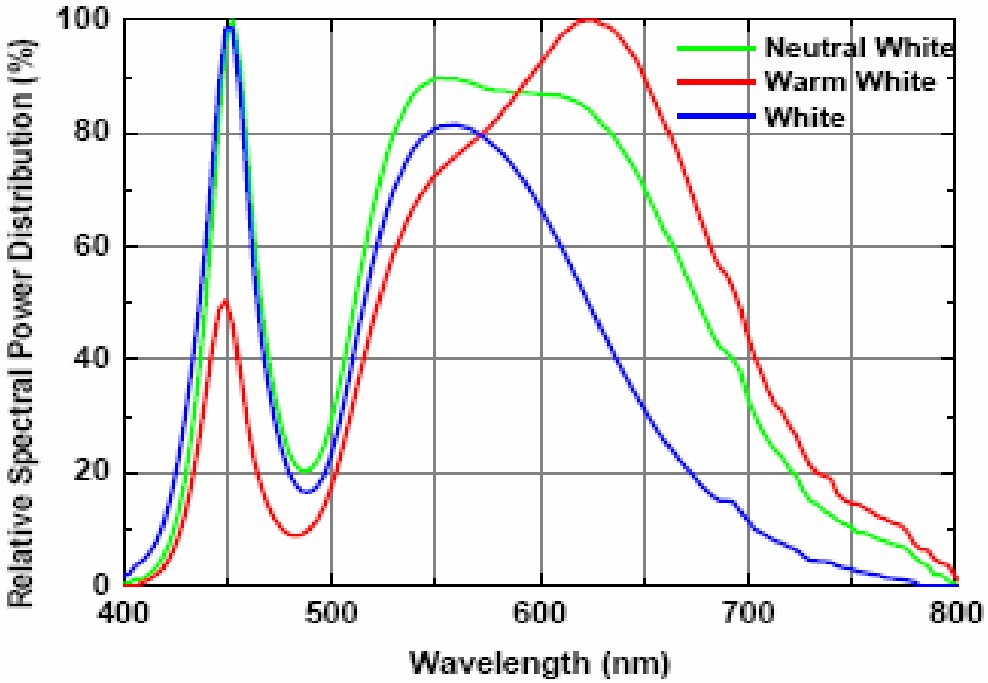


Typical Polar Radiation Pattern



White, Warm White, Neutral White

Emission Spectrum



1 Watt Diamond Flat Lens LED

Part No.: **M15007**

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APPD:	Schumi			FINISH	Jamy		Sheet No.		4 from 10

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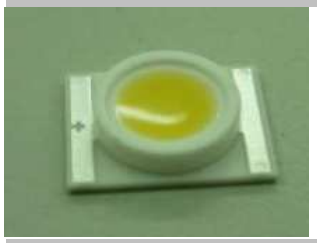

The Power of LED Light

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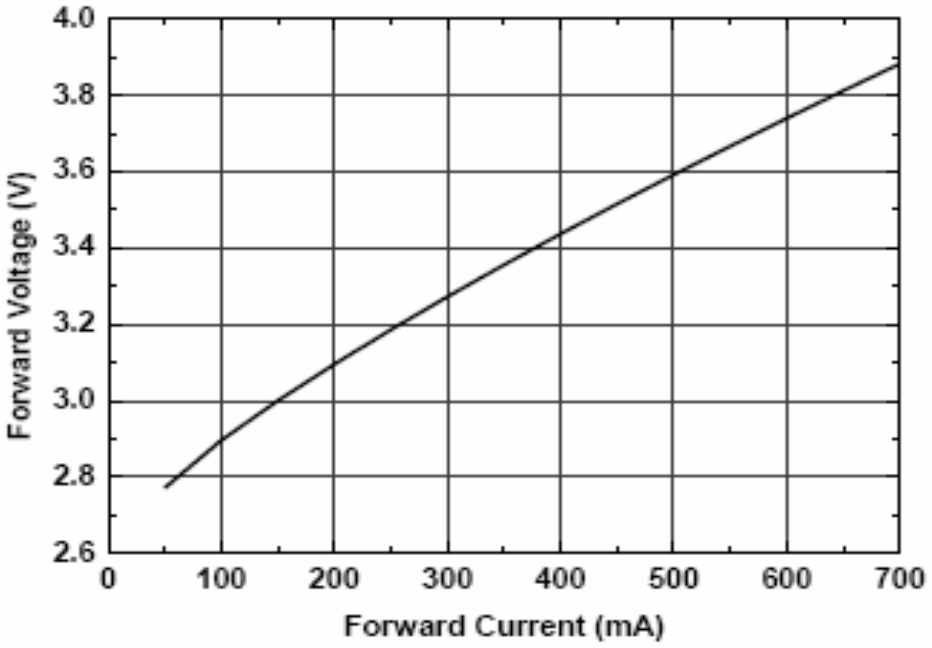
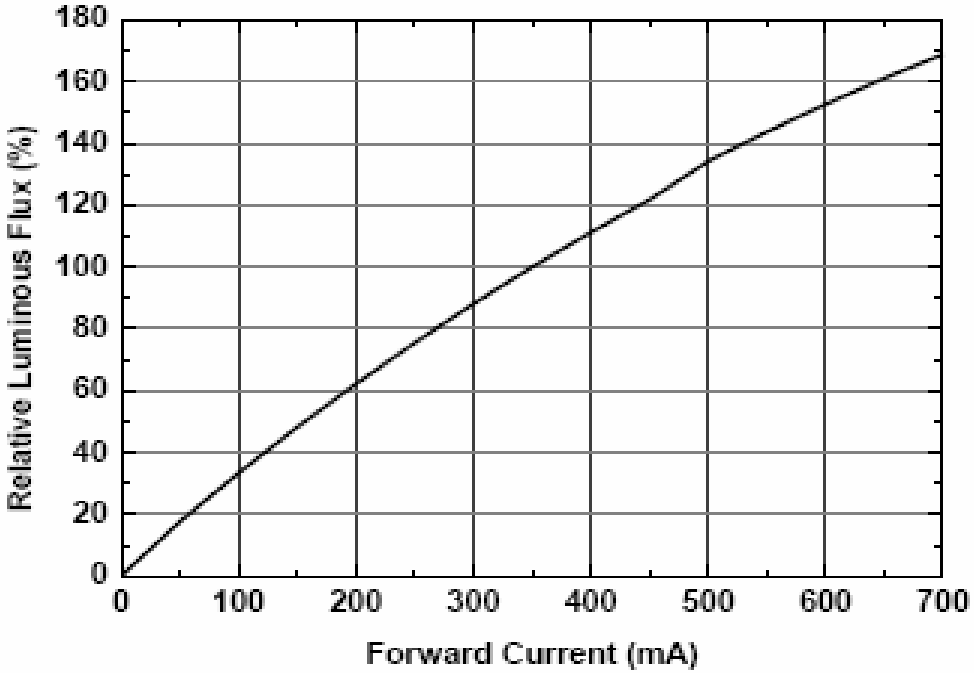
Characteristics

Forward Voltage vs Forward Current



Typical Light Output Characteristics over Forward Current



1 Watt Diamond Flat Lens LED

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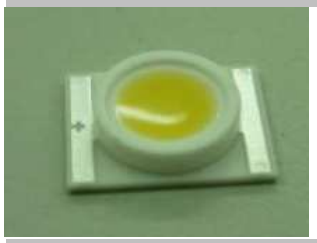

The Power of LED Light

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LED Handling Informations

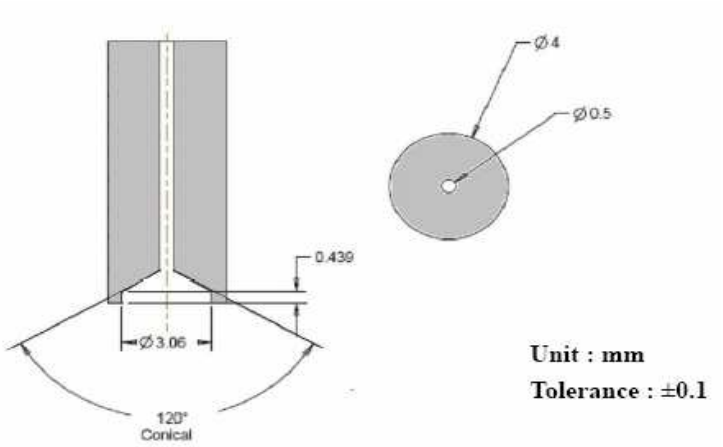
The following items are recommended when handling LEDs

The lens of LEDs should not be exposed to dust and debris. Excessive dust and debris may cause a drastic decraese in light output

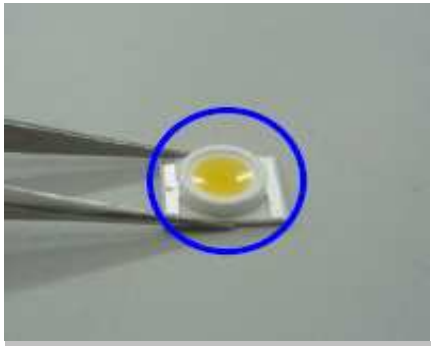
Avoid mechanical stress on LED lens.

Do not touch the LED lens surface. It would affect the otical performance of LED due to the LED lens damage.

Pick and Place Nozzle Pick and Place tool was recommended to use for the removal of LEDs from the factory tape&reel packaging. The pickup tool was recommended and shown as below



Please follow the guidline to grab LEDs
Use tweezers to grab LEDs
Do not touch lens with tweezers
Do not touch lens with fingers
Do not apply more than 2000gr. Impact or pressure on the silicone molding lens



Correct

Wrong

1 Watt Diamond Flat Lens LED

Part No.: **M15007**

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APPD:	Schumi			FINISH	Jamy		Sheet No.		6 from 10

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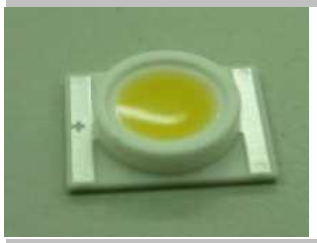

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LED Handling Informations

Lens cleaning

In the case where a minimal level of dirt and dust particles can not be guaranteed,
a suitable cleaning solutions can be applied to the lens surface.
Try a gentle swabbing using a lint-free swab
If needed, the use of lint-free swab and isopropyl alcohol used gently remoces dirt from the lens surface.
Do not use other solvents as they may directly react with the LED assembly.
Do not use ultrasonic cleaning that the LED will be damaged.

Carrier Tape Handling

The following items are recommended when handling the Carrier tape of LEDs
Do not twist the carrier tape
The inward bending radius should not smaller than 3cm for carrier tape.
Do not bend the tape outward.
Storage temperature should not exceed 60℃.

1 Watt Diamond Flat Lens LED

Part No.: **M15007**

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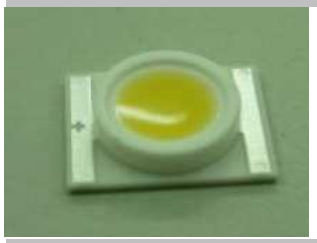

The Power of LED Light

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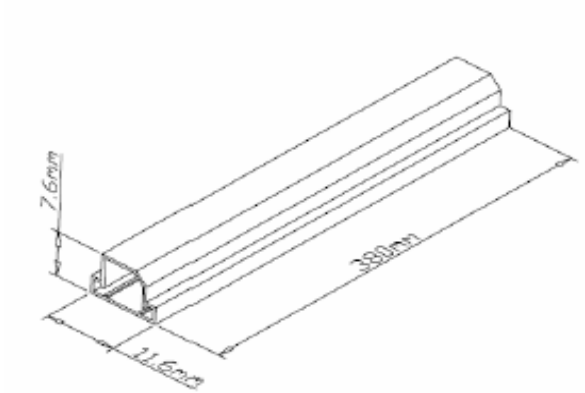
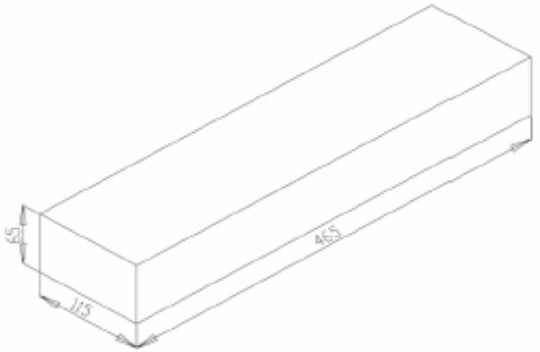
Package Specifications

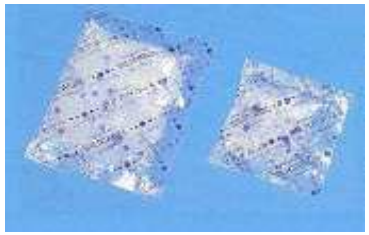
There are 50PCS LED in a tube
An antistic bag contains 20 tubes and a drying agent
There are 20 tubes in an inner carton.
All dimensions are in millimeter



Tube



Inner carton



1 Watt Diamond Flat Lens LED

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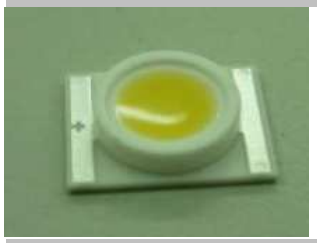

The Power of LED Light

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Ordering Informations

Serie	Color Tone	ROHS	Packing							
M15007	**CW**	**R**	**TR**							

CW= Cool White	**R**= ROHS Conform	**TR**= Tape Reel
NW= Neutral White	**N**= NON ROHS	
WW= Warm White		

1 Watt Diamond Flat Lens LED

Part No.: **M15007**

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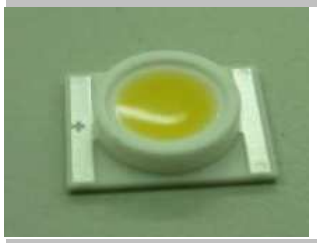

The Power of LED Light

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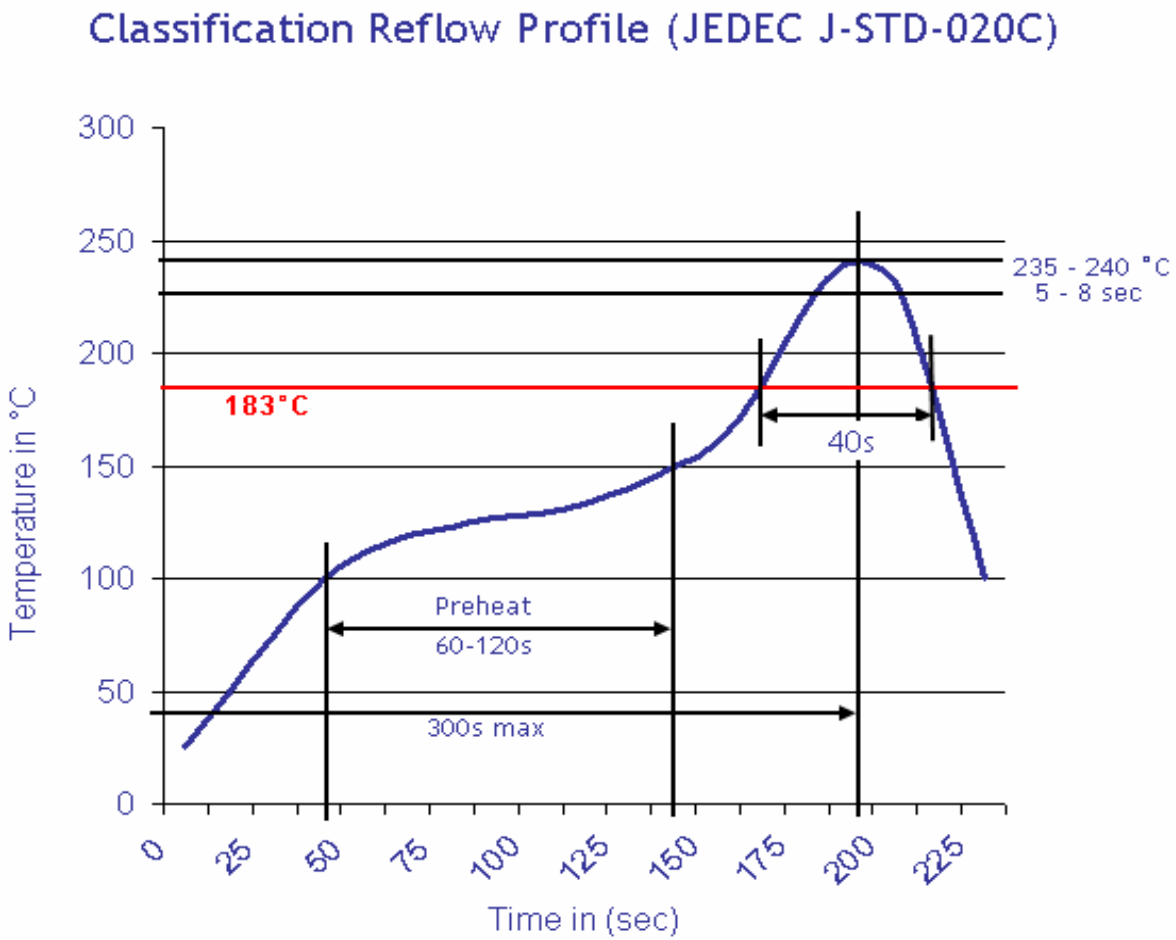
Soldering Profile Curve



1 Watt Diamond Flat Lens LED

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