



Maximum Rated Values

Part Number	Forward Current	Forward Voltage
RX-BKT57-56040	700mA	35.2V@700mA
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Thermal Characteristics

Storage Temperature, TSTG	-30 ~ +85°C
Operating Temperature, Top	-30 ~ +85°C
Max. Solder Point Temp., T <sub>cp</sub>	85°C

Standard Driver Options 100% No flicker

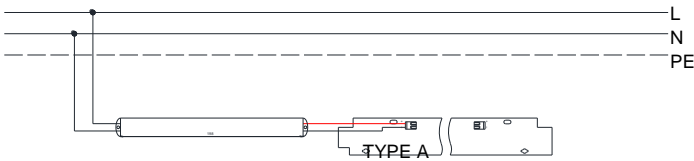
	Low brightness	High brightness
EFC-15D-420mA	1S 33.2V@420mA 1930Lm AC 15W PF0.9	--
EFC-022-600mA	2P 32.1V@300mA x2 2600Lm AC 22W PF0.9	1S 34.5V@600mA 2580Lm AC 23W PF0.9
HLG-40H-36	4P 31.7V@280mA x4 4930Lm AC 40W PF0.9	2P 34.2V@560mA x2 4780Lm AC 42W PF0.9

Part Numbering

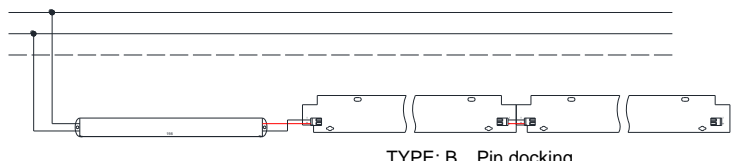
RX-BKT	-57	-XXXX	-XX
	LED	PCB Size	Photometric Code
	Model		CW6000~6500K
			NW3800~4250K
			WW2800~3200K

Where 1S = 1 Module, 4P is 4 Module in parallel etc; Power includes drivers consumption

For example: EFC-022-600mA drive of 2pcs parallel 300mA modules  
or 1pcs 600mA modules

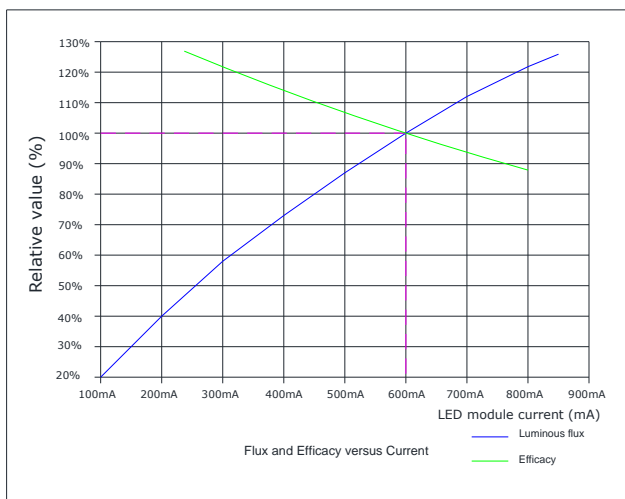


LED drivers EFC-022 for 1S x600mA =600mA

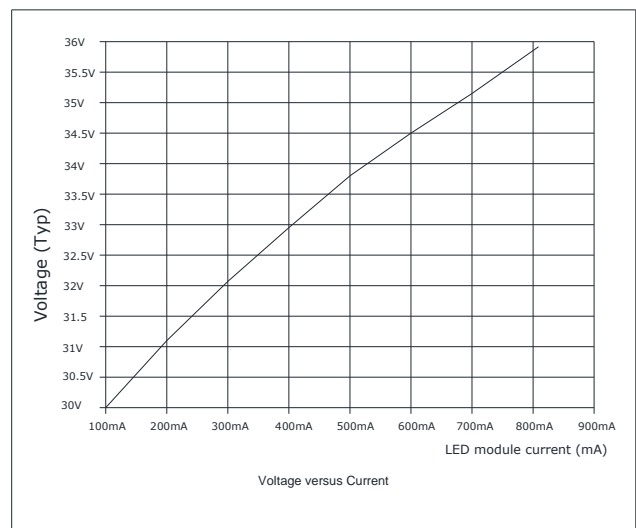


LED drivers EFC-022 for 2P x300mA =600mA

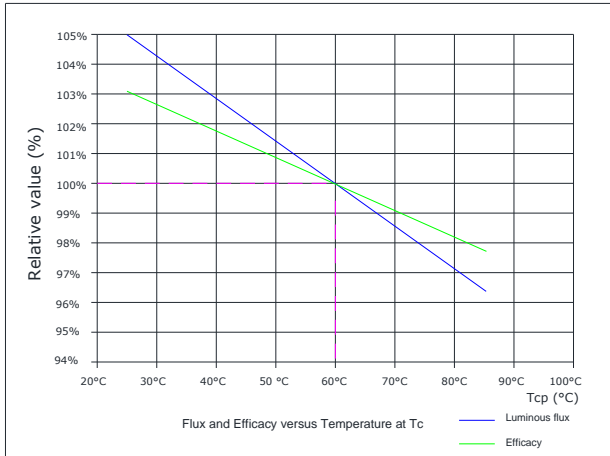
Flux and Efficacy versus Current



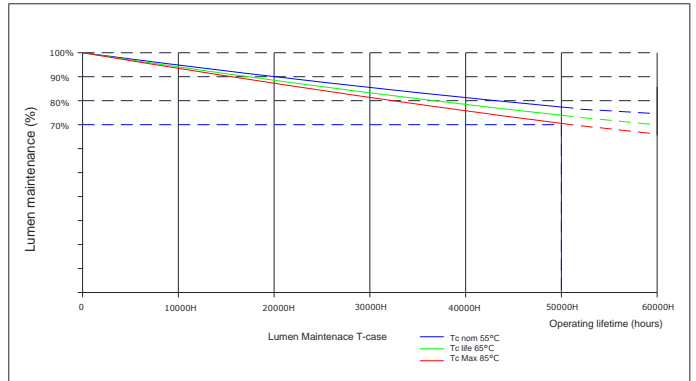
Voltage versus Current



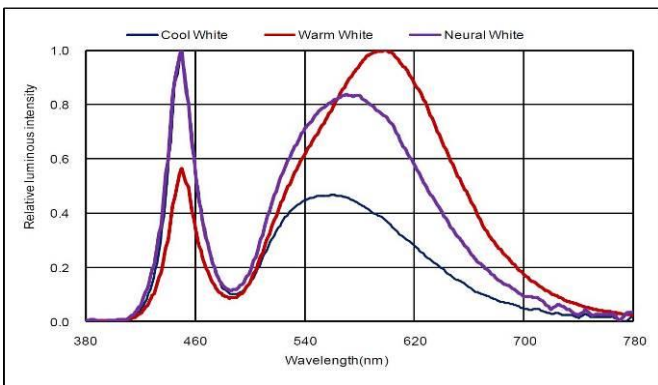
Flux and Efficacy versus Temperature at Tc



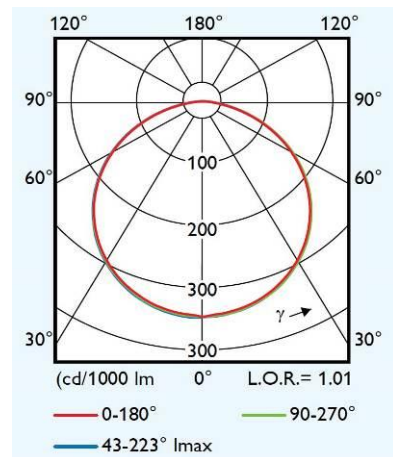
Lumen Maintenance T-case



Relative spectral emission



Light distribution



Thermal design and heat sink

The rated life of products depends to a large extent on the temperature. If the permissible temperature limits are exceeded, the life of the module will be greatly reduced or the module may be destroyed.

Tc point, ambient temperature and lifetime

The temperature at tp reference point is crucial for the light output and life time. For module a tp temperature of 65 °C has to be complied in order to achieve an optimum between heat sink requirements, light output and life time.

Compliance with the maximum permissible reference temperature at the tc point. must be checked under operating conditions in a thermally stable state.

The maximum value must be determined under worst-case conditions for the relevant application.

The tc and tp temperature of LED modules from are measured at the same reference point (Tcp)

Notes

The actual cooling surface can differ because of the material, the structural shape, outside influences and the installation situation. Depending on the heat sink a heat conducting paste or heat conducting film might be necessary to keep the specified tp temperature.

Heat sink values

Ambient Temperature Ta	Reference point Tp	Forward current	Rth, hs-a	Cooling area
25 °C	50 °C	500mA	self cooling	--
35 °C	60 °C	500mA	self cooling	--
45 °C	65 °C	500mA	1.2K/W	525 cm <sup>2</sup>
55 °C	65 °C	500mA	0.37K/W	1792 cm <sup>2</sup>
25 °C	52 °C	600mA	self cooling	--
35 °C	62 °C	600mA	self cooling	--
45 °C	65 °C	600mA	0.95K/W	658 cm <sup>2</sup>
55 °C	65 °C	600mA	--	--

## Mounting instruction

None of the components of the umodule (substrate, LED, electronic components etc.) may be exposed to tensile or compressive stresses.

Max. torque for fixing: 0.5 Nm.

The LED modules are mounted with min. 2 screws per module. In order not to damage the modules only rounded head screws and an additional plastic flat washer should be used.

## Precautions In Handling

1, LED Lighting for white light are devices which are materialized by combining white LEDs. The color of white light can differ a little unusually to diffuser plate(sign-board panel).

### 2, Handling

Don't drop the unit and don't give the unit any shocks.

Don't storage the Module in a dusty place or room.

Don't take the unit to pieces.

### 3, Cleaning

This LED Module should not be used in any type of fluid such as oil, organic solvent, etc.

It is recommended that IPA(Isopropyl Alcohol) be used as a solvent for cleaning the LED Module.

When using other solvents, it should be confirmed beforehand whether the solvents will dissolve the package and the resin or not. Freon solvents should not be used to clean

the LEDs because of worldwide regulations. Do not clean the LED Module by the ultrasonic.

Before cleaning, a pre-test should be done to confirm whether any damage to the LED Lighting will occur.

### 4, Static Electricity

Static electricity or surge voltage damages the LED Lighting.

### 5, Discoloration

VOCs (volatile organic compounds) may be occurred by adhesives, flux, hardener or organic additives which is used in luminaires (fixture) and LED silicone bags are permeable to it. It may lead a discoloration when LED expose to heat or light.

This phenomenon can give a significant loss of light emitted(output) from the luminaires(fixture). In order to prevent these problems, we recommend you to know the physical properties for the materials used in luminaires, it requires to select carefully.

### 5, Risk of Sulfurization (or Tarnishing)

The lead frame is a plated package and it may change to black. (or dark colored) when it is exposed to Ag (a), Sulfur (S), Cchlorine (Cl) or other halogen compound. It requires attention.

Sulfide (Sulfurization) of the lead frame may cause a change of degradation intensity, chromaticity coordinates and it may cause open circuit in extreme cases. It requires attention.

Sulfide (Sulfurization) of the lead frame may cause of storage and using with oxidizing substances together. Therefore, LED is not recommend to use and store with the below list.: Rubber, Plain paper, lead solder cream etc.

### 6, Others

If over voltage which exceeds the absolute maximum rating is applied to LED Lighting,

it will cause damage Circuits(that LED is included) and result in destruction.

Do not directly look into lighted LED with naked eyes for long time.