



High Power LED

EdixeonTM Emitter

5W EdixeonTM

Approved By Customer	Designer	Checker	Approval

Date : 2006/01/22

Version : 1.1

Device No. : 3-RD-01-E0017
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Edixeon™



Edixeon emitters are one of the highest flux LEDs in the world by Edison Opto. Edixeon emitters are designed to satisfy more and more Solid-State lighting High Power LED applications for brilliant world such as flash light, indoor and outdoor decoration light. Edixeon emitters are designed by particular package for High Power LED. 5W Edixeon white has more than 150 lumens @700mA. Unlike most fluorescent sources, Edixeon contains no mercury and has more energy efficient than other incandescent light source.

Features

- Various colors
- More energy efficient than incandescent and most halogen lamps
- Low voltage operated
- Instant light
- Long operating life

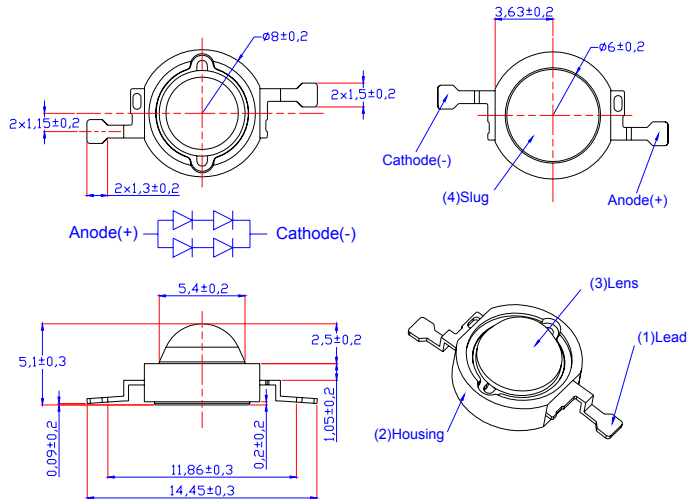
Typical Applications

- Reading lights
- Portable flashlight
- Up-lighters and Down-lighters
- LCD Backlights
- General lighting
- Contour lights
- Ceiling lights
- Garden lighting
- Decoration lights
- Architectural lighting
- Beacon lights



Package Outlines

Lambertian



Unit:mm

1. All dimensions are in mm.
2. It is strongly recommended that the temperature of lead be not higher than 55°C .
3. It is important that the slug can't contact aluminum surface, It is strongly recommended that there should coat an uniform electrically isolated heat dissipation film on the aluminum surface.

Absolute Maximum Ratings

Parameter	Symbol	Rating	Units
DC Forward Current	I_F	700	mA
Peak pulse current;(tp ≤ 100μs, Duty cycle=0.25)	I_{pulse}	1000	mA
Reverse Voltage	V_R	5	V
Reverse Current($V_R=5V$)	I_R	50	μA
LED junction Temperature (at 350 mA)	T_j	125	°C
Operating Temperature	T_{opr}	-30 ~ +110	°C
Storage Temperature	T_{stg}	-40 ~ +120	°C
Manual Soldering Time at 260°C (Max.)	T_{sol}	5	seconds

Luminous Flux Characteristics at $I_F=700mA(T_a=25°C, T_{opr}=100ms)$:

Lens Item	Part Name	Color	Flux			Units
			Min.	Typ.	Max.	
Lambertian	EDEW-5LAX	White	112.5	170.0	--	lm
	EDEX-5LAX	Warm White	86.5	110.0	--	lm
	EDEB-5LAX	Blue	30.3	50.0	--	lm

Forward Voltage Characteristics at $I_F=700mA(T_a=25°C, T_{opr}=100ms)$:

Lens Item	Part Name	Color	V_F			Units
			Min.	Typ.	Max.	
Lambertian	EDEW-5LAX	White	7.0	--	8.5	V
	EDEX-5LAX	Warm White	7.0	--	8.5	V
	EDEB-5LAX	Blue	7.0	--	8.5	V

Wavelength or Color Temperature Characteristics at $I_F=700mA(T_a=25°C, T_{opr}=100ms)$:

Lens Item	Part Name	Color	λ_d/CCT			Units
			Min.	Typ.	Max.	
Lambertian	EDEW-5LAX	White	5000	--	8000	K
	EDEX-5LAX	Warm White	2800	--	3800	K
	EDEB-5LAX	Blue	460	--	475	nm

Temperature Coefficient of Forward Voltage & Thermal Resistance Junction to Board Characteristics at $I_F=700\text{mA}(T_a=25^\circ\text{C})$:

Lens Item	Part Name	Color	$\Delta V_F/\Delta T$		$R\theta_{J-B}$	
			Typ.	Units	Typ.	Units
Lambertian	EDEW-5Lax	White	-2	mV/°C	20	°C/W
	EDEX-5Lax	Warm White	-2	mV/°C	20	°C/W
	EDEB-5Lax	Blue	-2	mV/°C	20	°C/W

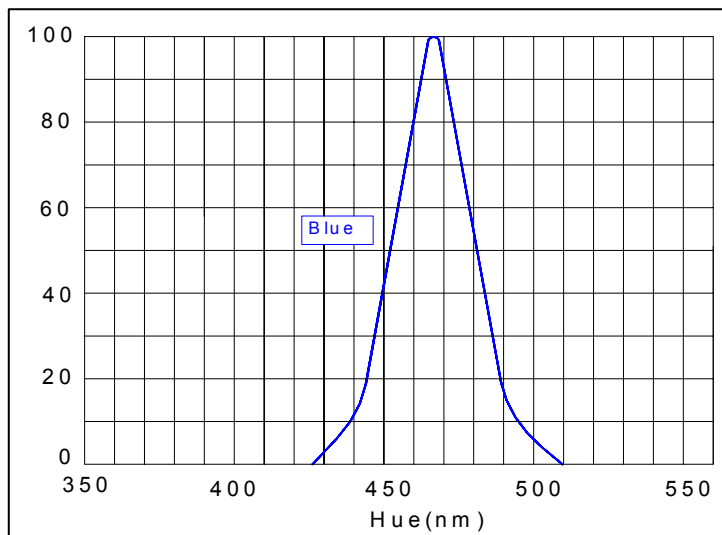
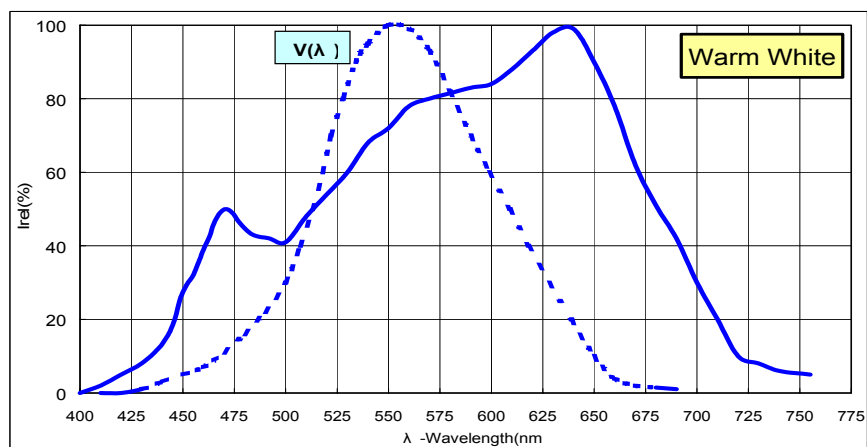
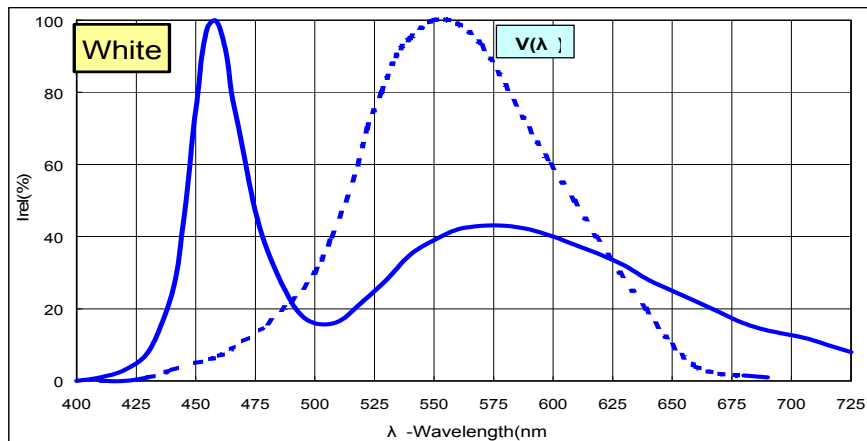
Emission Angle Characteristics at $I_F=700\text{mA}(T_a=25^\circ\text{C})$:

Part Name	Color	Min.	$2\theta_{1/2}$		Units
			Typ.	Max.	
EDEW-5Lax	White		130		Degrees
EDEX-5Lax	Warm White		130		Degrees
EDEB-5Lax	Blue		150		Degrees

Note

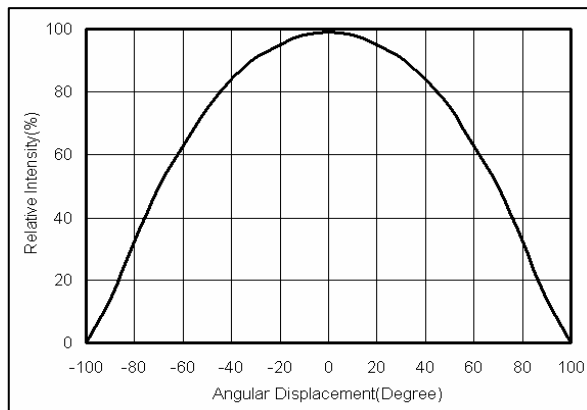
1. Flux is measured with an accuracy of $\pm 10\%$.
2. CCT selection acc. to CCT groups and an accuracy of $\pm 200\text{K}$
3. Forward Voltage is measured with an accuracy of $\pm 0.1\text{V}$
4. Wavelength is measured with an accuracy of $\pm 0.5\text{nm}$
5. All white, warm white and blue emitters are built with InGaN
6. All red, red-orange and amber emitters are built with AlGaInP

Electrical & Optical Curves-Spectrum

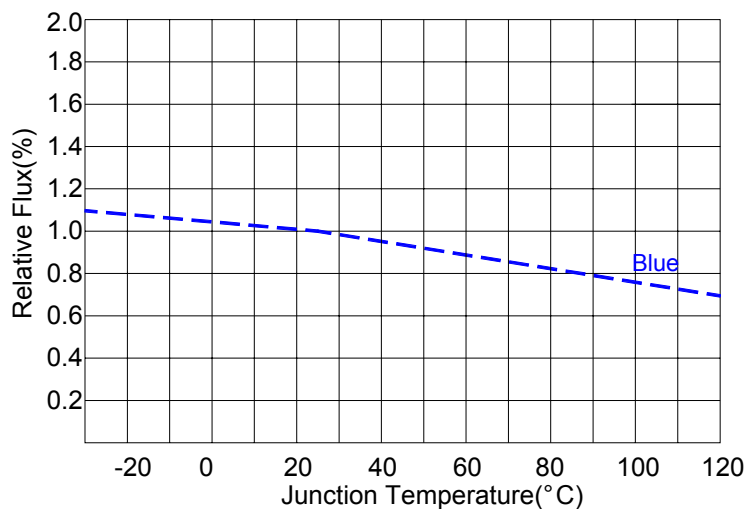


Typical Radiation Pattern for

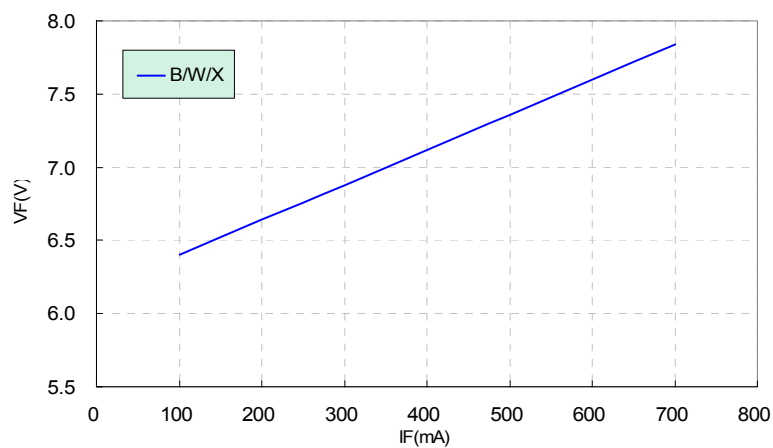
Lambertian



Typical Optical and Electrical Curves

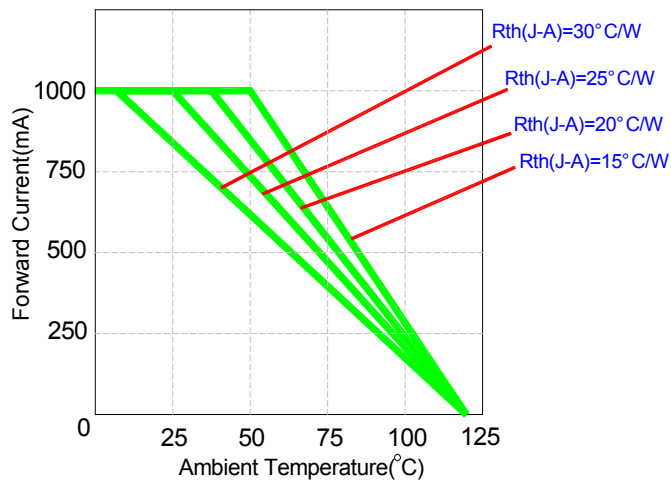


Junction Temperature & Forward Voltage

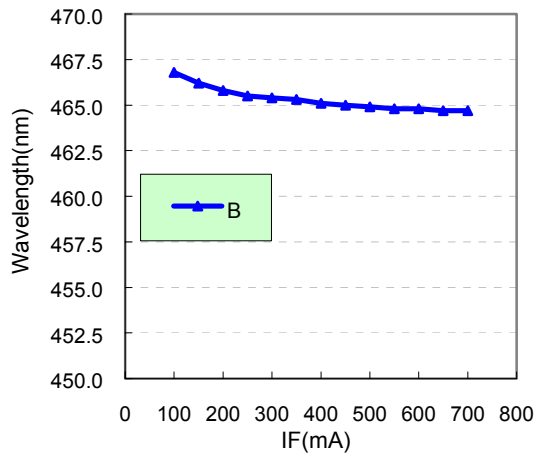


Operating Current & Forward Voltage

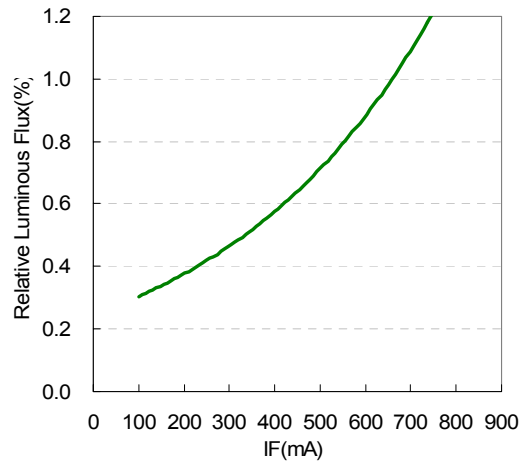
Typical Optical and Electrical Curves



Operating Current & Ambient Temperature

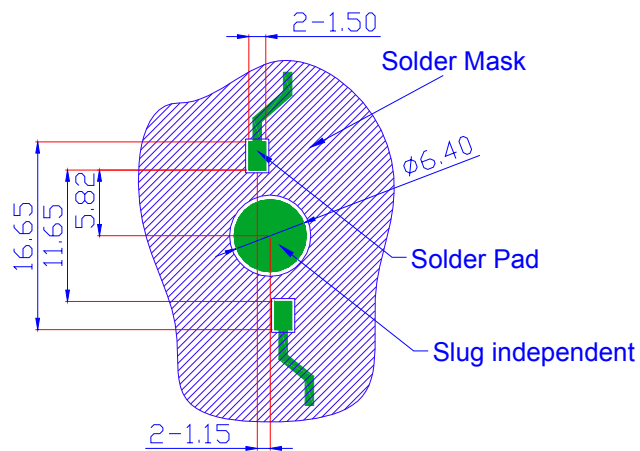


Forward Current & Wavelength



Forward Current & Luminous Flux

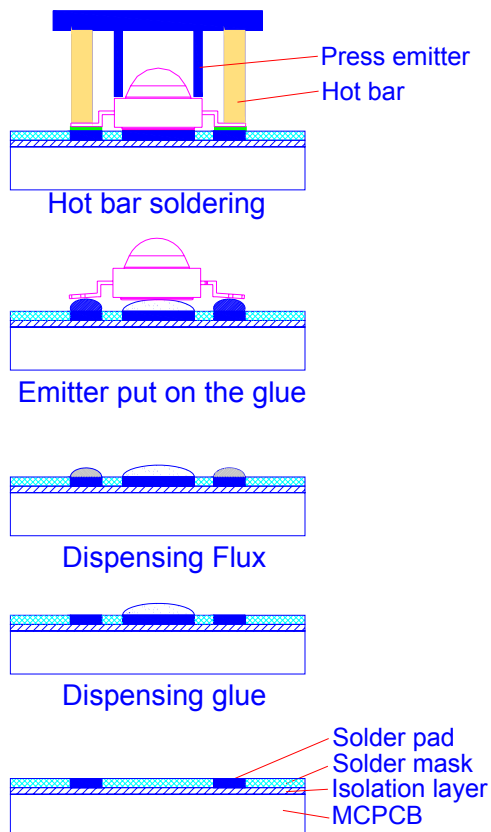
Recommend Solder Pad Design



Note:

Solder pad can't be connected to slug.

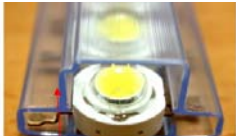
Recommend Solder Steps



Notes

1. MCPCB material with a thermal conductivity greater than 2.0 W/mK.
2. Solder pad can't be connected to slug.
3. The Thermal glue should be as thin as possible for better heat conductivity.
4. During any assembly process touching lens is avoided. This will cause pollution or scratch on the surface of lens.

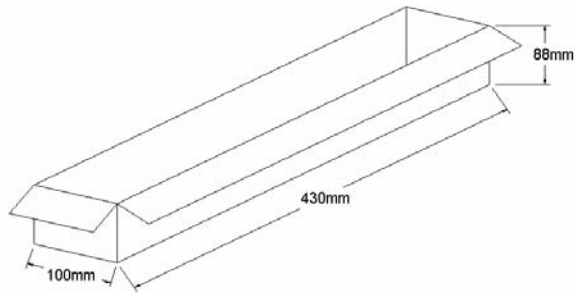
Package Specifications



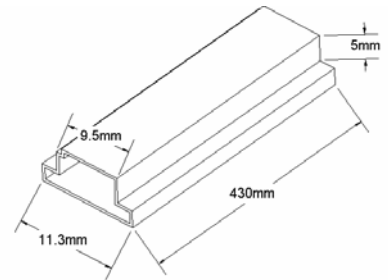
Cathode



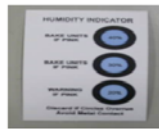
Anode



Antistatic bag



Tube



Humidity indicator card



Drying agent

Notes

1. There are 50pcs emitters in a tube
2. There are 20 tubes in a bag
3. There are 2 bags in an inner box
4. A bag contains one humidity indicator card and drying agent