High Power LED

3W Edixeon™

Edixeon™ Star

Approved By Customer	Designer	Checker	Approval

Date：2006/03/02
Version：1.3
Device No. : 3-RD-01-E0008

EDISON OPTO CORPORATION
4F, No. 800, Chung-Cheng Rd,
Chung-Ho, Taipei 235, Taiwan
Tel: 886-2-8227-6996
Fax: 886-2-8227-6997
http://www.edison-opto.com.tw

Edixeon™

Edixeon star is an edixeon emitter on an Alumina PCB 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. 3W Edixeon white has more than 90 lumens @700mA. Unlike most fluorescent sources, Edixeon contains no mercury and has more energy efficient than other incandescent light source.

Features

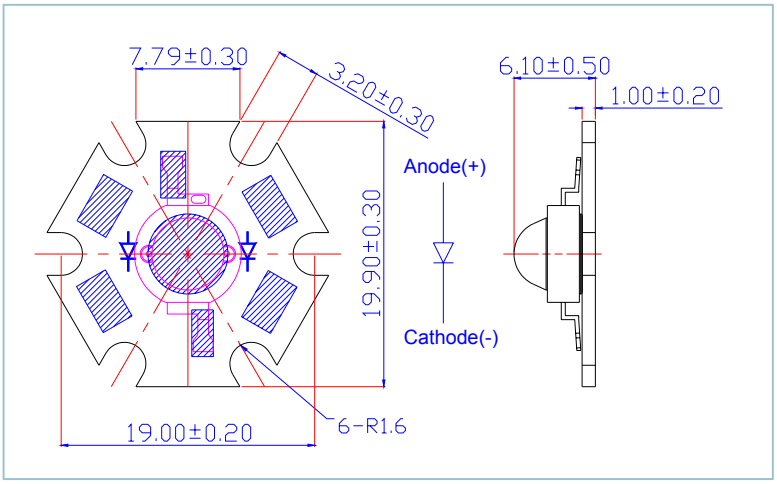
- Various colors
- More energy efficient than incandescent and most halogen lamps
- Low voltage operated
- Instant light
- Long operating life

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



Notes:

1. **All dimensions are in mm.**
2. **It is strongly recommended that the temperature of lead be not higher than 55℃**

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**	℃
Operating Temperature	T_{opr}	**-30 ~ +110**	℃
Storage Temperature	T_{stg}	**-40 ~ +120**	℃
Manual Soldering Time at 260℃(Max.)	T_{sol}	**5**	*seconds*

Luminous Flux Characteristics at I_F=700mA(Ta=25℃,T_{opr}=100ms):

Lens Item	Part Name	Color	Flux			Units
			Min.	Typ.	Max.	
Lambertian	**EDSW-3LAx**	White	***51.2***	***90***	**--**	*lm*
	EDSX-3LAx	Warm White	***39.4***	***60***	**--**	*lm*
	EDSR-3LAx	Red	***39.4***	***65***	**--**	*lm*
	EDSO-3LAx	Red Orange	***51.2***	***70***	**--**	*lm*
	EDSA-3LAx	Amber	***39.4***	***65***	**--**	*lm*
	EDST-3LAx	True Green	***51.2***	***90***	**--**	*lm*
	EDSB-3LAx	Blue	***13.8***	***30***	**--**	*lm*

Luminous Flux Characteristics at I_F=1000mA or 1400mA(Ta=25℃,T_{opr}=100ms):

Lens Item	Part Name	Color	Flux(Typ.)		Units
			1000mA	1400mA	
Lambertian	**EDSW-3LAx**	White	***120.0***	**--**	*lm*
	EDSX-3LAx	Warm White	***80.0***	**--**	*lm*
	EDSR-3LAx	Red	**--**	***110.0***	*lm*
	EDSO-3LAx	Red Orange	**--**	***120.0***	*lm*
	EDSA-3LAx	Amber	**--**	***100.0***	*lm*
	EDST-3LAx	True Green	***120.0***	**--**	*lm*
	EDSB-3LAx	Blue	***90.0***	**--**	*lm*

Forward Voltage Characteristics at I_F=700mA(Ta=25℃,T_{opr}=100ms):

Lens Item	Part Name	Color	V_F			Units
			Min.	Typ.	Max.	
	EDSW-3LAx	White	***3.1***	**--**	***4.3***	*V*
	EDSX-3LAx	Warm White	***3.1***	**--**	***4.3***	*V*
	EDSR-3LAx	Red	***2.0***	**--**	***3.0***	*V*
Lambertian	**EDSO-3LAx**	Red Orange	***2.0***	**--**	***3.0***	*V*
	EDSA-3LAx	Amber	***2.0***	**--**	***3.0***	*V*
	EDST-3LAx	True Green	***2.8***	**--**	***4.0***	*V*
	EDSB-3LAx	Blue	***3.1***	**--**	***4.3***	*V*

Wavelength or Color Temperature Characteristics at I_F=700mA(Ta=25℃,T_{opr}=100ms):

Lens Item	Part Name	Color	λd/CCT			Units
			Min.	Typ.	Max.	
	EDSW-3LAx	White	***5000***	**--**	***8000***	*K*
	EDSX-3LAx	Warm White	***2800***	**--**	***3800***	*K*
	EDSR-3LAx	Red	***620***	**--**	***630***	*nm*
Lambertian	**EDSO-3LAx**	Red Orange	***610***	**--**	***620***	*nm*
	EDSA-3LAx	Amber	***585***	**--**	***595***	*nm*
	EDST-3LAx	True Green	***515***	**--**	***535***	*nm*
	EDSB-3LAx	Blue	***460***	**--**	***475***	*nm*

Temperature Coefficient of Forward Voltage & Thermal Resistance Junction to Board Characteristics at I_F=700mA(Ta=25℃) :

Lens Item	Part Name	Color	$\triangle V_F/\triangle T$		$R\theta_{J-B}$	
			Typ.	Units	Typ.	Units
	EDSW-3LAx	White	***-2***	*mV/℃*	***12***	*℃/W*
	EDSX-3LAx	Warm White	***-2***	*mV/℃*	***12***	*℃/W*
	EDSR-3LAx	Red	***-2***	*mV/℃*	***12***	*℃/W*
Lambertian	**EDSO-3LAx**	Red Orange	***-2***	*mV/℃*	***12***	*℃/W*
	EDSA-3LAx	Amber	***-2***	*mV/℃*	***12***	*℃/W*
	EDST-3LAx	True Green	***-2***	*mV/℃*	***12***	*℃/W*
	EDSB-3LAx	Blue	***-2***	*mV/℃*	***12***	*℃/W*

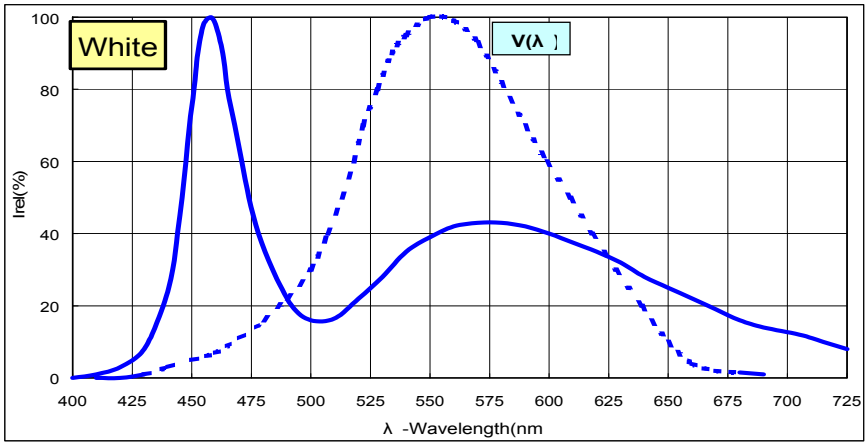
Emission Angle Characteristics at I_F=700mA(Ta=25℃):

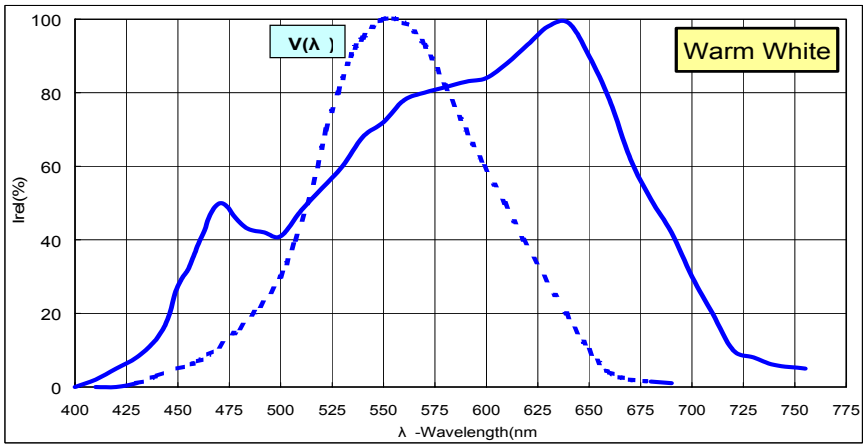
Part Name	Color	2Θ½			Units
		Max.	Typ.	Min.	
EDSW-3LAx	White	--	***130***	--	Degrees
EDSX-3LAx	Warm White	--	***130***	--	Degrees
EDSR-3LAx	Red	--	***120***	--	Degrees
EDSO-3LAx	Red Orange	--	***120***	--	Degrees
EDSA-3LAx	Amber	--	***120***	--	Degrees
EDST-3LAx	True Green	--	***150***	--	Degrees
EDSB-3LAx	Blue	--	***150***	--	Degrees

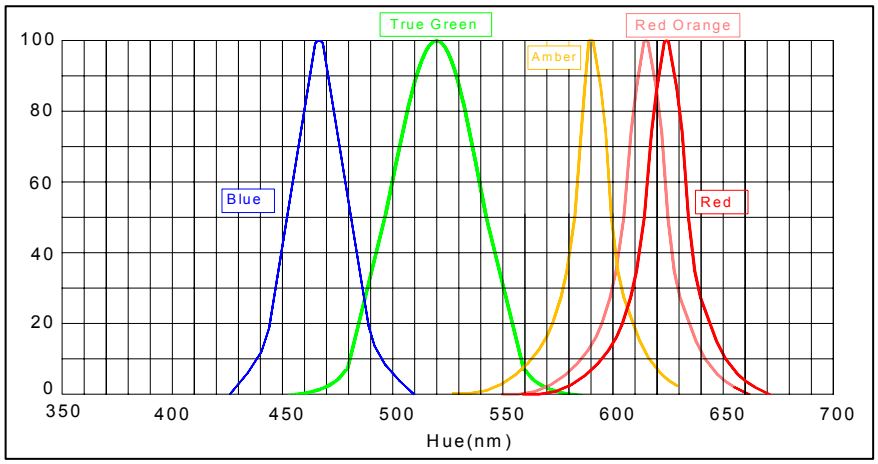
Note

1. **Flux is measured with an accuracy of ± 10%.**
2. **CCT selection acc. to CCT groups and an accuracy of ± 200K**
3. **Forward Voltage is measured with an accuracy of ± 0.1V**
4. **Wavelength is measured with an accuracy of ± 0.5nm**
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

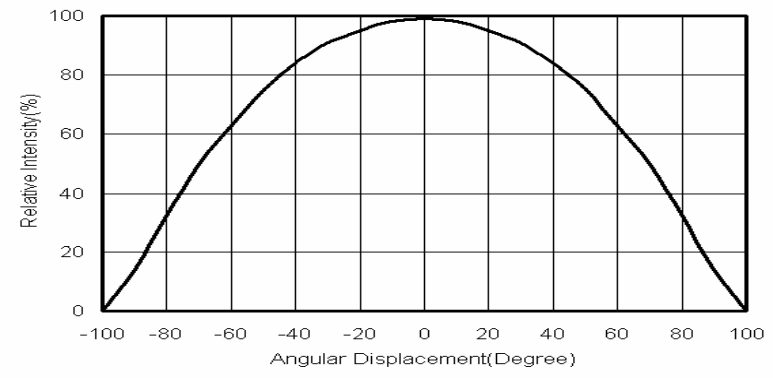




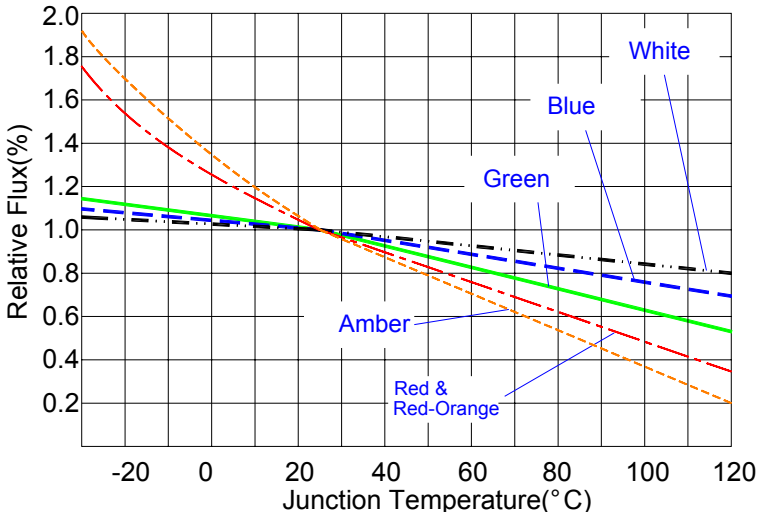


Typical Radiation Pattern for

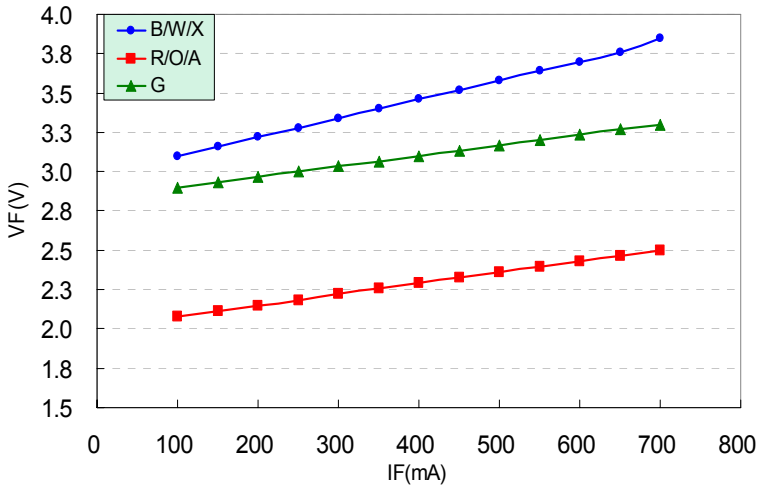
Lambertian



Typical Optical and Electrical Curves

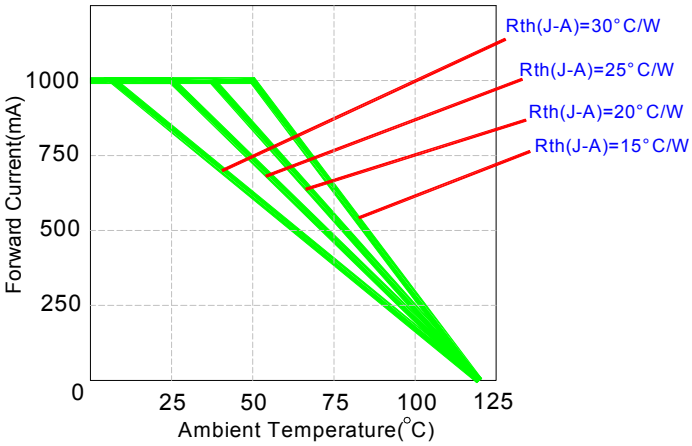


Junction Temperature & Forward Voltage

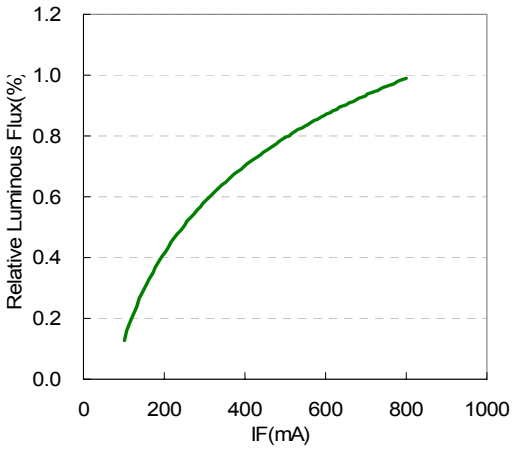


Operating Current & Forward Voltage

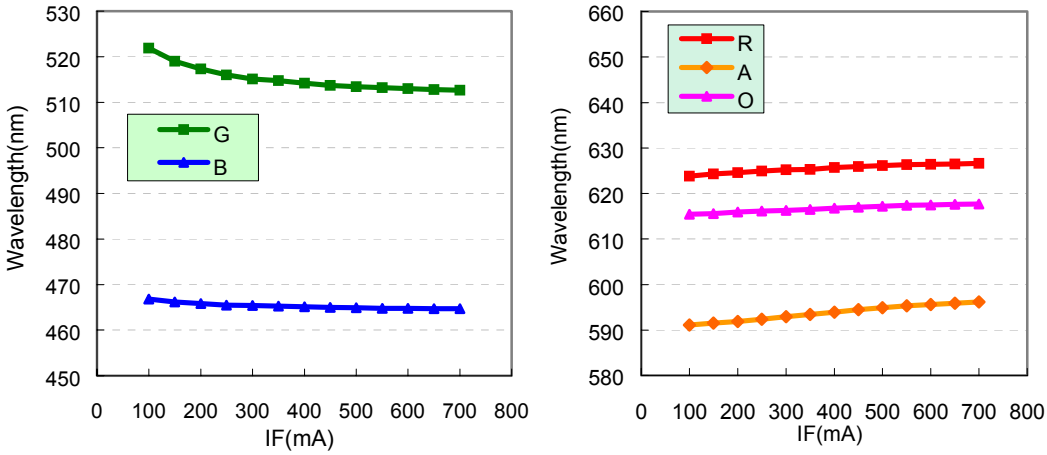
Typical Optical and Electrical Curves



Operating Current & Ambient Temperature

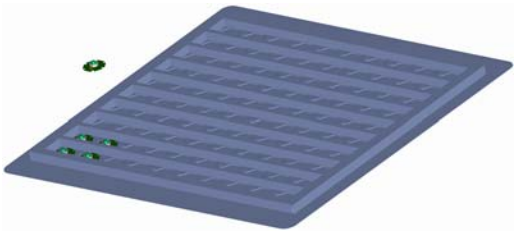


Forward Current & Luminous Flux



Forward Current & Wavelength

Package Specifications



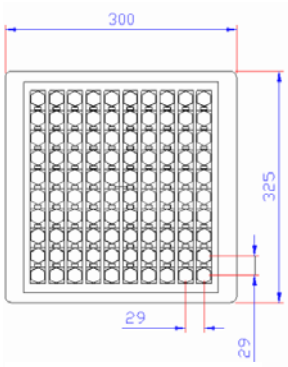


Figure 1: Tray

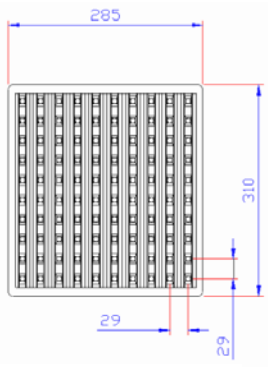


Figure 2: Cover

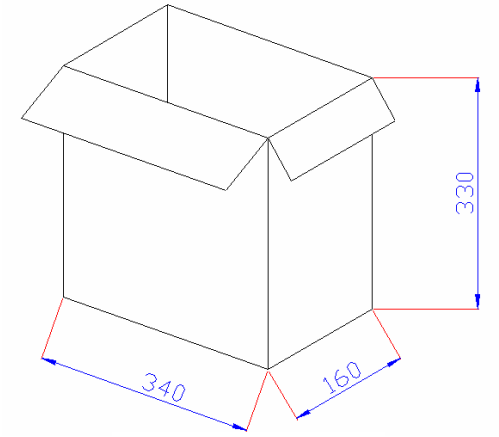


Figure 3: Inner box

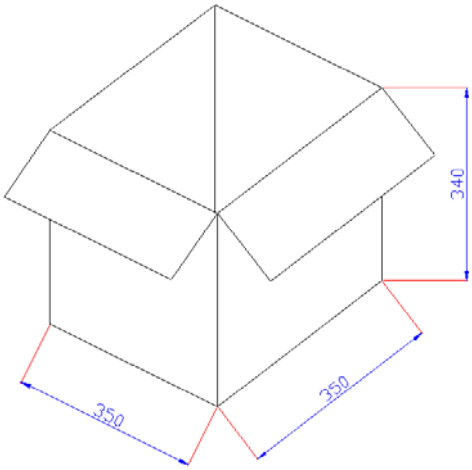


Figure 4: Outer box

Note

1. **All dimensions are in mm.**
2. **There are 100pcs stars in a tray.(Tray+Cover)**
3. **There are 10 trays in an inner box.**
4. **There are 2 inner boxes in an outer box.**