



EDISON OPTO CORPORATION

Edixeon Emitter

5W High Power LED



DATE : 2005/11/16
VERSION : 1.0
Device No. : 3-RD-01-E0017



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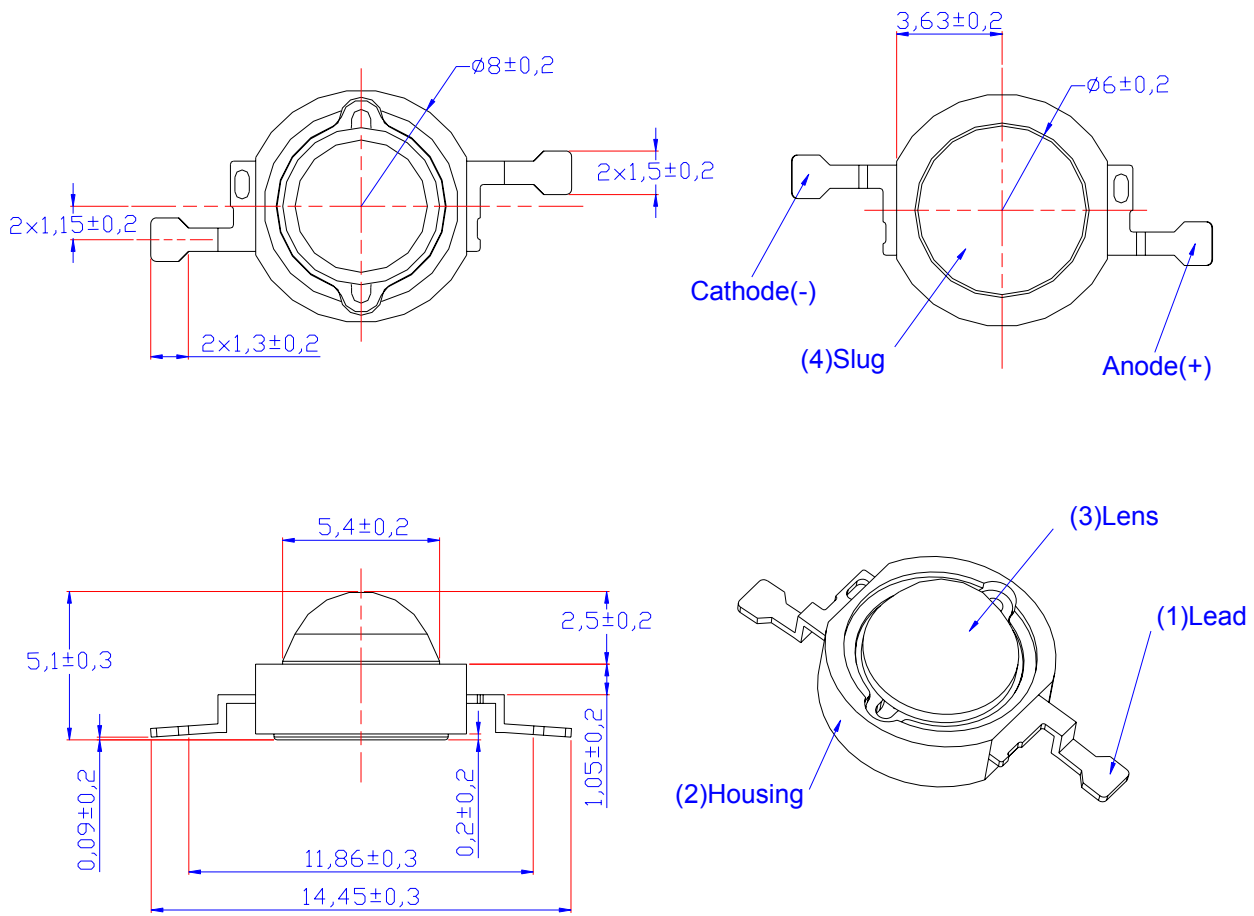
Features

- Long operating life (up to 100,000 hours)
- More Energy Efficient than incandescent and most halogen lamps
- Instant light (Less than 100 ns)

Typical Applications

- Reading lights
- Portable flashlight
- Up lighters and Down lighters
- Bollards / Security / Garden lighting
- Indoor and Outdoor Commercial lighting
- General lighting

Lambertian Package Outlines

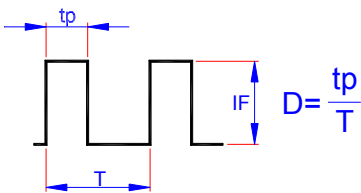


Unit:mm

Absolute Maximum Ratings

Parameter	Symbol	Rating	Units
DC Forward Current	I_F	700	mA
Peak pulse current; ($t_p \leq 100\mu s$, Duty cycle=0.005) ^{*1}	I_{pulse}	1000	mA
Reverse Voltage	V_R	8.6	V
LED junction Temperature (at 700 mA)	T_j	135	°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

1. Duty cycle



Luminous Flux

Characteristics at $I_F=700mA(T_a=25^\circ C)$:

Lens Item	Part Name	Color	Flux			Units
			Min.	Typ.	Max.	
Lambertian	EDEW-5Lx1	White	--	140	--	<i>lm</i>
	EDEB-5Lx1	Blue	--	40	--	<i>lm</i>

Forward Voltage

Characteristics at $I_F=700mA(T_a=25^\circ C)$:

Lens Item	Part Name	Color	V_F			Units
			Min.	Typ.	Max.	
Lambertian	EDEW-5Lx1	White	--	7.8	--	<i>V</i>
	EDEB-5Lx1	Blue	--	7.8	--	<i>V</i>

Wavelength or Color Temperature

Characteristics at $I_F=700mA(T_a=25^\circ C)$:

Lens Item	Part Name	Color	λ_d/CCT			Units
			Min.	Typ.	Max.	
Lambertian	EDEW-5Lx1	White	5000	--	8000	<i>K</i>
	EDEB-5Lx1	Blue	460	--	475	<i>nm</i>

Thermal Resistance Junction to Board

Characteristics at $I_F=700mA(T_a=25^\circ C)$:

Lens Item	Part Name	Color	R θ_{J-B}			Units
			Min.	Typ.	Max.	
Lambertian	EDEW-5Lx1	White	--	10	--	$^\circ C/W$
	EDEB-5Lx1	Blue	--	10	--	$^\circ C/W$

Temperature Coefficient Of Forward Voltage

Characteristics at $I_F=700mA(T_a=25^\circ C)$:

Lens Item	Part Name	Color	$\Delta V_F/\Delta T$			Units
			Min.	Typ.	Max.	
Lambertian	EDEW-5Lx1	White	--	-4	--	mV/ $^\circ C$
	EDEB-5Lx1	Blue	--	-4	--	mV/ $^\circ C$

Reverse Current

Characteristics at $V_R=5V(T_a=25^\circ C)$:

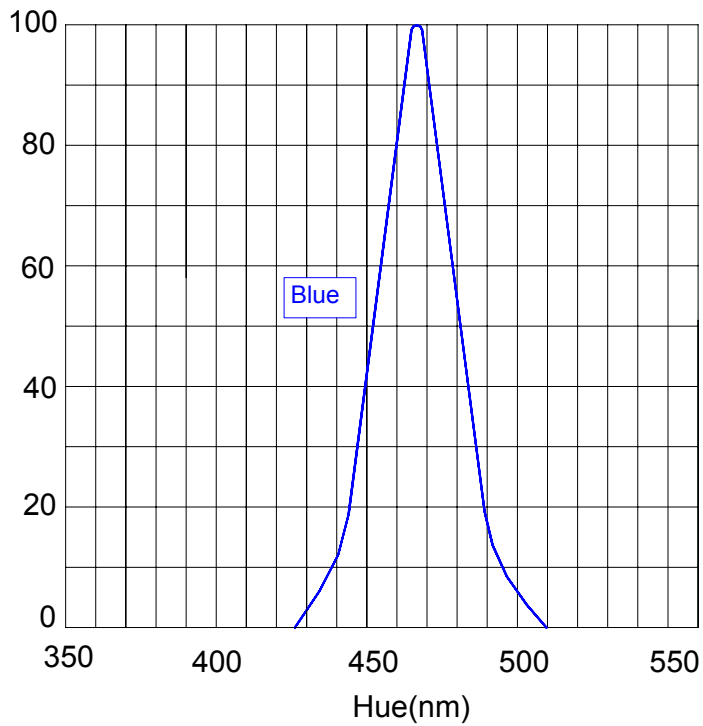
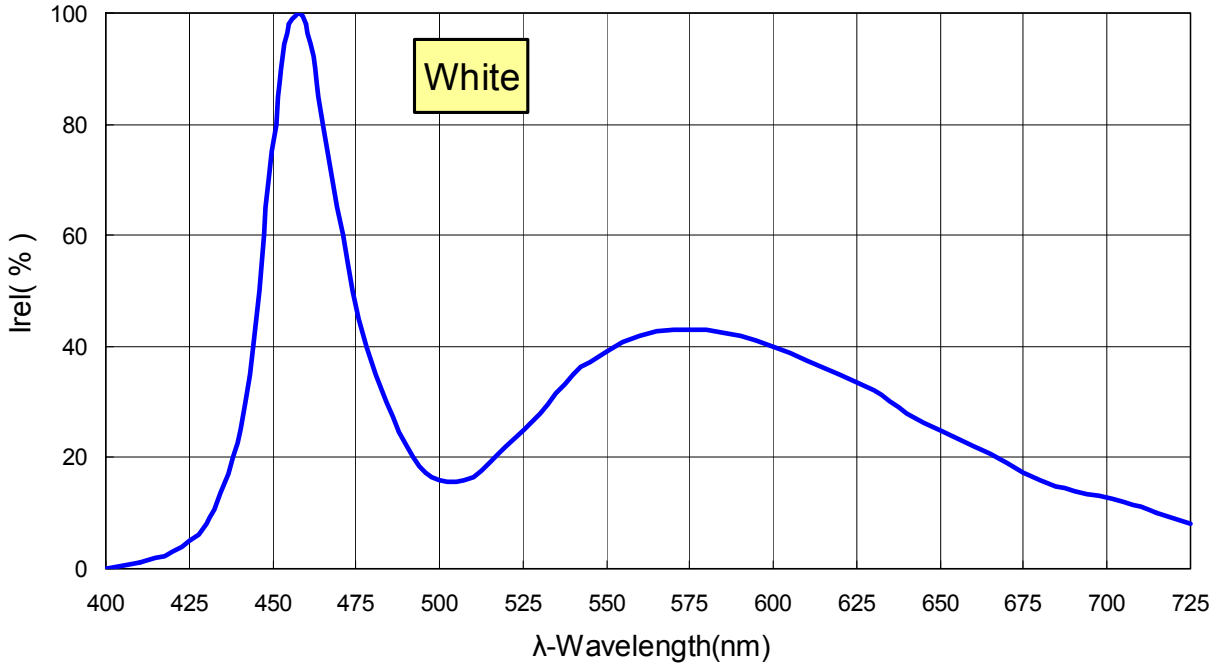
Lens Item	Part Name	Color	I $_R(V_R=5V)$			Units
			Min.	Typ.	Max.	
Lambertian	EDEW-5Lx1	White	--	--	50	μA
	EDEB-5Lx1	Blue	--	--	50	μA

Note

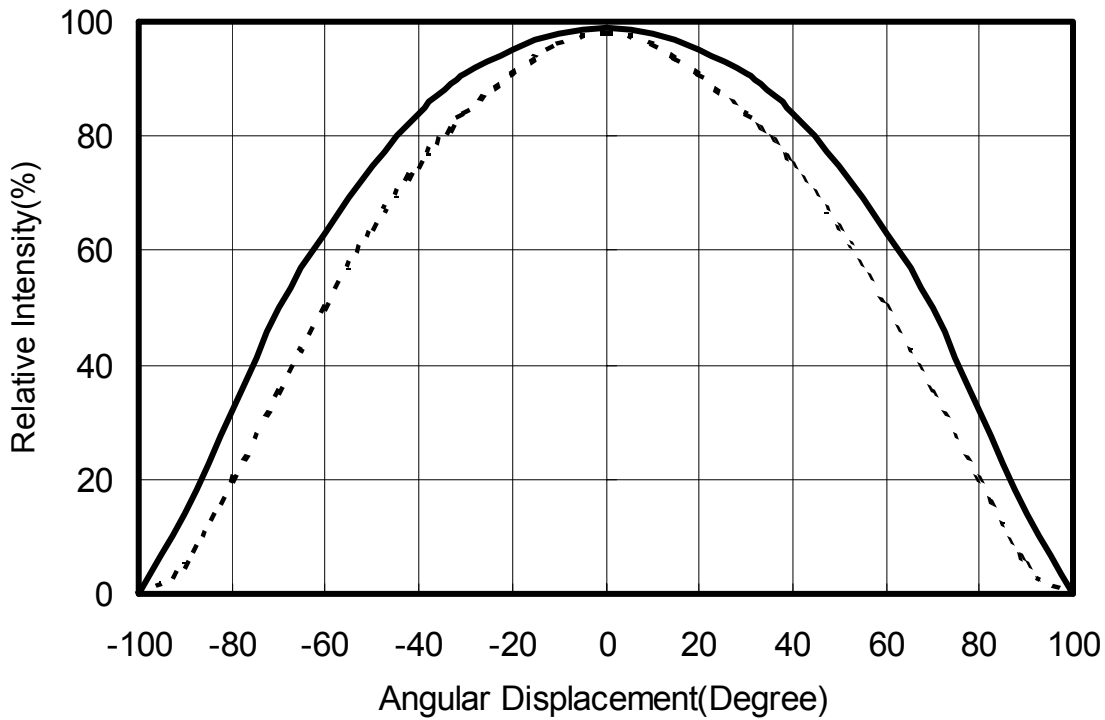
1. Flux is measured with an accuracy of $\pm 15\%$.
2. CCT selection acc. to CCT groups and an accuracy of $\pm 400K$
3. Forward Voltage is measured with an accuracy of $\pm 0.2V$.
4. Wavelength is measured with an accuracy of $\pm 3nm$
5. Angle is measured with an accuracy of ± 15 degree

Electrical & Optical Curves

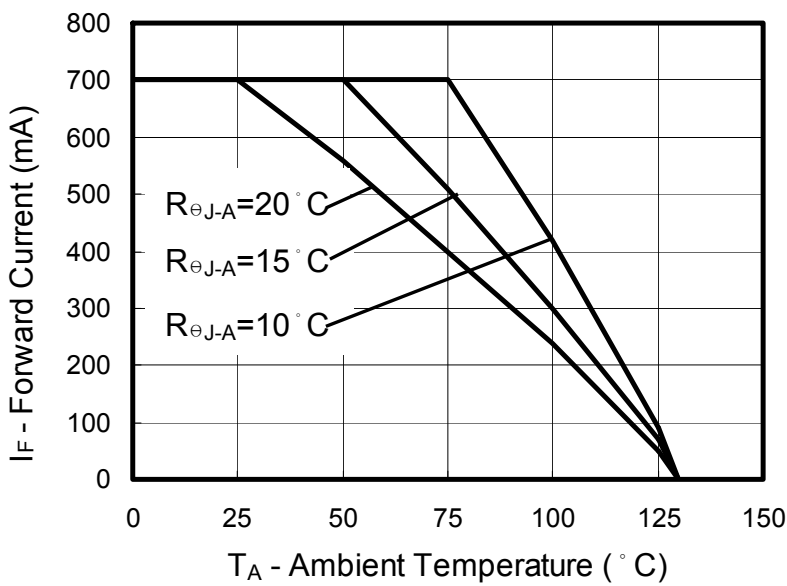
Wavelength Spectrum



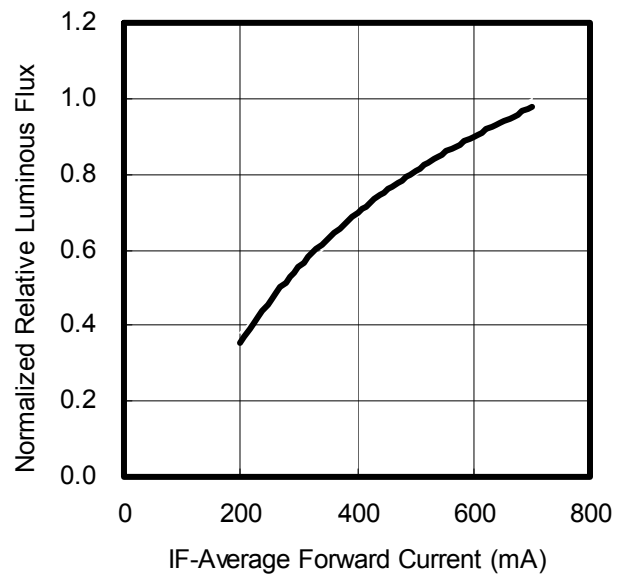
Typical Radiation Pattern for Lambertian



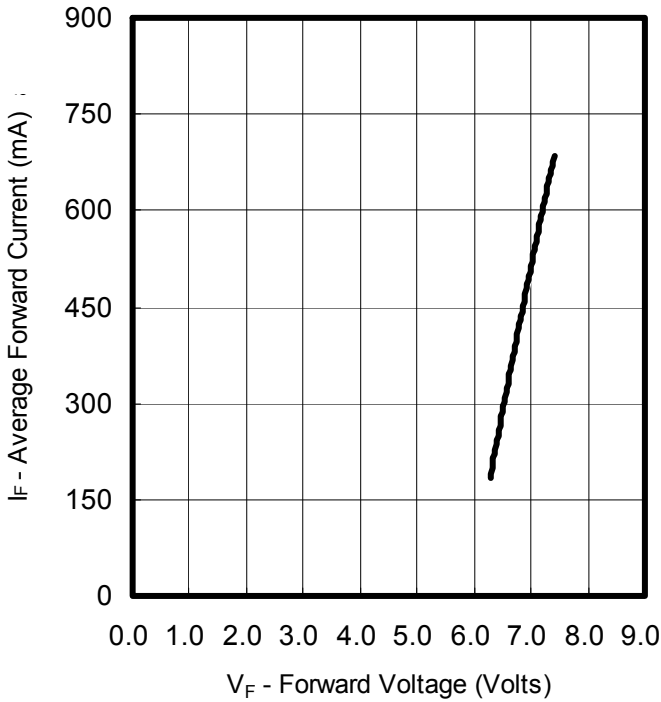
Operating Current & Ambient Temperature



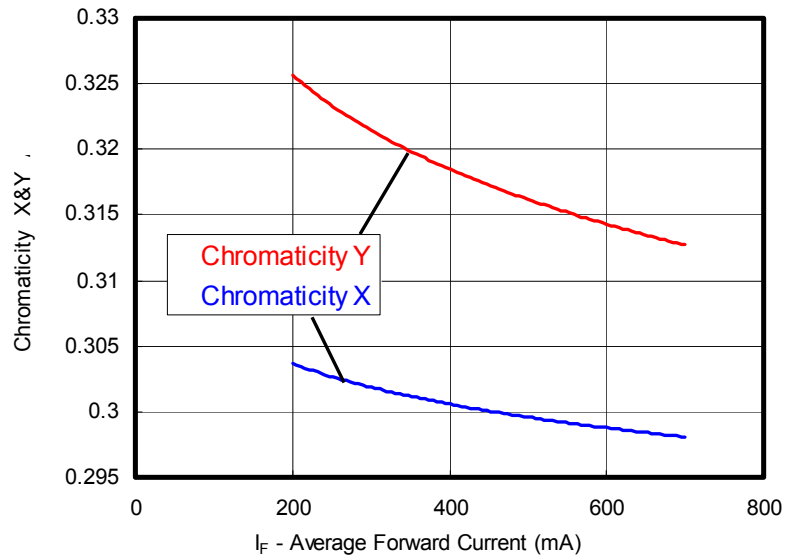
Current & Luminous Flux



Operating Current & Forward Voltage



Forward Current & Color Temperature



Light Output & Junction Temperature

