



EDISON OPTO CORPORATION

Edixeon Star 0.7W Power LED

DATE : 2005/04/30

VERSION : 1.0

Device No. : 3-RD-01-E0014



EDISON OPTO CORPORATION

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Features

- Long operating life (up to 100,000 hours)
- More Energy Efficient than incandescent and most halogen lamps
- Low forward voltage operated
- Instant light (less than 100 ns)
- No UV
- High ESD protection.(More than 8kV).

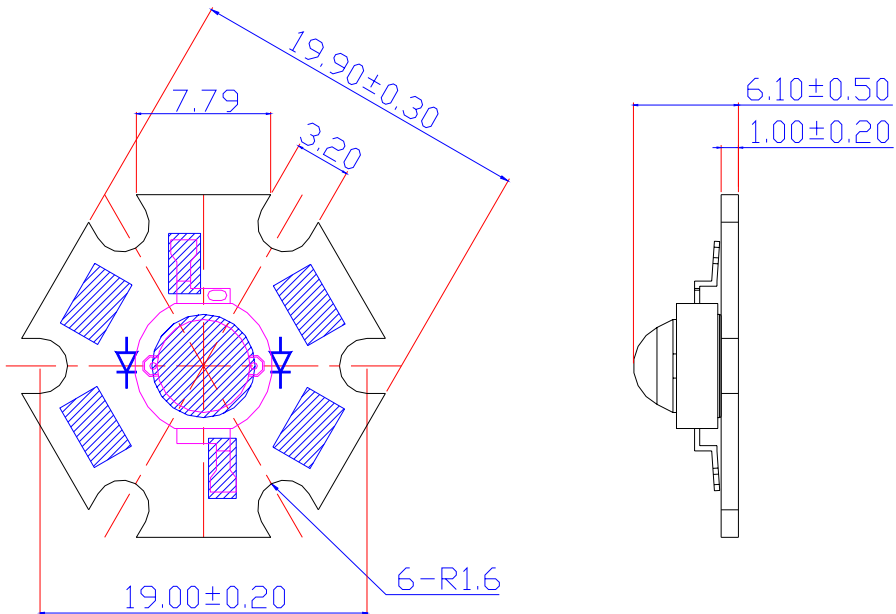
Typical Applications

- Reading lights
- Portable flashlight
- Uplighters and Downlighters
- Bollards / Security / Garden lighting
- Indoor and Outdoor Commercial lighting
- General lighting

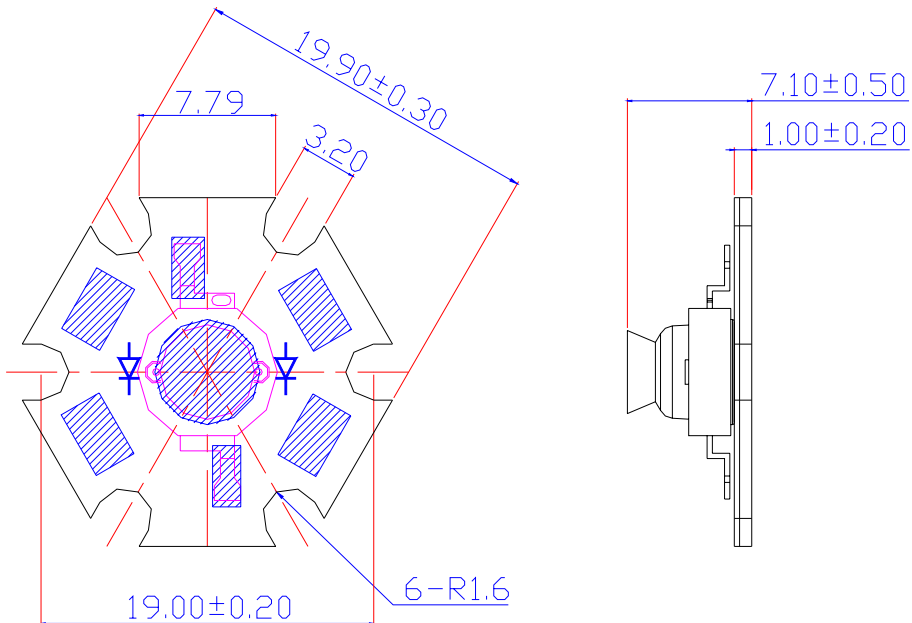
Edixeon Emitter group

White Housing	<i>Emitter</i>	White	Warm White	Red	True Green
	Lambertian	EDSW-ALA1	EDSX-ALA1	EDSR-ALA3	EDST-ALA1
	Batwing	EDSW-ABA1	EDSX-ABA1	EDSR-ABA3	EDST-ABA1
	Side Emitting	EDSW-ASA1	EDSX-ASA1	EDSR-ASA3	EDST-ASA1
	Focusing	EDSW-AFA1	EDSX-AFA1	EDSR-AFA3	EDST-AFA1
	<i>Emitter</i>	Blue	Red Orange	Amber	
	Lambertian	EDSB-ALA1	EDSO-ALA3	EDSA-ALA3	
	Batwing	EDSB-ABA1	EDSO-ABA3	EDSA-ABA3	
	Side Emitting	EDSB-ASA1	EDSO-ASA3	EDSA-ASA3	
	Focusing	EDSB-AFA1	EDSO-AFA3	EDSA-AFA3	

Lambertian Star Package Outlines

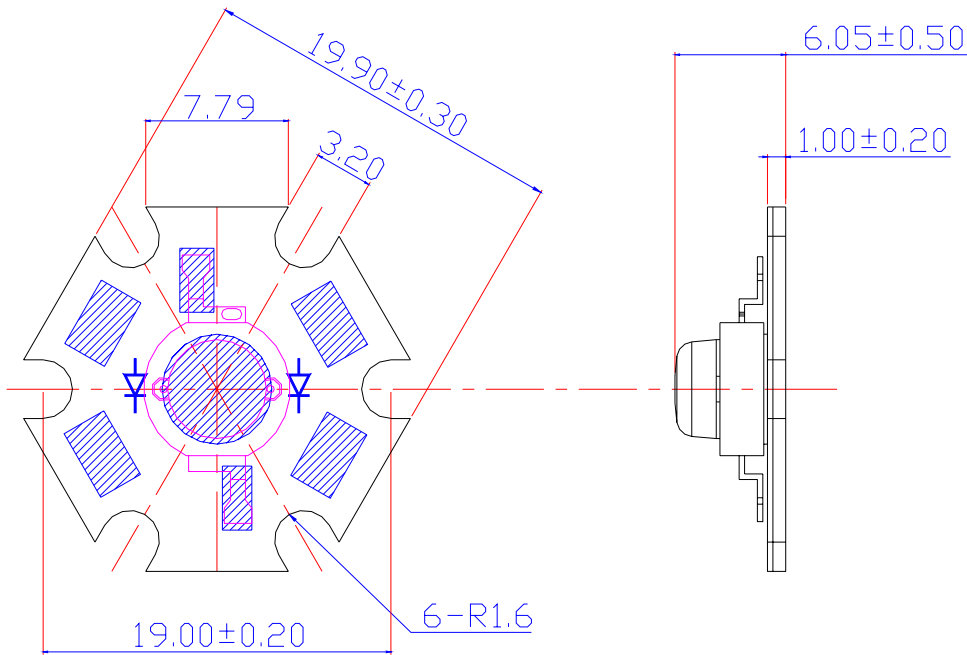


Side Emitting Star Package Outlines

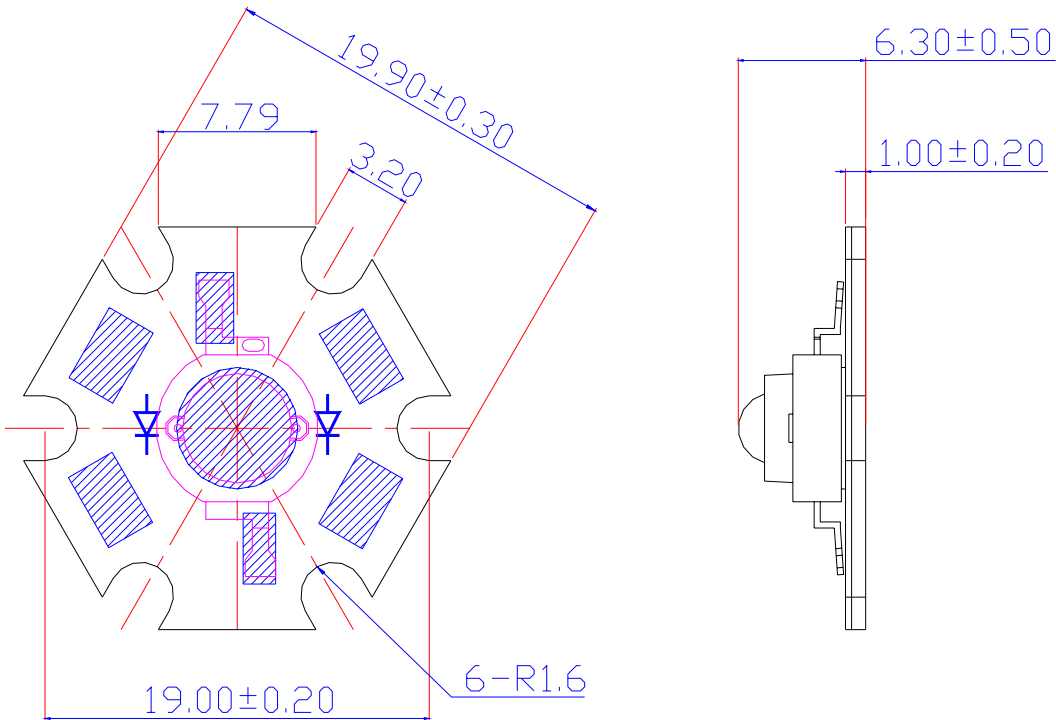


Unit:mm

Batwing Star Package Outlines



Focusing Star Package Outlines

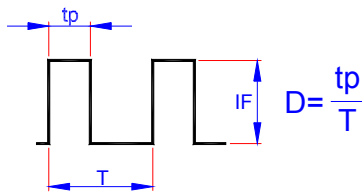


Unit:mm

Absolute Maximum Ratings

Parameter	Symbol	Rating	Units
DC Forward Current	I_F	200	mA
Peak pulse current; ($t_p \leq 100\mu s$, Duty cycle=0.005) ^{*1}	I_{pulse}	600	mA
Reverse Voltage	V_R	5	V
LED junction Temperature (at 200 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

1. Duty cycle:



Luminous Flux

Characteristics at $I_F=200mA(T_a=25^\circ C)$:

Lens Item	Part Name	Color	Flux			Units
			Min.	Typ.	Max.	
Lambertian Side Emitting Batwing Focusing	EDSW-Axx1	White	13.8	20	--	lm
	EDSX-Axx1	Warm White	8.2	12	--	lm
	EDSR-Axx3	Red	8.2	12	--	lm
	EDSO-Axx3	Red Orange	8.2	12	--	lm
	EDSA-Axx3	Amber	8.2	12	--	lm
	EDST-Axx1	True Green	8.2	12	--	lm
	EDSB-Axx1	Blue	2.9	3.5	--	lm

Forward Voltage

Characteristics at $I_F=200mA(T_a=25^\circ C)$:

Lens Item	Part Name	Color	V_F			Units
			Min.	Typ.	Max.	
Lambertian Side Emitting Batwing Focusing	EDSW-Axx1	White	--	3.7	--	V
	EDSX-Axx1	Warm White	--	3.7	--	V
	EDSR-Axx3	Red	--	2.5	--	V
	EDSO-Axx3	Red Orange	--	2.5	--	V
	EDSA-Axx3	Amber	--	2.5	--	V
	EDST-Axx1	True Green	--	3.7	--	V
	EDSB-Axx1	Blue	--	3.7	--	V

Wavelength or Color Temperature

Characteristics at $I_F=200mA(T_a=25^\circ C)$:

Lens Item	Part Name	Color	$\lambda D/CCT$			Units
			Min.	Typ.	Max.	
Lambertian Side Emitting Batwing Focusing	EDSW-Axx1	White	5000	--	8000	<i>K</i>
	EDSX-Axx1	Warm White	2850	--	3800	<i>K</i>
	EDSR-Axx3	Red	460	--	475	<i>nm</i>
	EDSO-Axx3	Red Orange	515	--	535	<i>nm</i>
	EDSA-Axx3	Amber	620	--	630	<i>nm</i>
	EDST-Axx1	True Green	610	--	620	<i>nm</i>
	EDSB-Axx1	Blue	585	--	595	<i>nm</i>

Thermal Resistance Junction to Board

Characteristics at $I_F=200mA(T_a=25^\circ C)$:

Lens Item	Part Name	Color	$R_{\theta J-B}$			Units
			Min.	Typ.	Max.	
Lambertian Side Emitting Batwing Focusing	EDSW-Axx1	White	--	15	--	$^\circ C/W$
	EDSX-Axx1	Warm White	--	15	--	$^\circ C/W$
	EDSR-Axx3	Red	--	15	--	$^\circ C/W$
	EDSO-Axx3	Red Orange	--	15	--	$^\circ C/W$
	EDSA-Axx3	Amber	--	15	--	$^\circ C/W$
	EDST-Axx1	True Green	--	15	--	$^\circ C/W$
	EDSB-Axx1	Blue	--	15	--	$^\circ C/W$

Temperature Coefficient Of Forward Voltage

Characteristics at $I_F=200mA(T_a=25^\circ C)$:

Lens Item	Part Name	Color	$\Delta V_F/\Delta T$			Units
			Min.	Typ.	Max.	
Lambertian Side Emitting Batwing Focusing	EDSW-Axx1	White	--	-2	--	mV/°C
	EDSX-Axx1	Warm White	--	-2	--	mV/°C
	EDSR-Axx3	Red	--	-2	--	mV/°C
	EDSO-Axx3	Red Orange	--	-2	--	mV/°C
	EDSA-Axx3	Amber	--	-2	--	mV/°C
	EDST-Axx1	True Green	--	-2	--	mV/°C
	EDSB-Axx1	Blue	--	-2	--	mV/°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 Side Emitting Batwing Focusing	EDSW-Axx1	White	--	--	50	μA
	EDSX-Axx1	Warm White	--	--	50	μA
	EDSR-Axx3	Red	--	--	50	μA
	EDSO-Axx3	Red Orange	--	--	50	μA
	EDSA-Axx3	Amber	--	--	50	μA
	EDST-Axx1	True Green	--	--	50	μA
	EDSB-Axx1	Blue	--	--	50	μA

Emission Angle

Characteristics at $I_F=200mA(T_a=25^\circ C)$:

Lens Item	Part Name	Color	$2\Theta^{1/2}$			Units
			Min.	Typ.	Max.	
Lambertian	EDSW-ALx1	White	--	140	--	Degrees
	EDSX-ALx1	Warm White	--	140	--	Degrees
	EDSR-ALx3	Red	--	120	--	Degrees
	EDSO-ALx3	Red Orange	--	120	--	Degrees
	EDSA-ALx3	Amber	--	120	--	Degrees
	EDST-ALx1	True Green	--	140	--	Degrees
	EDSB-ALx1	Blue	--	140	--	Degrees

Lens Item	Part Name	Color	Θ_{PEAK}			Units
			Min.	Typ.	Max.	
Side Emitting	EDSW-ASx1	White	--	80	--	Degrees
	EDSX-ASx1	Warm White	--	80	--	Degrees
	EDSR-ASx3	Red	--	75	--	Degrees
	EDSO-ASx3	Red Orange	--	75	--	Degrees
	EDSA-ASx3	Amber	--	75	--	Degrees
	EDST-ASx1	True Green	--	80	--	Degrees
	EDSB-ASx1	Blue	--	80	--	Degrees

Emission Angle

Characteristics at $I_F=200mA(T_a=25^\circ C)$:

Lens Item	Part Name	Color	$2\Theta^{1/2}$			Units
			Min.	Typ.	Max.	
Focusing	EDSW-AFx1	White	--	85	--	Degrees
	EDSX-AFx1	Warm White	--	85	--	Degrees
	EDSR-AFx3	Red	--	55	--	Degrees
	EDSO-AFx3	Red Orange	--	55	--	Degrees
	EDSA-AFx3	Amber	--	55	--	Degrees
	EDST-AFx1	True Green	--	60	--	Degrees
	EDSB-AFx1	Blue	--	60	--	Degrees

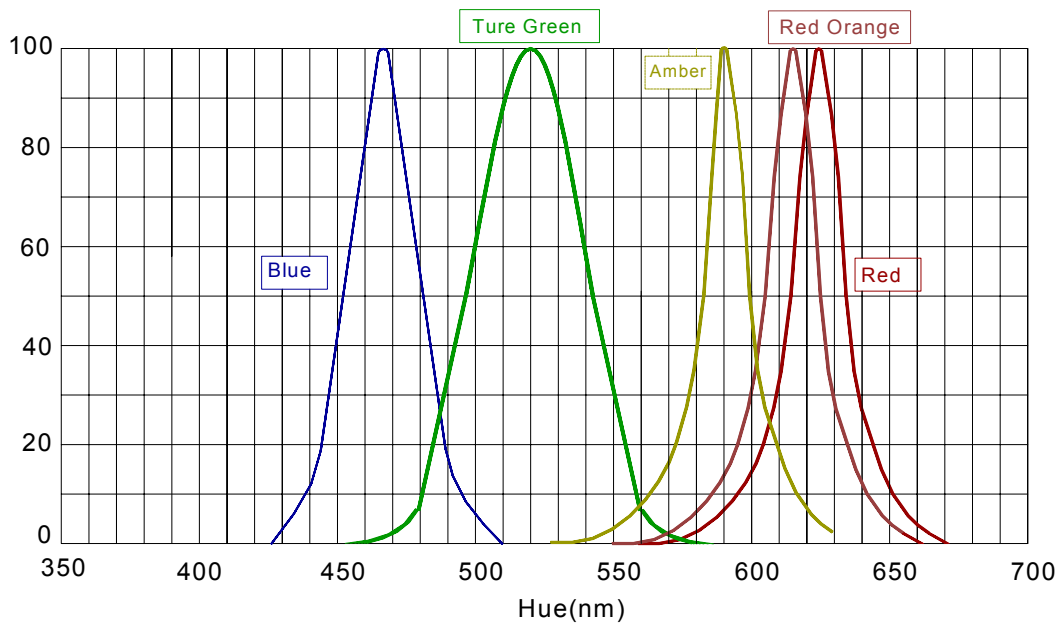
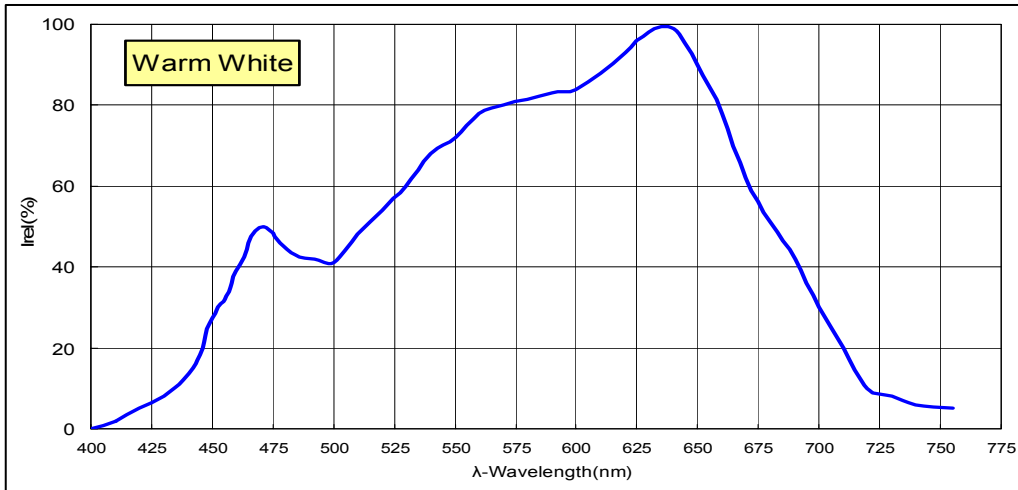
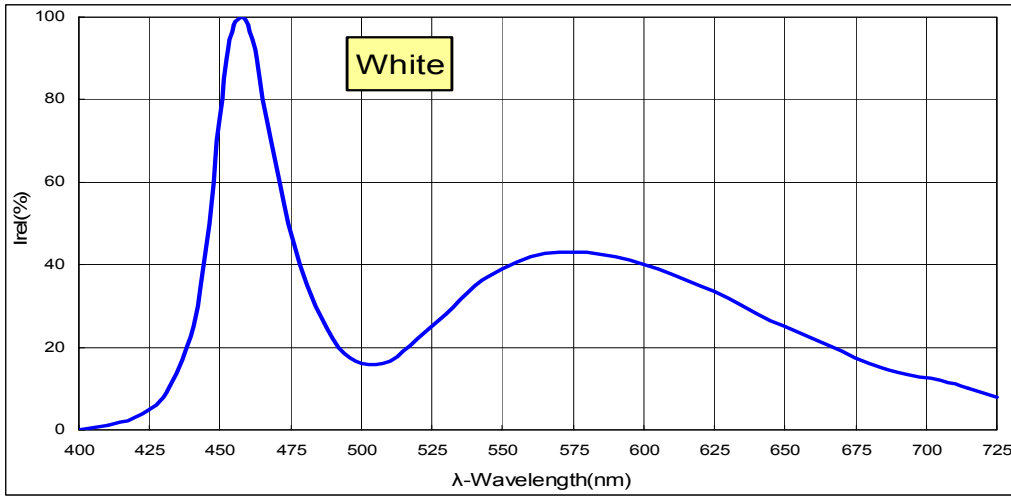
Lens Item	Part Name	Color	$2\Theta^{1/2}$	Θ_{PEAK}	Units
			Typ.	Typ.	
Batwing	EDSW-AFx1	White	110	40	Degrees
	EDSX-AFx1	Warm White	110	40	Degrees
	EDSR-AFx3	Red	110	35	Degrees
	EDSO-AFx3	Red Orange	110	35	Degrees
	EDSA-AFx3	Amber	110	35	Degrees
	EDST-AFx1	True Green	110	40	Degrees
	EDSB-AFx1	Blue	110	40	Degrees

Note

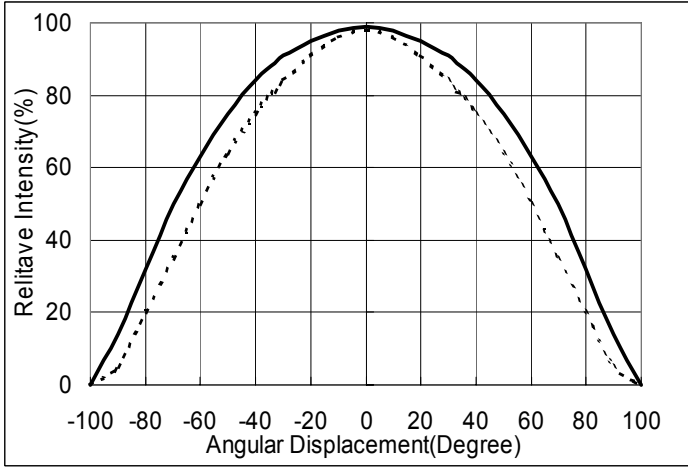
1. Flux is measured with an accuracy of $\pm 15\%$.
2. CCT selection acc. to CCT groups and an accuracy of $\pm 400K$
3. Forward Voltage is measured with an accuracy of $\pm 0.2V$.
4. Wavelength is measured with an accuracy of $\pm 3nm$
5. Angle is measured with an accuracy of ± 15 degree

Electrical & Optical Curves

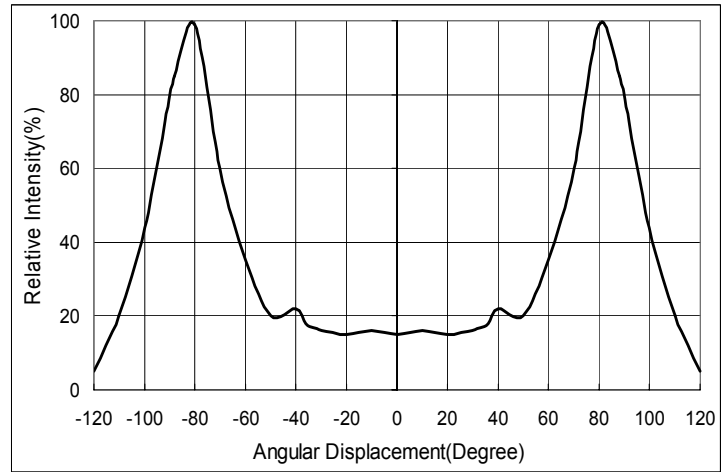
Wavelength Spectrum



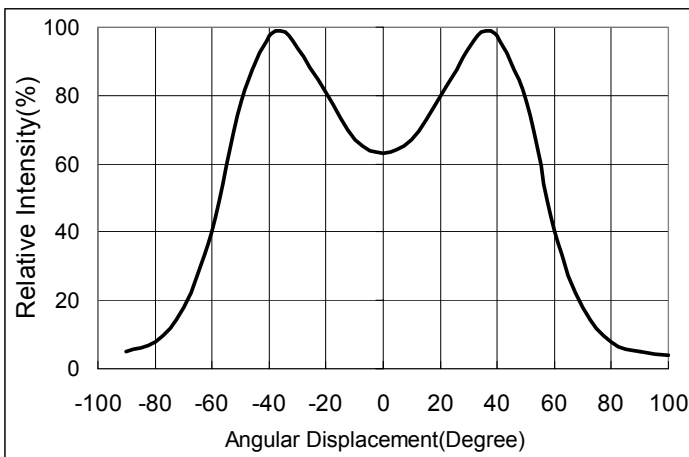
Typical Radiation Pattern for Lambertian



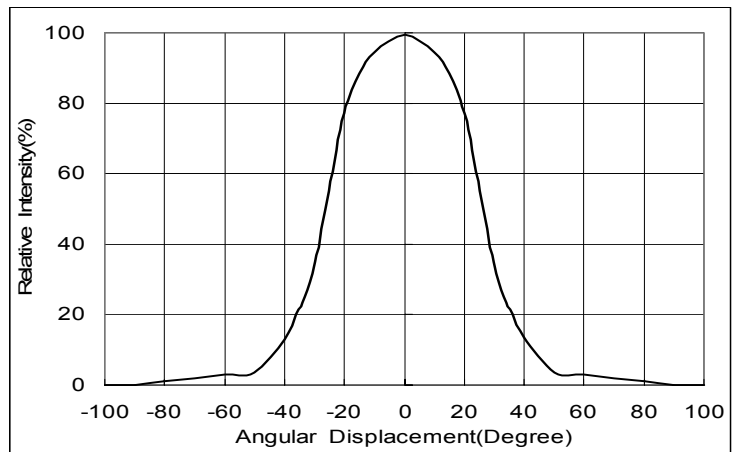
Typical Radiation Pattern for Side Emitting



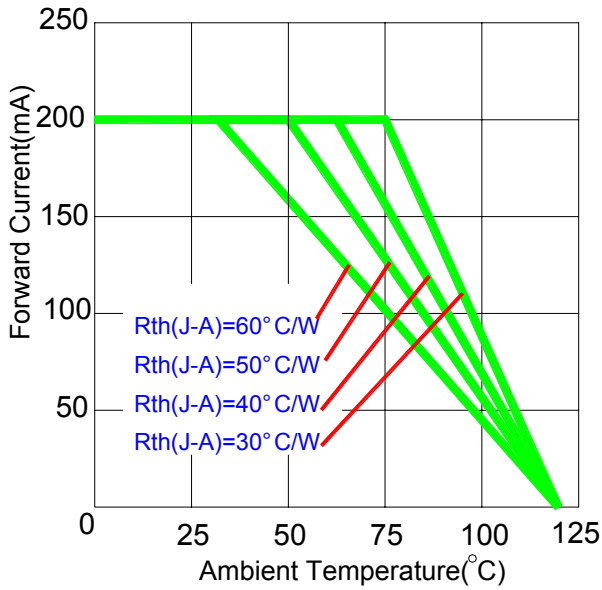
Typical Radiation Pattern for Batwing



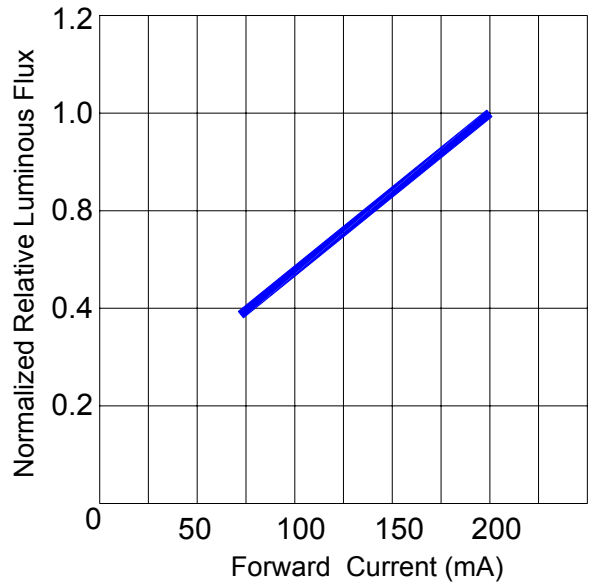
Typical Radiation Pattern for Focusing



Operating Current & Ambient Temperature



Current & Luminous Flux



Operating Current & Forward Voltage

