Lighting Design Manufacturing Service

Edixeon S1 White Series Datasheet

Features :

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

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General Information

Introduction

Edixeon S1 series emitters are one of the highest flux LEDs in the world by Edison Opto. Edixeon S1 series 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. Unlike most fluorescent sources, Edixeon contains no mercury and has more energy efficient than other incandescent light source.

Ordering Code Format

2	E	S 1	0 x	x W	x x	0 0 0	x x x
X1	X2	X3	X4	X5	X6	X7	X8

X1		X2		X3		X4		X5	
Type		Component		Series		Wattage		Color	
2	Emitter	E	Edixeon	S1	S1 Series	01	1W	CW	Cool White
						03	3W	NW	Neutral White
								WW	Warm White

X6		X7		X8	
Internal code		PCB Board		Serial Number	
06	-	000	-	-	-
14	-				
32	-				

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Absolute Maximum Ratings

Parameter		Symbol	Value	Units
DC Forward Current[1]	(1W) (3W)	I_F	350 700	mA
Peak Pulsed Current; (tp≤100μs, Duty cycle=0.25) [2]	(1W) (3W)	I_{pulse}	500 1000	mA
Reverse Voltage		V_R	5	V
Drive Voltage		V_D	5	V
LED Junction Temperature[3]		T_J	125	°C
Operating Temperature		-	-30 ~ +110	°C
Storage Temperature		-	-40 ~ +120	°C
ESD Sensitivity (HBM)		-	2,000	V
Manual Soldering Time at 260˚C(Max.)		-	5	Sec.

Notes:
1. Proper current derating must be observed to maintain junction temperature below the maximum at all time.
2. LEDs are not designed to be driven in reverse bias.
3. tp: Pulse width time

Characteristics

Parameter		Symbol	Value	Units
Viewing Angle		$2\Theta_{1/2}$	135	Degree
Forward voltage	(Typ.)	V_F	3.4	V
Thermal resistance		-	11	°C/W
$\Delta V_F/\Delta T$		$\Delta V_F/\Delta T$	-2	mV/ ˚C
CCT		λd	CW: 5,000-10,000 NW: 3,800-5,000 WW: 2,670-3,800	K
CRI		-	CW: 70&80 NW: 80 WW: 80	-

Notes:
1. Wavelength is measured with an accuracy of ± 0.5nm.
2. CCT is measured with an accuracy of ± 5%.
3. Viewing anlge is measured with an accuracy of ± 5%.
4. Color Rendering index CRI tolerane: ± 2.

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Luminous Flux Characteristic

Luminous Flux Characteristics at I_F=350mA, T_j=25°C.

Color	Wattage (W)	Group	Min. Luminous Flux(lm)	Max. Luminous Flux(lm)	Forward Current (mA)	Order Code
Cool White	1	U3	100	110	350	2ES101CW06000001 2ES101CW14000001
		V1	110	120		
		V2	120	130		
		V3	130	140		
		V4	140	150		
	3	W1	160	180	700	2ES103CW06000001 2ES103CW14000001
		W2	180	200		
		W3	200	220		
		X1	220	240		
Neutral White	1	U2	90	100	350	2ES101NW32000001
		U3	100	110		
		V1	110	120		
		V2	120	130		
	3	W1	160	180	700	2ES103NW32000001
		W2	180	200		
		W3	200	220		
Warm White	1	T3	80	86.5	350	2ES101WW32000001
		U1	86.5	90		
		U2	90	100		
		U3	100	110		
	3	V5	150	160	700	2ES103WW32000001
		W1	160	180		
		W2	180	200		

Notes:
1. Flux is measured with an accuracy of ± 10%.
2. All Cool White, Neutral White, Warm White, True Green and Blue emitters are built with InGaN.
3. All Red emitters are built with AlGaInP.

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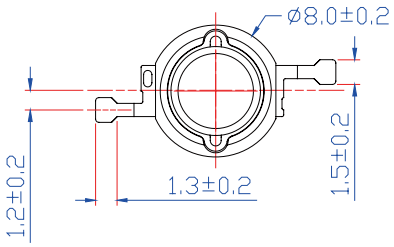
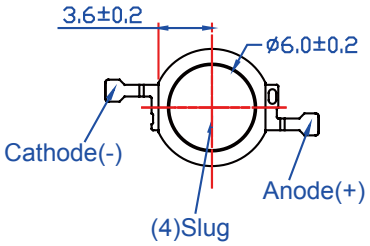
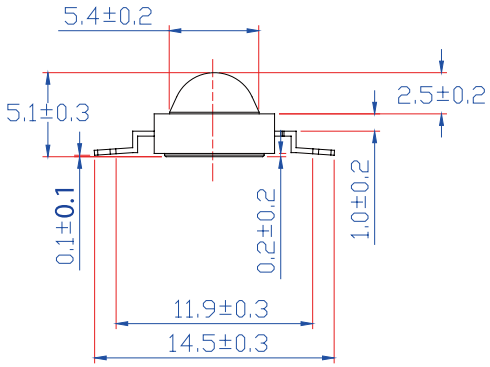
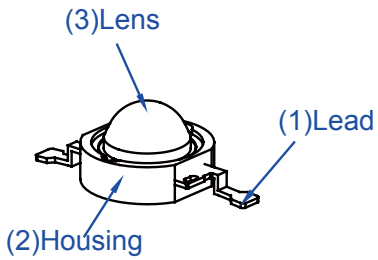
Mechanical Dimensions

Emitter Type Dimension









Emitter Color	Slug at the bottom of the electrode	Circuit
W/H/X	No electrode	

Edixeon S1 series dimensions and circuits

Notes:

1. All dimensions are in mm.
2. It is strongly recommended that the temperature of lead doesn't exceed 55°C.
3. Lambertian and side emitting series slug has polarity as anode.
4. It is important that the slug can't contact aluminum surface, It is strongly recommended that there should coat a uniform electrically isolated heat dissipation film on the aluminum surface.

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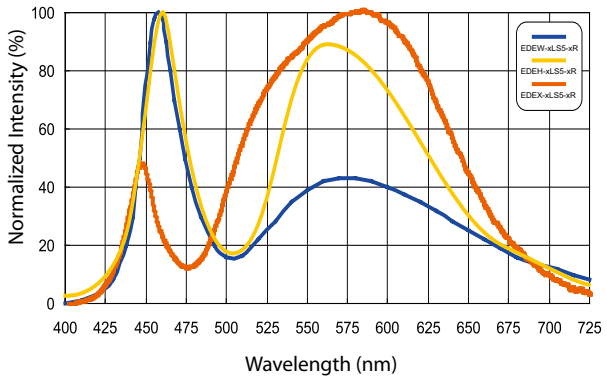
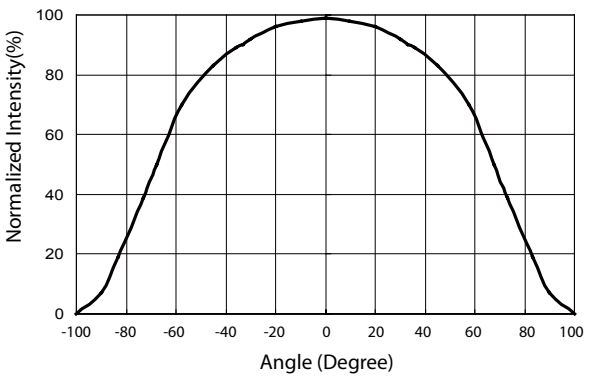
Characteristic Curve

Spectrum



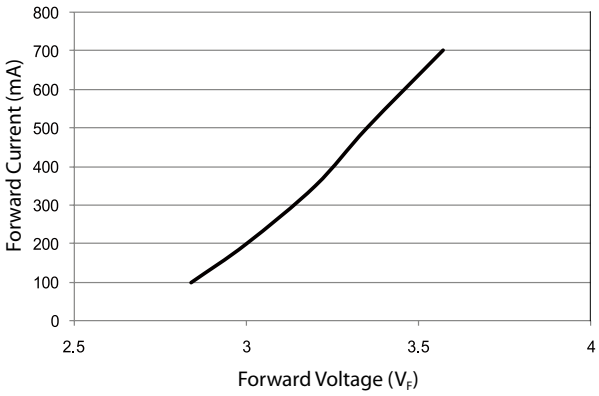
Cool white, Neutral white and Warm white color spectrum at T_J=25˚C

Radiation Diagram



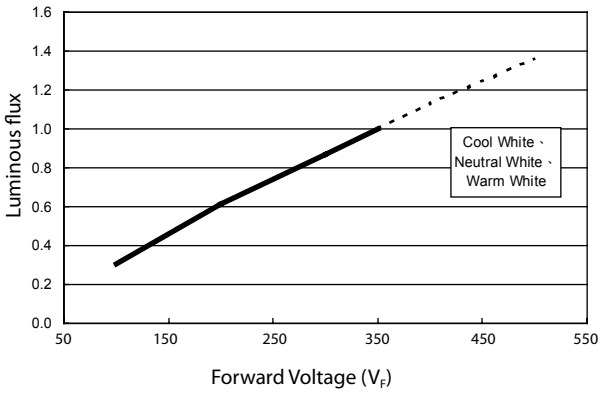
Emission angle

Forward Current vs. Forward Voltage



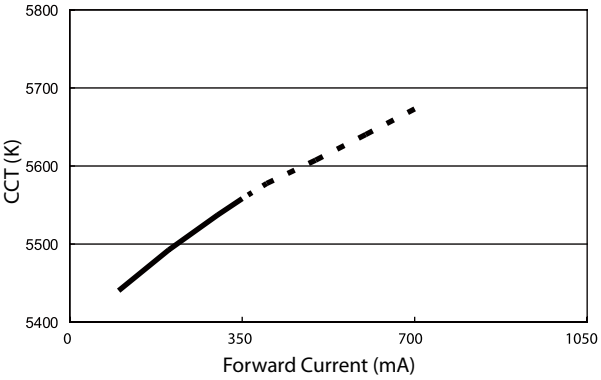
Forward current vs. forward voltage for Edixeon S1 series

Luminous Flux vs. Forward Current

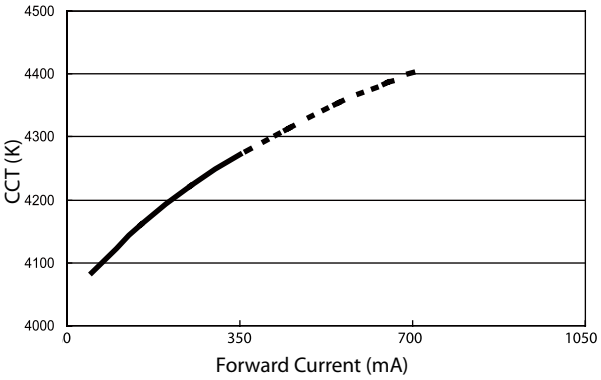


Forward current vs. luminous flux at T_J=25˚C for Edixeon S1 series

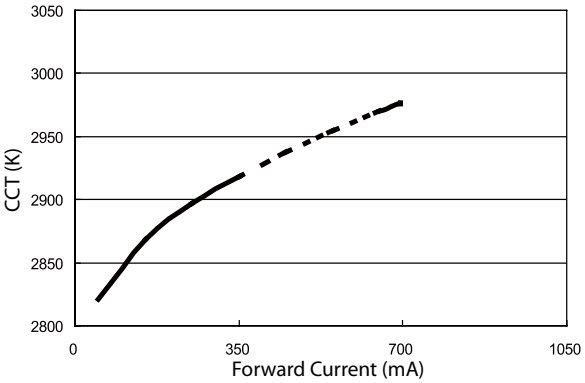
CCT vs. Forward Current



Forward current vs. CCT at T_J =25˚C for Edixeon S1 series Cool White

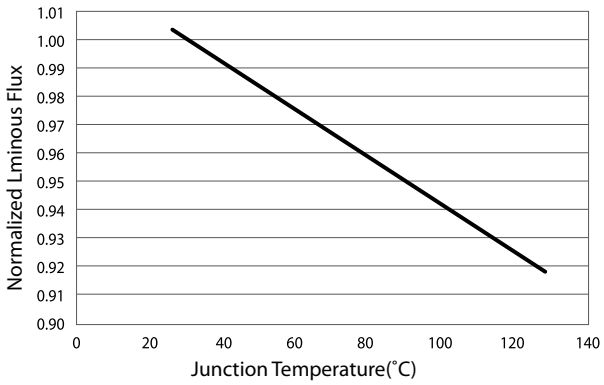


Forward current vs. CCT at T_J =25˚C for Edixeon S1 series Neutral White



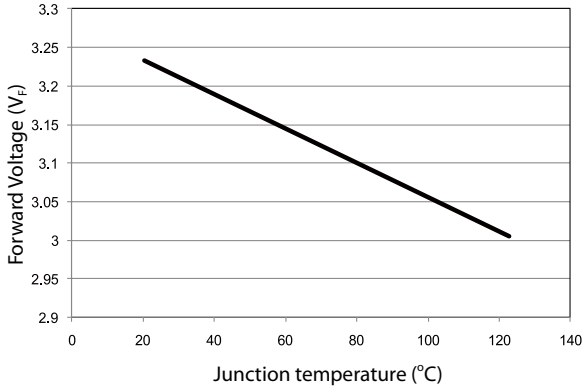
Forward current vs. CCT at T_j=25°C for Edixeon S1 series Warm White

Luminous Flux vs. Junction temperature



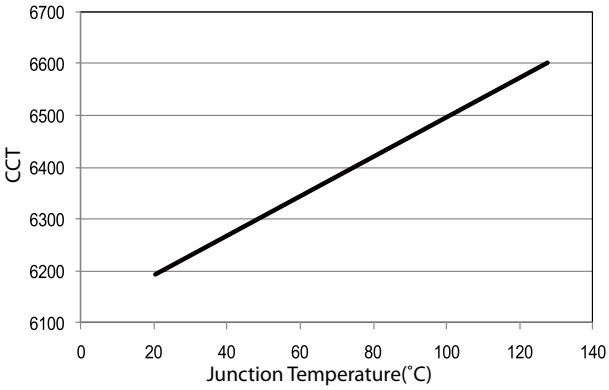
Luminous flux vs. Junction temperature for White series.

Forward Voltage vs. Juction temperature

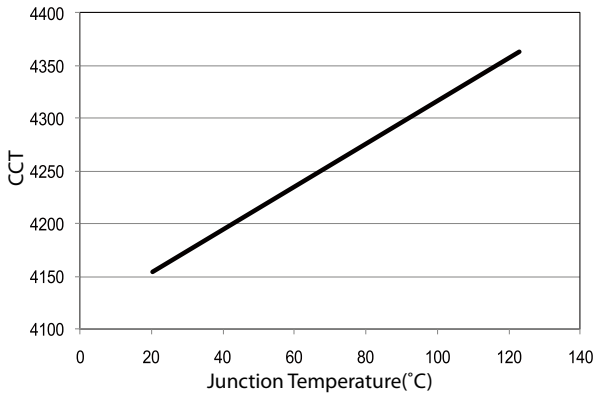


Forward voltage vs. Junction temperature for Edixeon S1 series

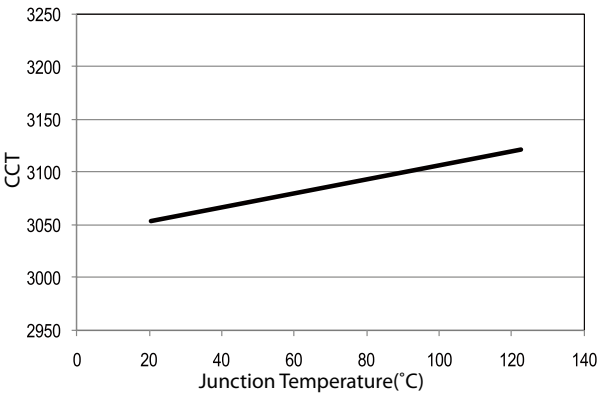
CCT vs. Junction Temperature



CCT vs. Junction temperature for Edixeon S1 series Cool white

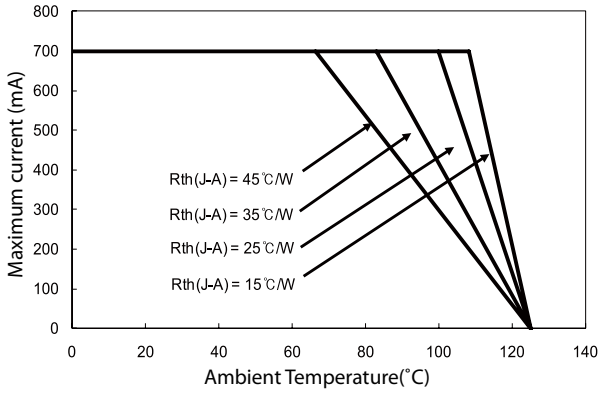


CCT vs. Junction temperature for Edixeon S1 series Neutral white



CCT vs. Junction temperature for Edixeon S1 series Warm white

Maximum Current vs. Junction Temperature



CCT vs. Junction temperature for Edixeon S1 White series

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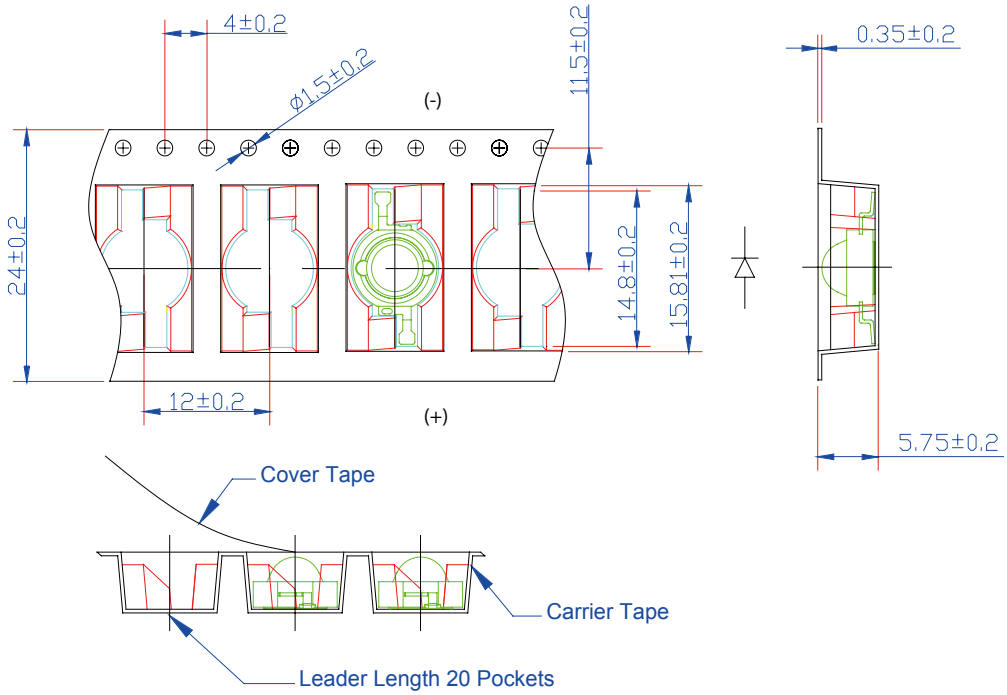
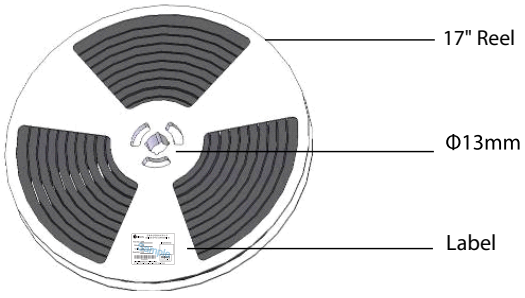
Product Packaging Information

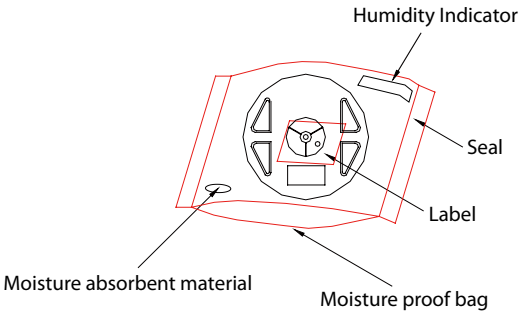
Tape and Reel Dimension

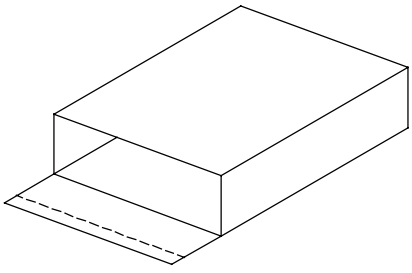


Edixeon Emitter

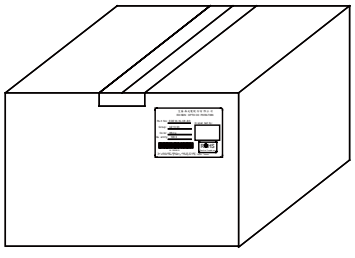


1000pcs LEDs inside





2 bags in 1 box



5 boxes in 1 carton

Note : 445*410*415 (Tolerance : ±5mm)

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Revision History

Versions	Description	Release Date
1	Establish order code information	2013/10/25

About Edison Opto

Edison Opto is a leading manufacturer of high power LED and a solution provider experienced in LDMS. LDMS is an integrated program derived from the four essential technologies in LED lighting applications- Thermal Management, Electrical Scheme, Mechanical Refinement, Optical Optimization, to provide customer with various LED components and modules. More Information about the company and our products can be found at www.edison-opto.com

www.edison-opto.com

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