EDISON
Lighting Design Manufacturing Service

Edixeon S Series IR/UV Datasheet

Features :

- Low voltage operation
- Instant light
- Long operating life
- Reflow process compatible

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General Information

Introduction

Edixeon S IR/UV emitters are one of the highest power LEDs in the world by Edison Opto. Edixeon S IR/UV emitters are designed to satisfy more and more Solid-State lighting High Power LED applications for CCTV, plant lights.

Ordering Code Format

2	E	R 1	x x	x X	0 0	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	R1	R1 Series	01	1W	EX	Deep Red
						03	3W	FX	Cherry Red
								VX	Ultraviolet
								IX	IR 850

X6		X7		X8	
Internal code		PCB Board		Serial Number	
00	-	000	-	-	-

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Absolute Maximum Ratings

Parameter	Symbol	Value	Units
DC Forward Current	I_F	E / F : 350 V : 350/700 I : 700/1000	mA
Peak Pulsed Current; (tp≤100μs, Duty cycle=0.25)	I_{pulse}	E / F: 700 V : 700/1400 I : 1400	mA
Reverse Voltage	V_R	I : 3 E/F/V : 5	V
Drive Voltage	V_D	I : 3 E/F/V : 5	V
LED Junction Temperature	T_J	125	°C
Operating Temperature	-	-30 ~ +110	°C
Storage Temperature	-	-40 ~ +120	°C
ESD Sensitivity	-	2,000	V
Soldering Temperature	-	260	°C
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. Allowable reflow cycles are 3 times for each LED.
4. tp: Pulse width time

Characteristics

Parameter		Symbol	Value	Units
Viewing Angle		$2\Theta_{1/2}$	120	Degree
Forward voltage	(Typ.)	V_F	3.4	V
Thermal resistance		-	E / F : 2.0 - 3.0 V : 2.8 - 4.0 / 3.2 - 5.0 I : 1.5 - 2.5	°C/W
$\Delta V_F/\Delta T$		$\Delta V_F/\Delta T$	-2	mV/˚C
Wavelength		λp	E: 650 - 670 F: 730 - 750 I: 835 - 860 V: 390 - 410	nm
JEDEC Moisture Sensitivity		-	Level 2a **Floor Life** Conditions: ≤30˚C / 60% RH **Soak Requirements(Standard)** Time (hours): 120+1/-0 Conditions: 60˚C / 60% RH	-

Notes:
1. Wavelengths are stated as peak wavelength.
2. Edison maintains a tolerance of ±0.5nm for dominant wavelength, ±2nm for peak wavelength and ±5% on CCT measurement.
3. Edison maintains a tolerance of 0.06V on forward voltage measurement.
4. Emission angle is measured with an accuracy of ±10 degree

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Luminous Flux Characteristic

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

Color	Group	Min. Radiometric Power(mW)	Max. Radiometric Power(mW)	Forward Current (mA)	Order Code
Deep Red	B0	100	150	350	2ER101EX00000001
	B1	150	200		
	B3	250	300		
Cherry Red	A1	50	100	350	2ER101FX00000001
	B0	100	150		
	B1	150	200		
Ultraviolet	B3	250	300	350	2ER101VX00000001
	B5	350	400		
	C1	600	700	700	2ER103VX00000001
	C2	700	800		
	C3	800	900		
IR 850	B6	400	450	700	2ER101IX00000002
	B7	450	500		

Note:
Flux is measured with an accuracy of ± 10%.

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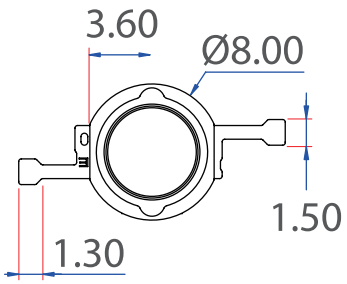
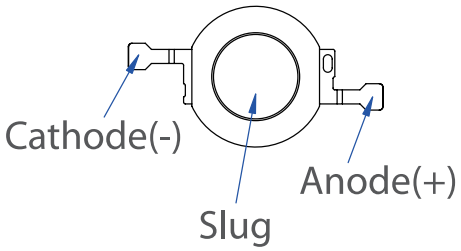
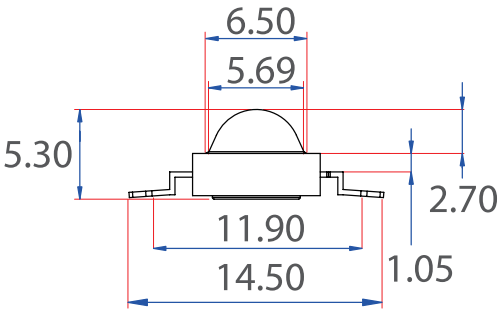
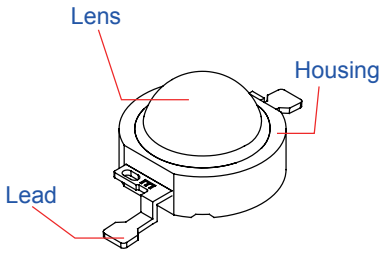
Mechanical Dimensions

Emitter Type Dimension

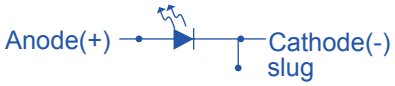




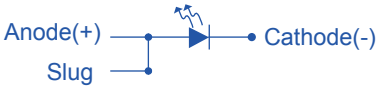




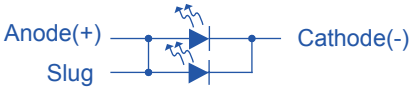
Star Type Dimensions



2ER101IX00000002



2ER101EX00000001
2ER101FX00000001
2ER101VX00000001



2ER103VX00000001

Edixeon S IR/UV Series dimensions and circuit

Notes:
1. All dimensions are in mm.
2.Drawings are not to scale.
3.It is strongly recommended that the temperature of lead dose not exceed 55°C.
4.The slug has polarity as anode.
5.It is strongly recommended to apply on electrically isolated heat conducting film between the slug and contact surfaces.

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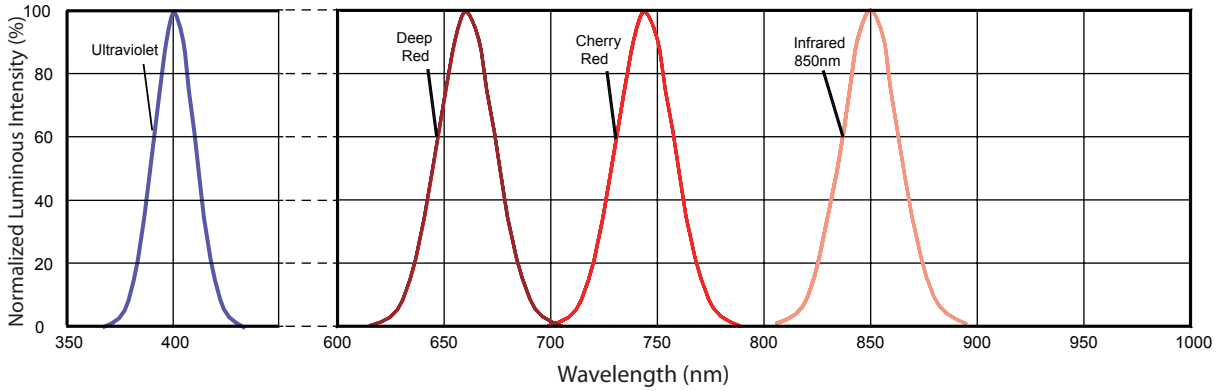
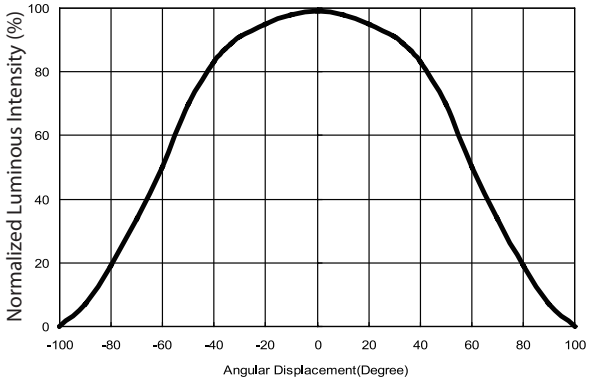
Characteristic Curve

Spectrum



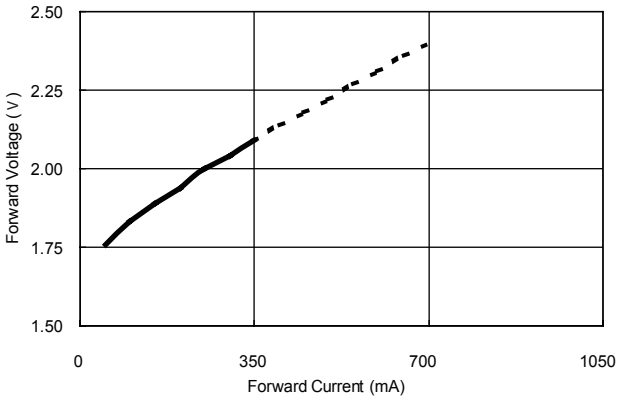
Color spectrum at T_J =25˚C.for Edixeon S IR/UV series

Radiation Diagram

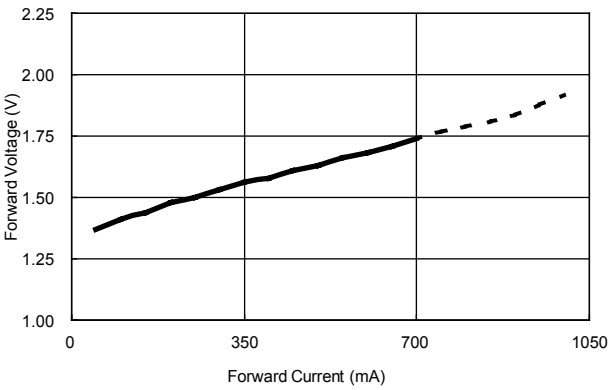


Lambertain at T_J=25˚C for Edixeon S IR/UV series

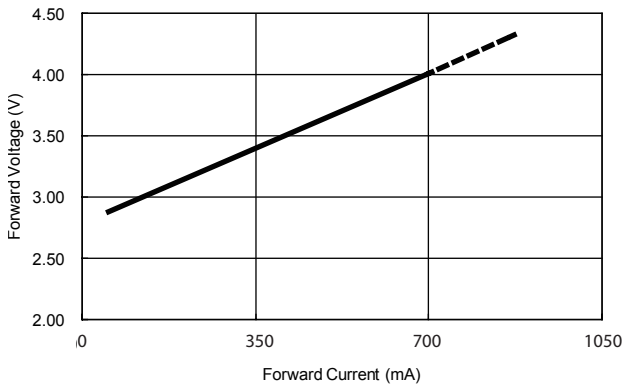
Forward Voltage & Forward Current



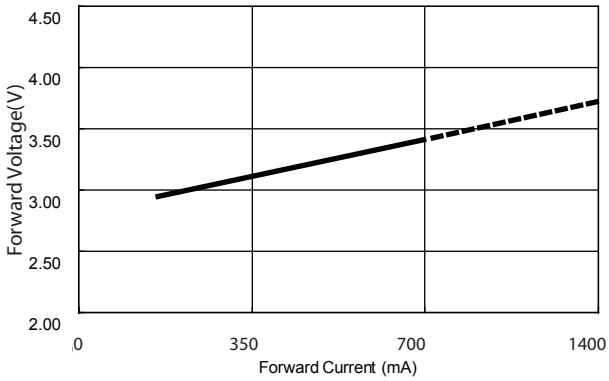
Forward Current & Forward Voltage for 2ER101FX00000001, 2ER101EX00000001



Forward Current & Forward Voltage for 2ER101IX00000002

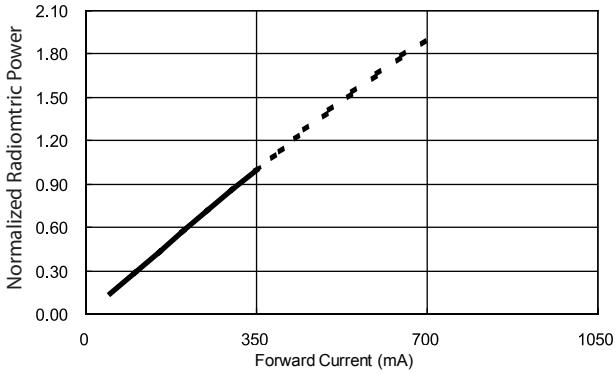


Forward Current & Forward Voltage for 2ER101VX00000001

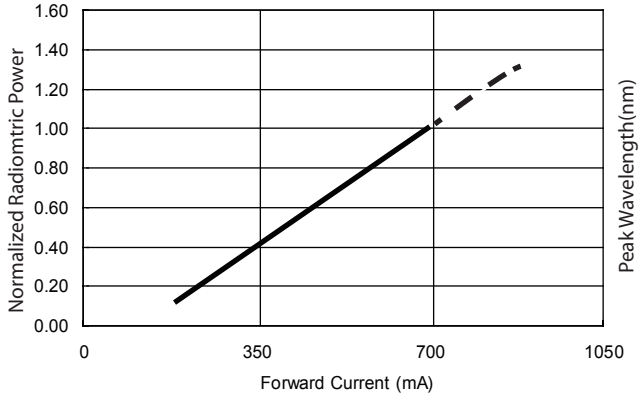


Forward Current & Forward Voltage for 2ER103VX00000001

Radiomtric power & Forward Current

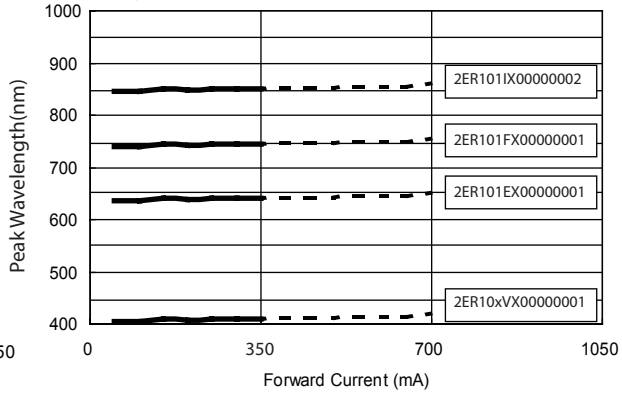


Forward current & radiometric power for at T_J=25°C for 2ER101EX00000001, 2ER101FX00000001



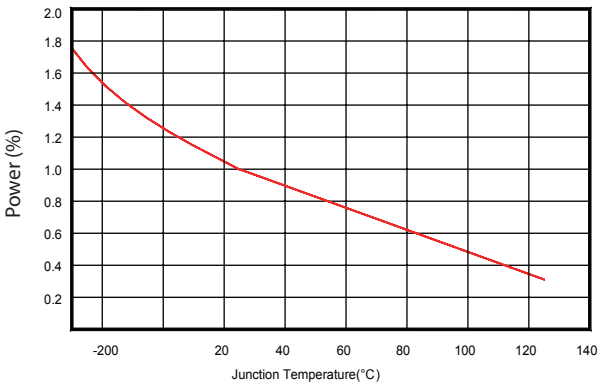
Forward current & radiometric power for at T_J=25°C for 2ER101IX00000002

Wavelength & Forward Current



Forward current & wavelength at T_J=25°C for 2ER101IX00000002, 2ER101FX00000001, 2ER101EX00000001, 2ER10xVX00000001

Power & Junction Temperature



Junction temperature & power rate for all Edixeon S IR/UV series.

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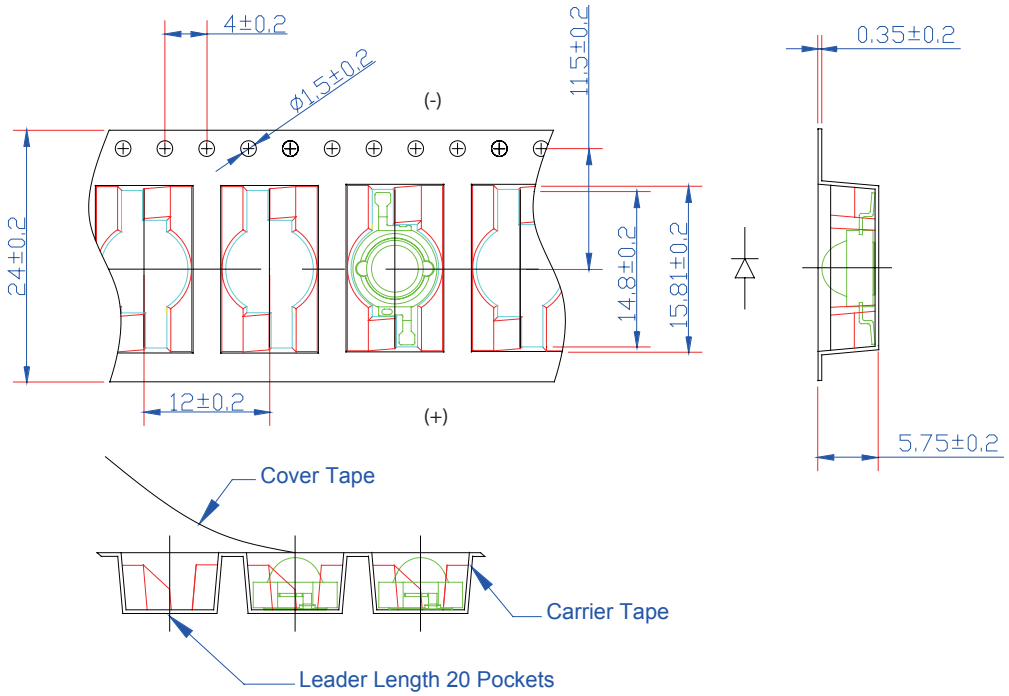
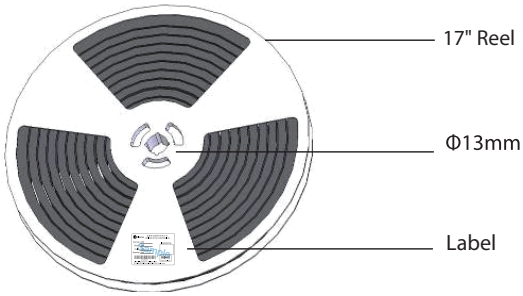
Product Packaging Information

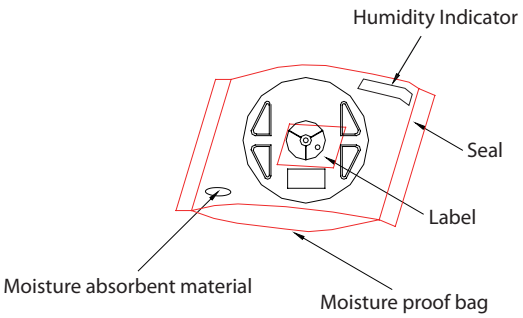
Tape and Reel Dimension

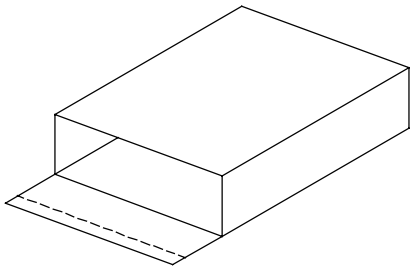


Edixeon Emitter

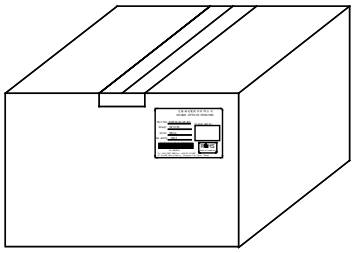


1000pcs LEDs inside





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	2012/12/20

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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