

Edixeon S Single Color Series Datasheet



Features :

- Various colors for choice
- Low voltage operation
- Instant light
- Long operating life
- Reflow process compatible



Table of Contents

General Information.....	3
Absolute Maximum Ratings.....	4
Characteristics.....	4
Luminous Flux Characteristic.....	5
Mechanical Dimensions.....	7
Characteristic Curve.....	8
Product Packaging Information.....	10
Revision History.....	11
About Edison Opto.....	11

General Information

Introduction

Edixeon S Series are ideal for various colors of lighting, signaling, and entertainment applications. These flux differentiated parts, like all other Edixeon S Series, provide the best lumen maintenance, superior reliability and quality light.

Ordering Code Format

$\frac{2}{X1}$ $\frac{E}{X2}$ $\frac{R1}{X3}$ $\frac{xx}{X4}$ $\frac{xX}{X5}$ $\frac{xx}{X6}$ $\frac{000}{X7}$ $\frac{xxx}{X8}$

X1		X2		X3		X4		X5	
Type	Emitter	Component	Edixeon	Series	R1 Series	Wattage	1W	3W	Color
2		E		R1		01			RX Red
						03			TX True Green
									BX Blue
									AX Amber
									JX Cyan
									CX Royal Blue
									DX Dental Blue

X6		X7		X8	
Internal code	-	PCB Board	-	Serial Number	-
00	-	000	-	-	-
01	-				

Absolute Maximum Ratings

Parameter	Symbol	Value	Units
DC Forward Current	(1W) (3W) I_F	350 700	mA
Peak Pulsed Current; ($t_p \leq 100\mu s$, Duty cycle=0.25)	(1W) (3W) I_{pulse}	500 1000	mA
Reverse Voltage	V_R	5	V
Drive Voltage	V_D	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. T_p : Pulse width time

Characteristics

Parameter	Symbol	Value	Units
Viewing Angle	(R/A) (T/J/B/C/D) $2\theta^{1/2}$	135 150	Degree
Forward voltage	V_F	R/A: 2.2-2.4 B/J/T/C/D: 3.2-3.7	V
Thermal resistance	-	10	°C/W
$\Delta V_F / \Delta T$	$\Delta V_F / \Delta T$	-2	mV/°C
CCT / Wavelength	λ_d	R: 620-630 A: 585-595 T: 515-535 J: 490-510 B: 455-475	nm
	λ_p	C: 440-460 D: 450-470	
JEDEC Moisture Sensitivity	-	Level 2a Floor Life Conditions: $\leq 30^\circ C$ / 60% RH Soak Requirements(Standard) Time (hours): 120+1/-0 Conditions: $60^\circ C$ / 60% RH	-

Notes:

1. Wavelengths are stated as peak wavelength.
2. Edison maintains a tolerance of $\pm 0.5nm$ for dominant wavelength, $\pm 2nm$ for peak wavelength and $\pm 5\%$ on CCT measurement.
3. Edison maintains a tolerance of 0.06V on forward voltage measurement.

Luminous Flux Characteristic

Luminous Flux Characteristics at $I_f=350\text{mA}$, $T_j=25^\circ\text{C}$

Color	Wattage (W)	Group	Min. Luminous Flux(lm)	Max. Luminous Flux(lm)	Forward Current (mA)	Order Code
Red	1	R0	39.4	51.2	350	2ER101RX00000001
		S0	51.2	66.5		
	3	T0	66.5	86.5	700	2ER103RX00000001
		U0	86.5	110		
		V0	110	160		
True Green	1	S0	51.2	66.5	350	2ER101TX00000001
		T0	66.5	86.5		
	3	V0	110	160	700	2ER103TX00000001
Blue	1	N0	17.9	23.3	350	2ER101BX00000001
		P0	23.3	30.3		
		Q0	30.3	39.4		
	3	Q0	30.3	39.4	700	2ER103BX00000001
		R0	39.4	51.2		
Amber	1	R0	39.4	51.2	350	2ER101AX01000001
		S0	51.2	66.5		
	3	T0	66.5	86.5	700	2ER103AX00000001
		U0	86.5	110		
		V0	110	160		
Cyan	1	S0	51.2	66.5	350	2ER101JX00000001
		T0	66.5	86.5		

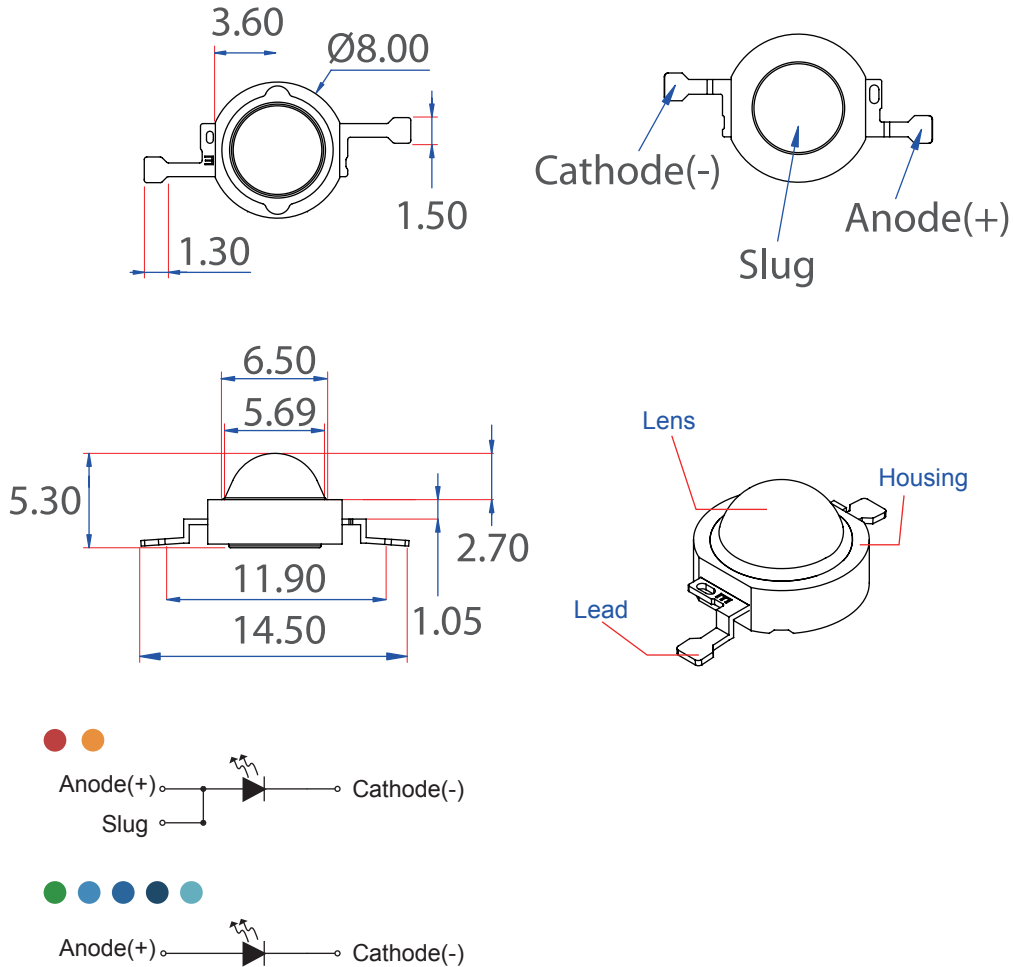
Note:
Flux is measured with an accuracy of $\pm 10\%$.

Color	Wattage (W)	Group	Min. Radiometric Power (mW)	Max. Radiometric Power (mW)	Forward Current (mA)	Order Code
Royal Blue	1	B5	350	400	350	2ER101CX00000001
		B6	400	450		
		B7	450	500		
		C0	500	600		
	3	C1	600	700	700	2ER103CX00000001
		C2	700	800		
		C3	800	900		
Dental Blue	3	C1	600	700	700	2ER103DX00000001
		C2	700	800		
		C3	800	900		

Note:
Radiometric power is measured with an accuracy of $\pm 10\%$.

Mechanical Dimensions

Emitter Type Dimension



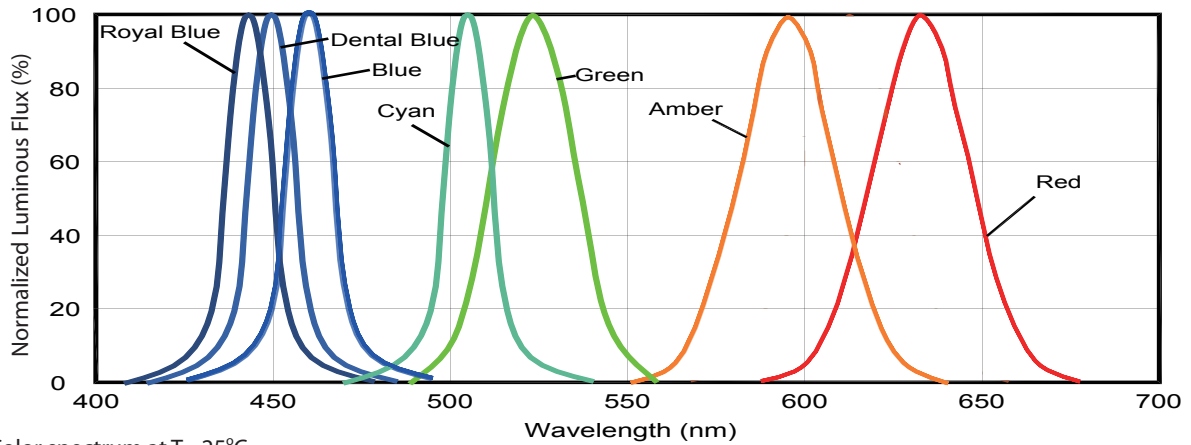
Edixeon S series dimensions and circuits

Notes:

1. All dimensions are in mm.
2. Lambertian and side emitting series slug has polarity as anode.
3. 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.

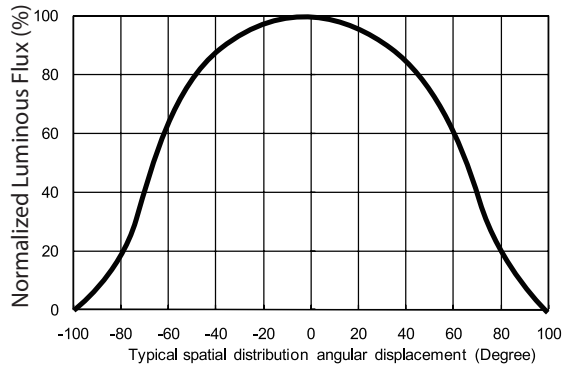
Characteristic Curve

Spectrum

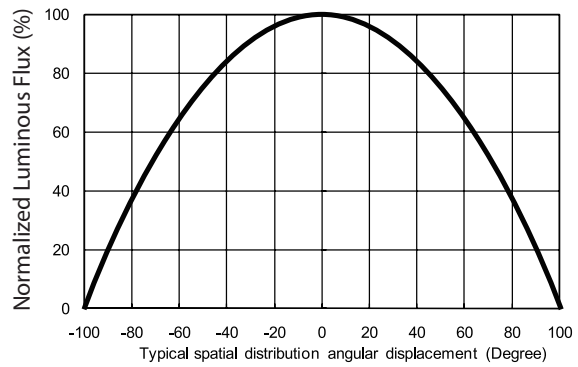


Color spectrum at $T_j=25^\circ\text{C}$

Radiation Diagram

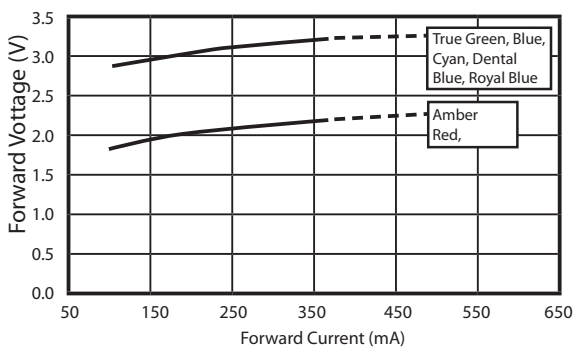


Typical Spatial distribution for Red, Amber.

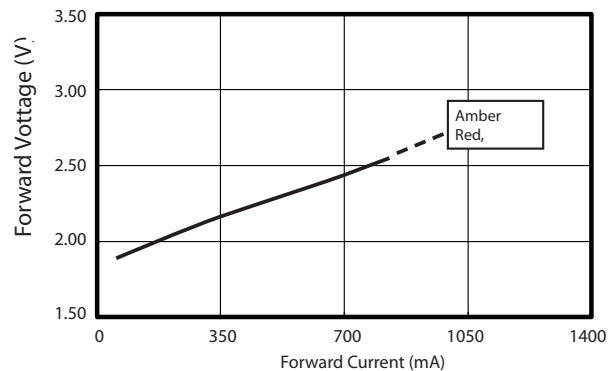


Typical Spatial distribution for Blue and True Green, Cyan, Dental Blue, Royal Blue

Forward Voltage & Forward Current

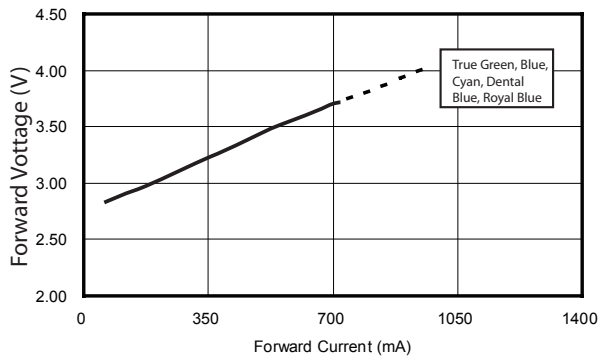


Forward Current & Forward Voltage for 1W Edixeon S series



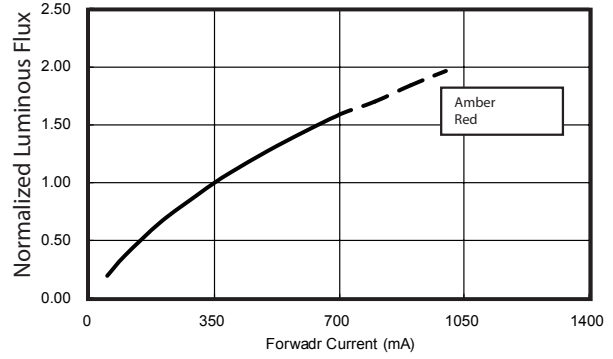
Forward Current & Forward Voltage for 3W Edixeon S series at $T_j=25^\circ\text{C}$

Forward Voltage & Forward Current

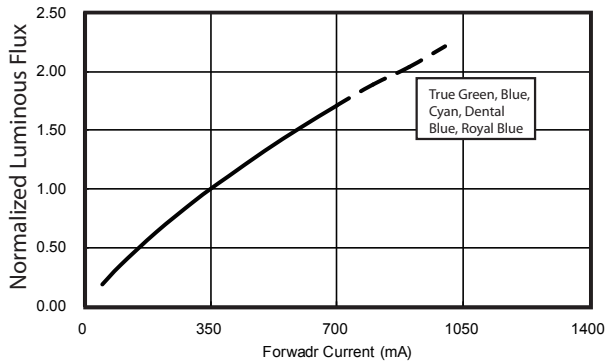


Forward Current & Forward Voltage for 3W Edixeon S series at $T_j=25^\circ\text{C}$

Luminous Flux & Forward Current

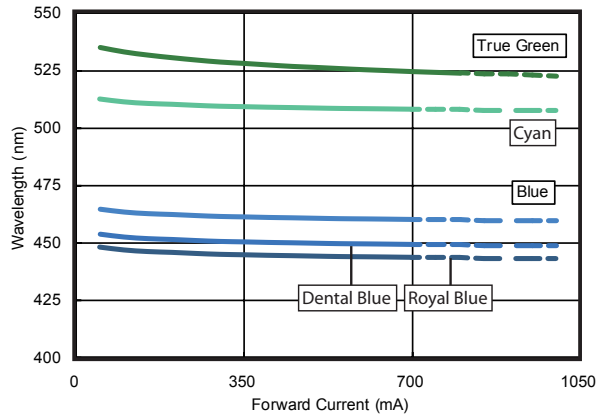


Forward Current & Luminous Flux for 3W Edixeon S series at $T_j=25^\circ\text{C}$

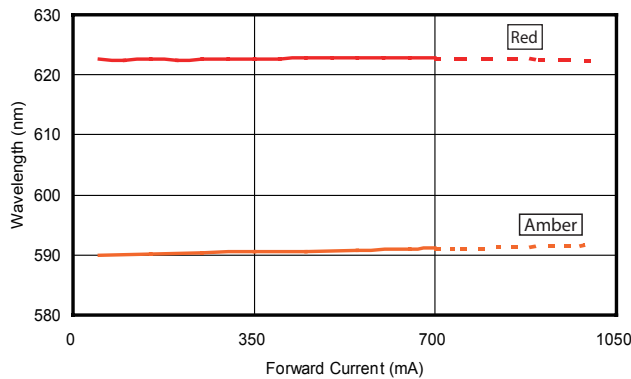


Forward Current & Luminous Flux for 3W Edixeon S series at $T_j=25^\circ\text{C}$

Wavelength & Forward Current



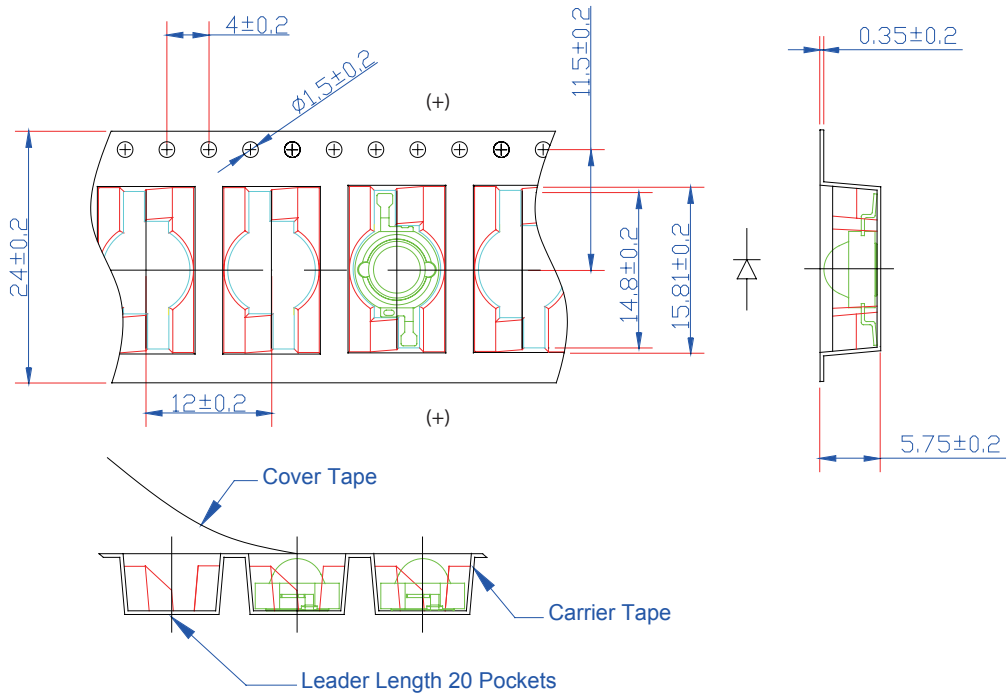
Forward Current & Wavelength at $T_j=25^\circ\text{C}$ for Edixeon S series.



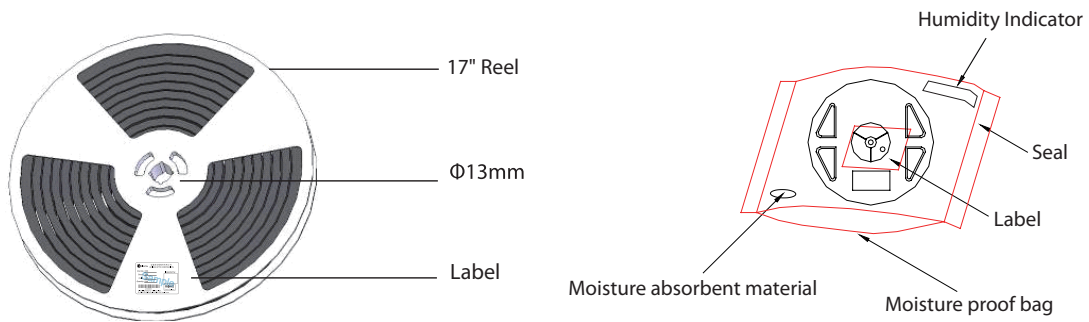
Forward Current & Wavelength at $T_j=25^\circ\text{C}$ for Edixeon S series.

Product Packaging Information

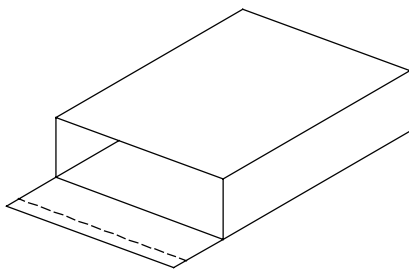
Tape and Reel Dimension



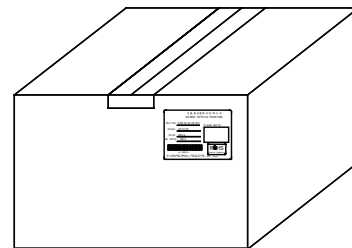
Edixeon Emitter



1000pcs LEDs inside



2 bags in 1 box



5 boxes in 1 carton

Note : 445*410*415 (Tolerance : $\pm 5\text{mm}$)

Revision History

Versions	Description	Release Date
1	Establish order code information	2012/12/12

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

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