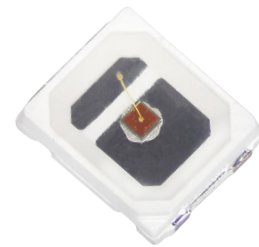


PLCC Series

2835 0.2W Red

Datasheet



Outdoor Lighting



General Lighting



Indoor Lighting

Introduction :

Ultra high luminous efficacy, combined with the flexibility in design due to its slim and miniature size, PLCC LED Series are optimized to be used as lighting for building lighting designs or signboard.

Description :

- Building interior and exterior
- Signal and Symbol Luminaire
- Best luminous and color uniformity
- Enables halogen and CDM replacement
- The article itself presents the actual color.

Feature and Benefits :

- High luminous flux and high efficiency
- Based on Red : AlGaInP technology
- Wide viewing angle : 120°
- Excellent performance and visibility
- Suitable for all SMT assembly methods
- IR reflow process compatible
- Environmental friendly; RoHS compliance

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General Information

Ordering Code Format

$\frac{2}{X1}$ $\frac{T}{X2}$ $\frac{03}{X3-X4}$ $\frac{X2}{X5-X6}$ $\frac{xX}{X7-X8}$ $\frac{X}{X9}$ $\frac{00}{X10-X11}$ $\frac{03}{X12-X13}$ $\frac{XXX}{X14-X16}$

X1		X2		X3-X4		X5-X6		X7-X8	
Type		Component		Series		Wattage		Color/CCT	
2	Emitter	T	PLCC	03	2835	X2	0.2W	RX	Red

X9		X10-X11		X12-X13		X14-X16	
BIN		CRI		Voltage		Serial Number	
X	Single Color	00	-	03	3V	-	-

Absolute Maximum Ratings

Absolute maximum ratings

Parameter	Symbol	Rating	Units
Forward Current($T_J=25^{\circ}\text{C}$)	I_F	70	mA
Pulse Forward Current ($t_p \leq 100\mu\text{s}$, Duty cycle=0.25)	-	100	mA
Reverse Current	I_R	10	μA
Reverse Voltage	V_R	-	V
ESD Sensitivity(HBM,Class 2)	V_B	2,000	V
LED Junction Temperature	T_J	125	$^{\circ}\text{C}$
Operating Temperature	-	-40 ~ +85	$^{\circ}\text{C}$
Storage Temperature	-	-40 ~ +125	$^{\circ}\text{C}$
Soldering Temperature	-	255~260/10~30	$^{\circ}\text{C}/\text{sec}$
Manual Soldering at 350 $^{\circ}\text{C}$ (Max.)	-	3	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. t_p : Pulse width time

Characteristics

Characteristics($T_J=25^{\circ}\text{C}$)

Parameter	Symbol	Value	Units
Viewing Angle	(Typ.) $2\theta_{1/2}$	120	Degree
Real thermal resistance junction/solderpoint	(Typ.) (Rth J-S)	35	$^{\circ}\text{C}/\text{W}$
Wavelength	-	620-624	nm
JEDEC Moisture Sensitivity	-	Level 3 Floor Life Conditions: $\leq 30^{\circ}\text{C}$ / 60% RH Soak Requirements(Standard) Time (hours): 24+1/-0 Conditions: 60°C / 60% RH	-

Note:

$2\theta_{1/2}$ is the off-axis angle where the luminous intensity is half of the axial luminous intensity.

Luminous Flux Characteristic

Luminous Intensity Characteristics, $I_f=70\text{mA}$ and $T_j=25^\circ\text{C}$

Color	Group	Min Luminous Intensity(mcd)	Max Luminous Intensity(mcd)	Forward Current (mA)	Order Code
Red	H0	3200	3650	70	2T03X2RXX0003001
	I0	3650	4150		

Note:

The luminous intensity performance is guaranteed within published operating conditions. Edison Opto maintains a tolerance of $\pm 10\%$ on intensity measurements.

Voltage Bin Structure

Voltage Bin Structure, $I_f=70\text{mA}$ and $T_j=25^\circ\text{C}$

Group	Min Voltage (V)	Max Voltage (V)
B20	2.20	2.35
B35	2.35	2.50
B50	2.50	2.75

Note:

Forward voltage measurement allowance is $\pm 0.06\text{V}$.

Wavelength Bin Structure

Wavelength Bin Structure, $I_f=70\text{mA}$ and $T_j=25^\circ\text{C}$

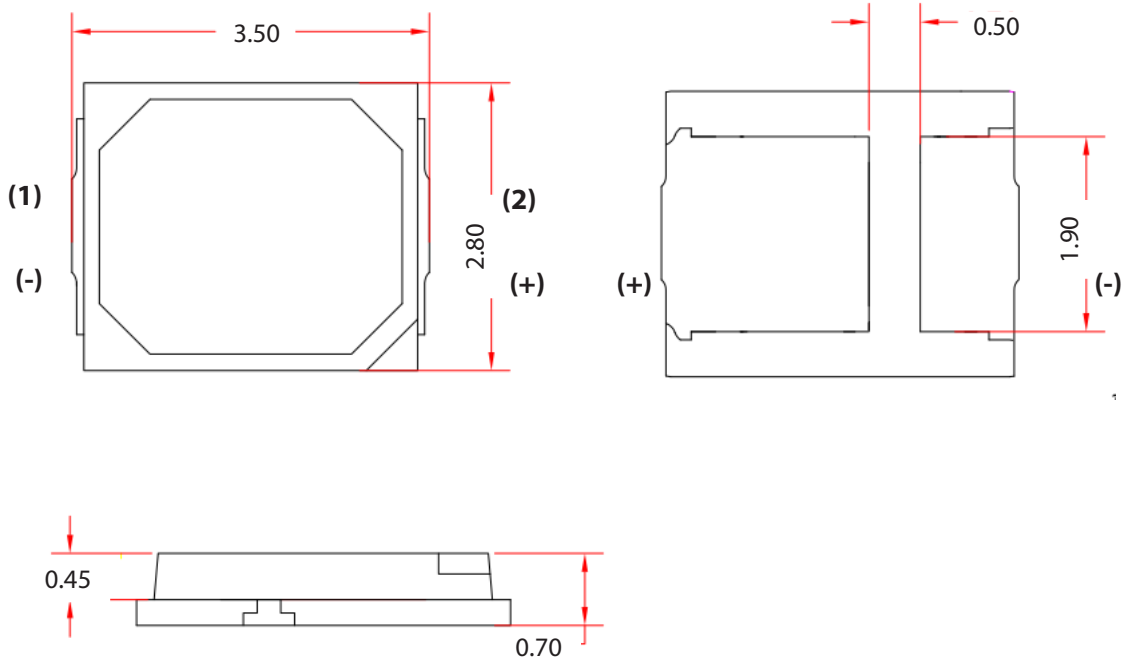
Color	Group	Min. Wd (nm)	Max. Wd (nm)
Red	R20	620	624

Note:

Dominant wavelength measurement allowance is $\pm 1\text{nm}$.

Mechanical Dimensions

Emitter Type Dimension

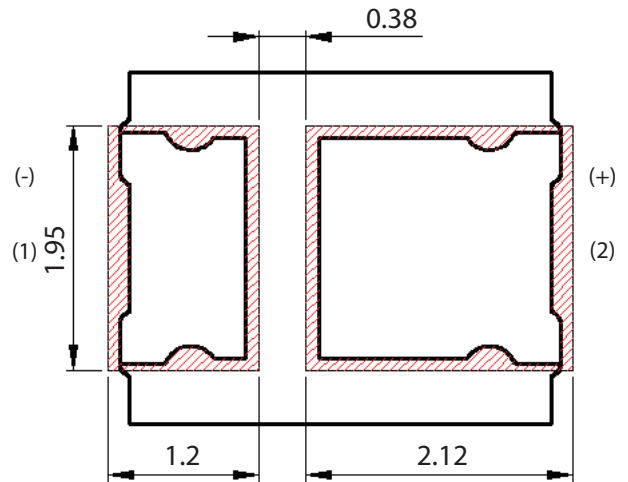


Circuit



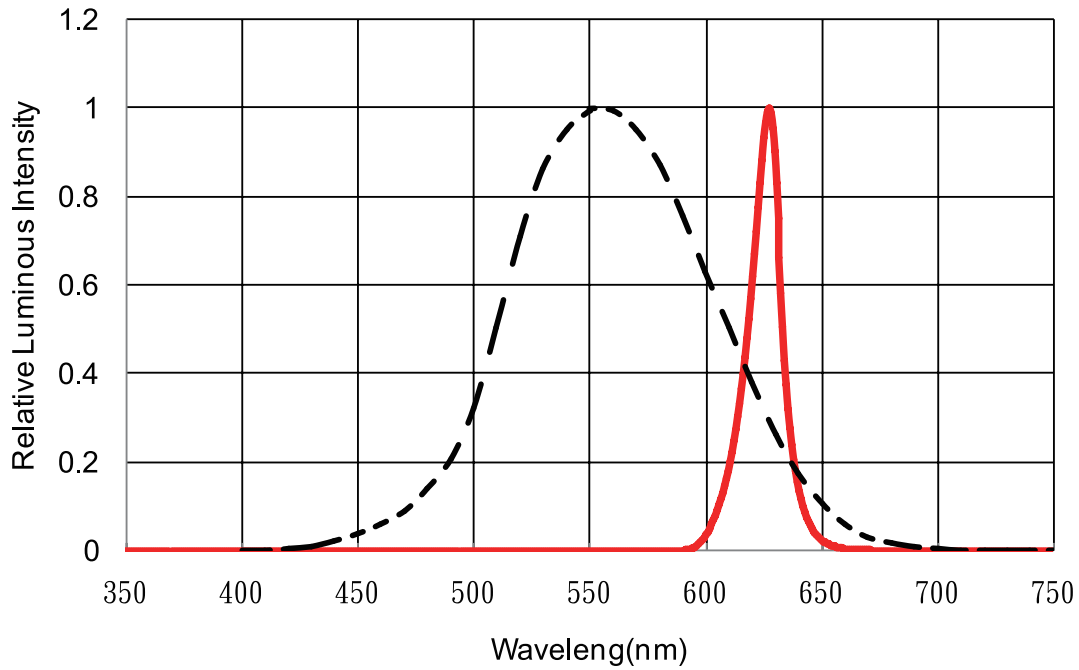
- Notes:
1. All dimensions are measured in mm.
2. Tolerance : ± 0.20 mm

Solder Pad

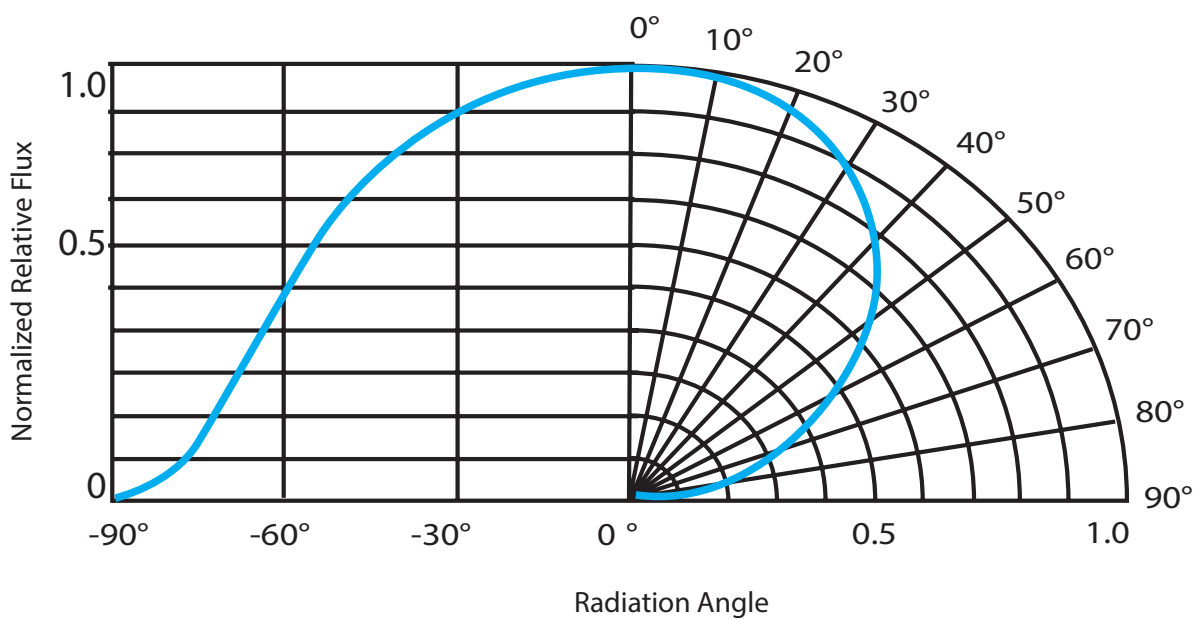


Characteristic Curves

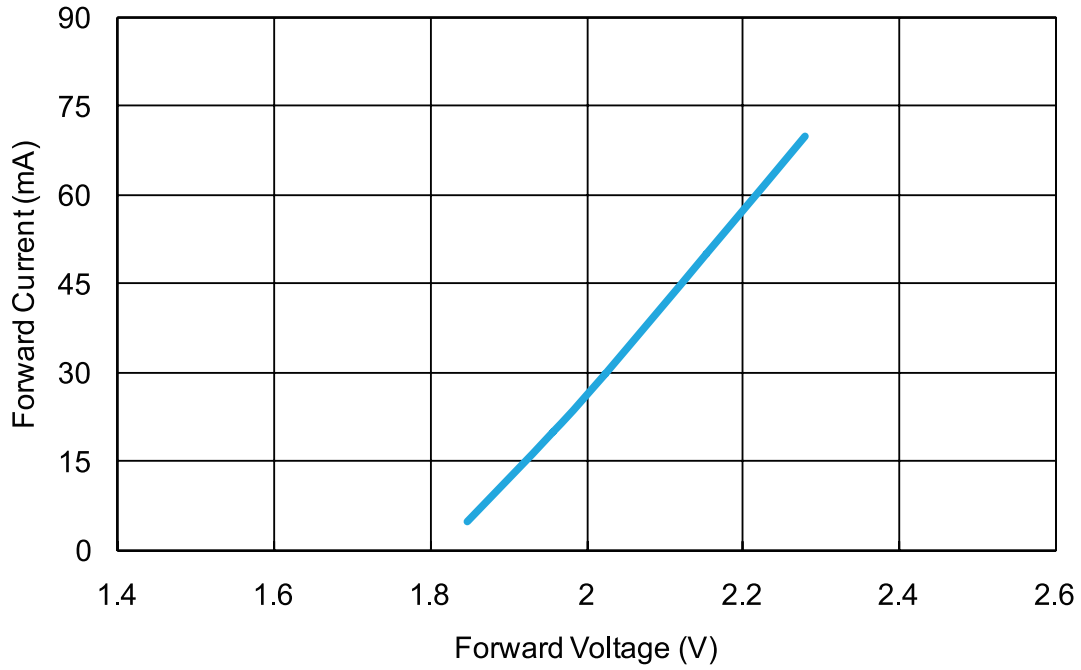
Color Spectrum($I_F=70\text{mA}$ and $T_J=25^\circ\text{C}$)



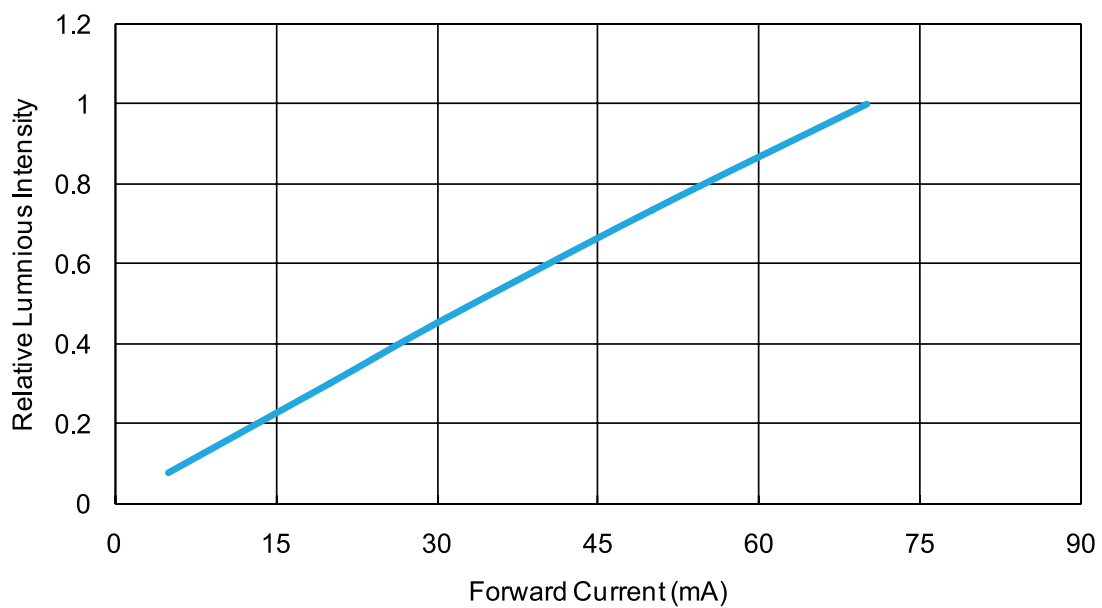
Beam Pattern($I_F=70\text{mA}$ and $T_J=25^\circ\text{C}$)



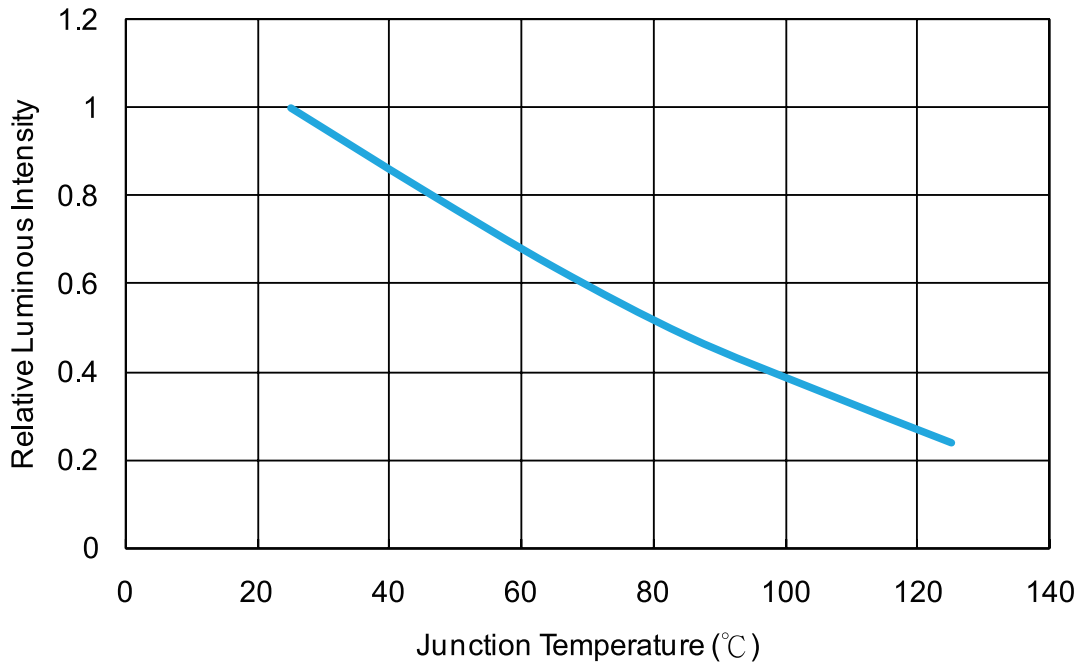
Forward Current vs. Forward Voltage ($I_f=70\text{mA}$ and $T_j=25^\circ\text{C}$)



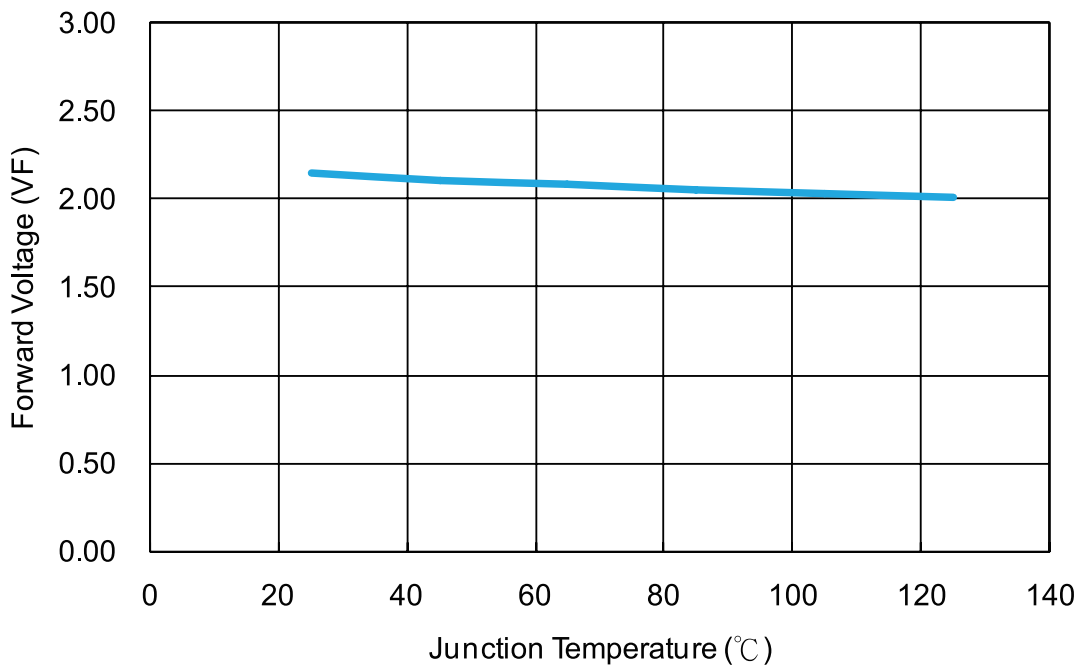
Relative Luminous Intensity vs. Forward Current ($I_f=70\text{mA}$ and $T_j=25^\circ\text{C}$)



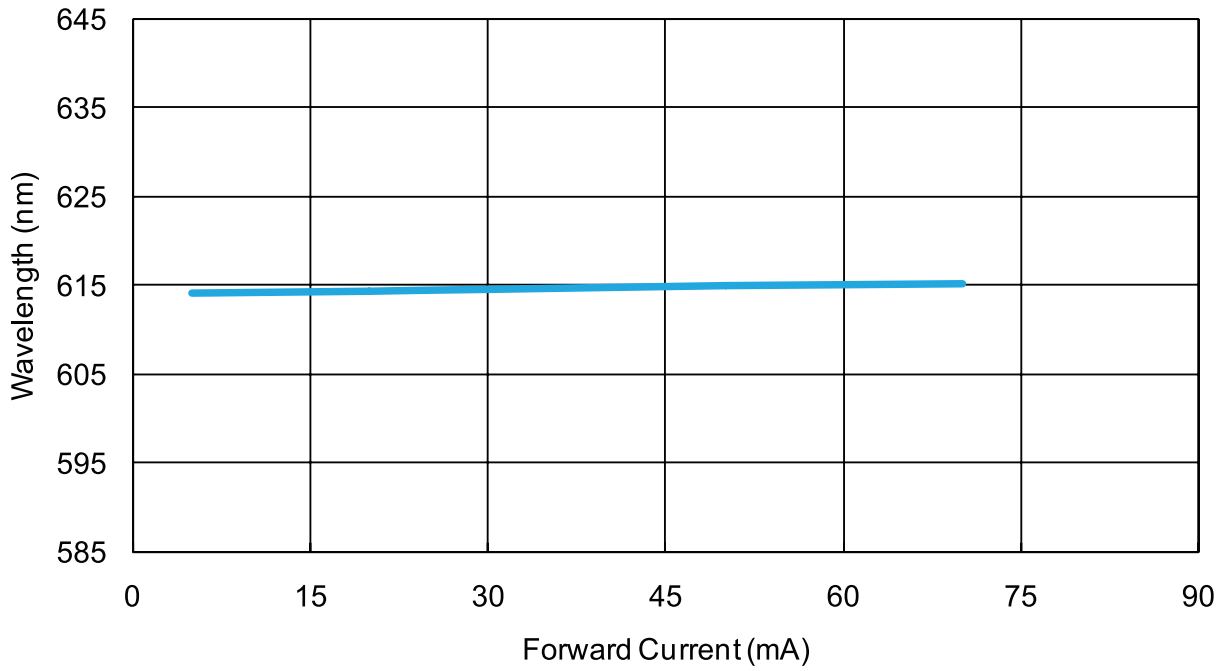
Relative Luminous Intensity vs. Junction Temperature ($I_f=70mA$)



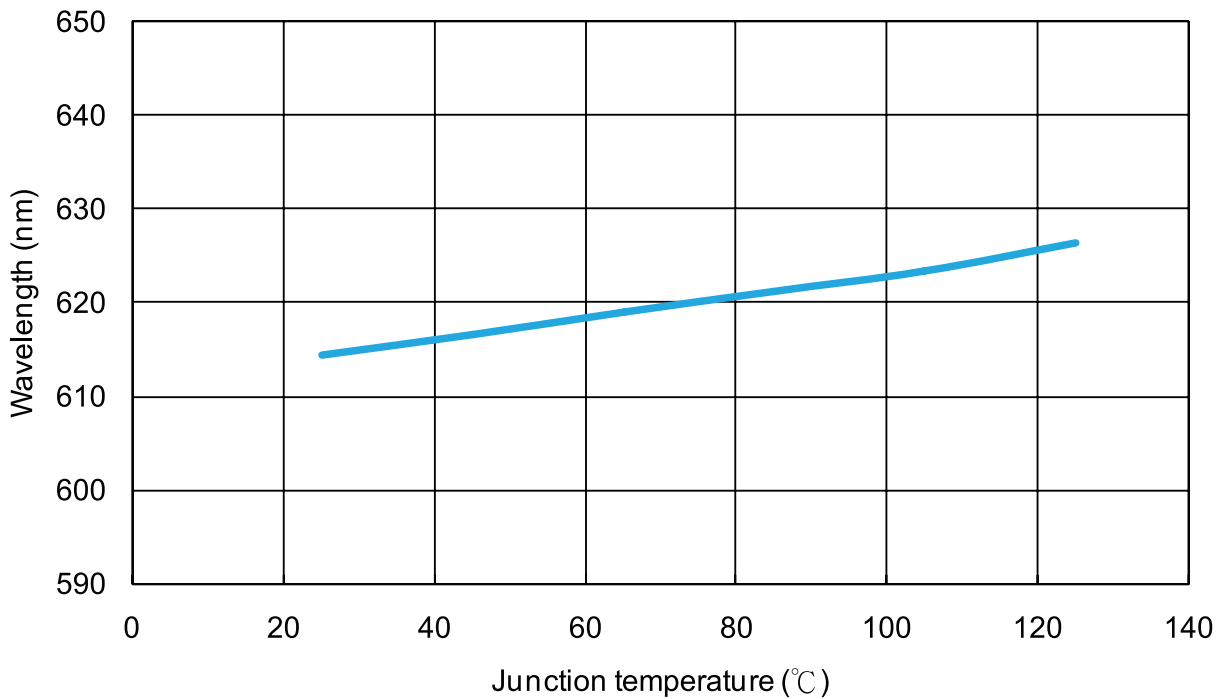
Forward Voltage vs. Junction Temperature ($I_f=70mA$)



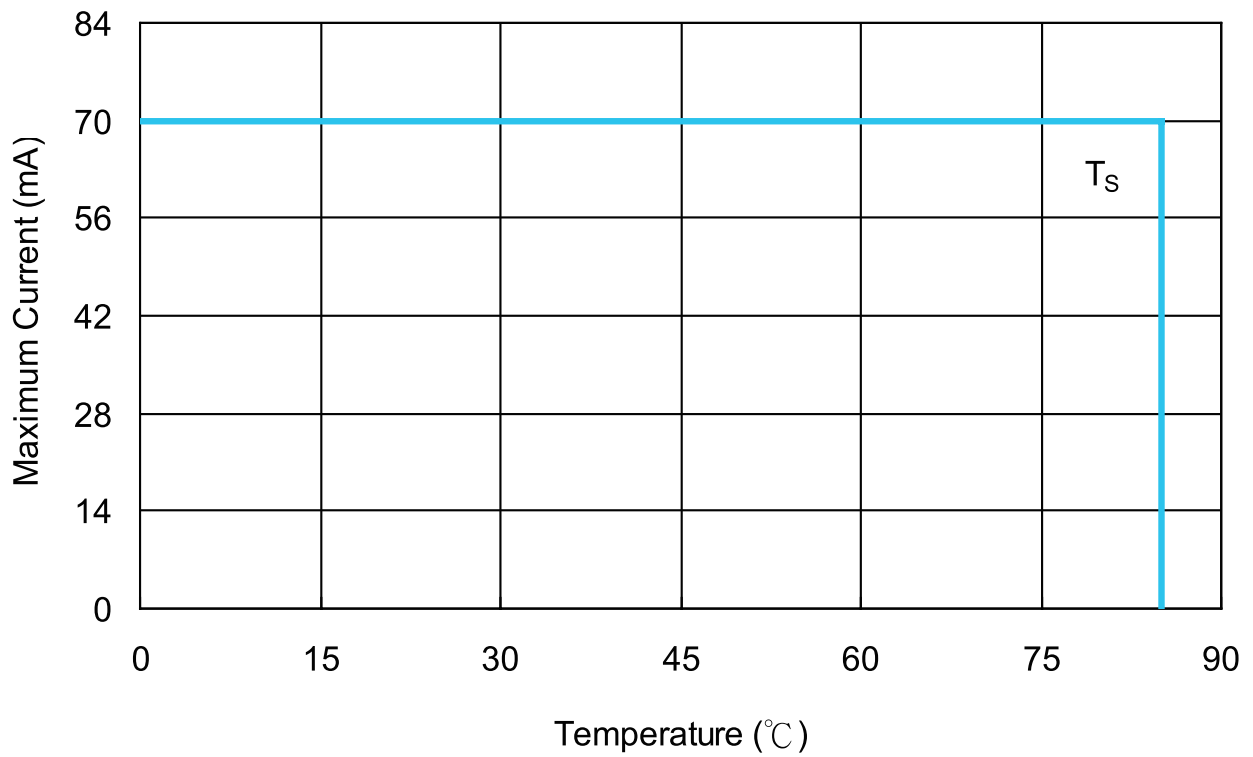
Wavelength vs. Forward Current ($T_j=25^\circ\text{C}$)



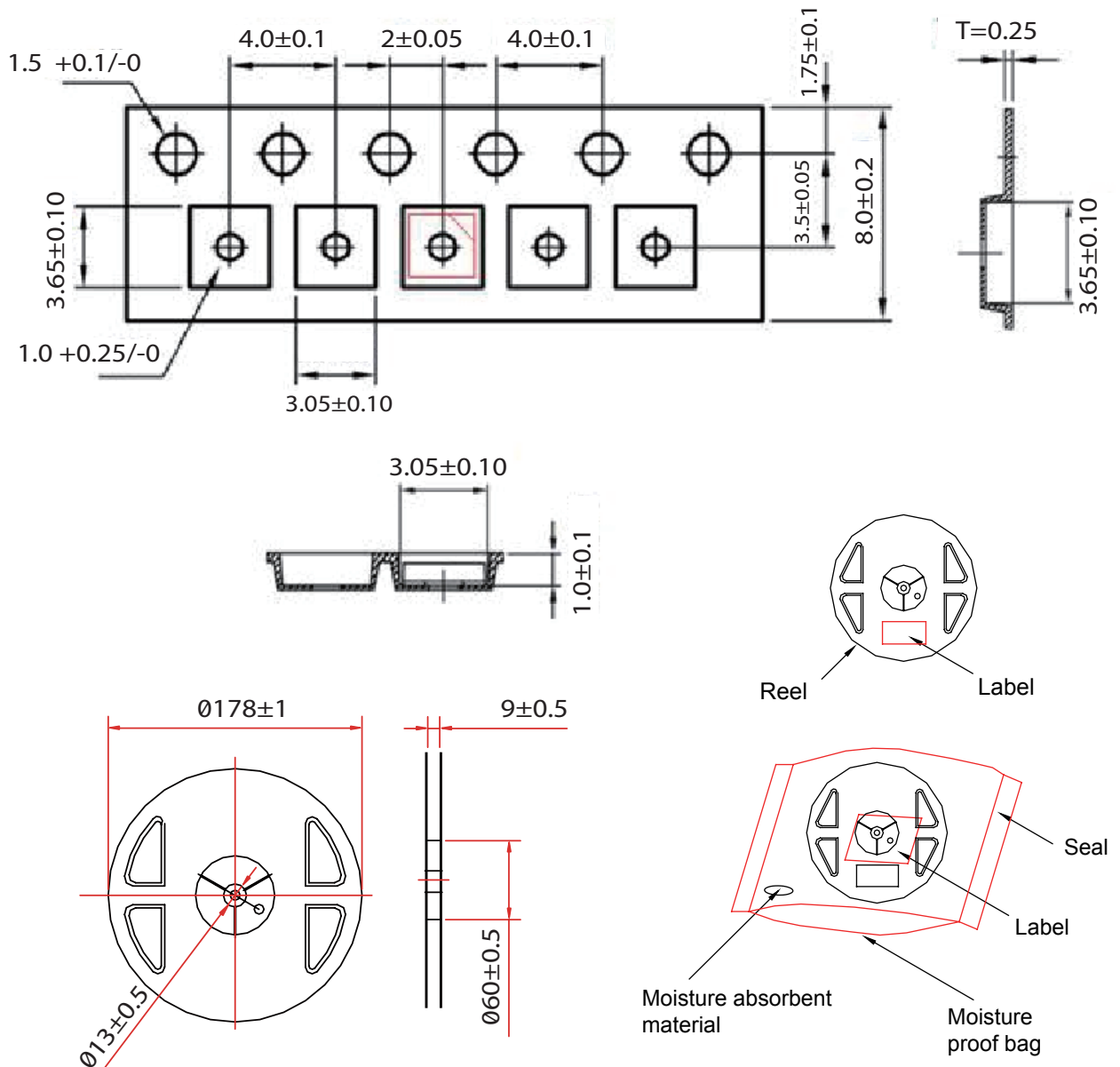
Wavelength vs. Junction temperature ($I_f=70\text{mA}$)



Maximum Current vs. Ambient Temperature



Product Packaging Information



Item	Quantity	Total	Dimensions(mm)
Reel	4,000pcs	4,000pcs	R=178
Starting with 150pcs empty, and 150pcs empty at the last			

Revision History

Versions	Description	Release Date
1	Establish a Datasheet	2019/05/24

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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