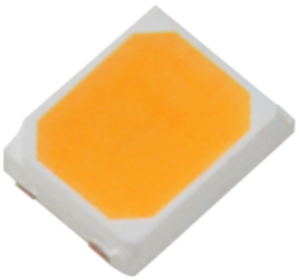
2835 0.2W 3V PC Yellow 2T03X2PY00003001

PLCC 2835 PC Yellow have narrow bandwidth illuminant. 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 semiconductor industry.



Industrial light

Applications :

- semiconductor industial light

Features :

- Package: white SMT package, colored diffused silicone resin
- Dimension: 3.5 mmx2.8 mm
- Chip technology: InGaN
- View Angle: 120°
- Luminous flux : typ. 32lm
- MSL: Level 3

EDISON
Lighting Design Manufacturing Service

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General Information

Ordering Code Format

2	T	0 3	X 2	P Y	0	0 0	0 3	x x x
X1	X2	X3-X4	X5-X6	X7-X8	X9	X10-X11	X12-X13	X14-X16

X1		X2		X3-X4		X5-X6		X7-X8	
Type		Component		Series		Wattage		Color/CCT	
2	Emitter	T	PLCC	03	3528	X2	0.2W	PY	PC Yellow

X9		X10-X11		X12-X13		X14-X16	
BIN		CRI (Ra)		Voltage		Serial Number	
0	-	00	-	03	3V	-	-

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Absolute Maximum Ratings

Absolute maximum ratings (T_a=25°C)

Parameter	Symbol	Value	Units
DC Forward Current	I_F	180	mA
Pulse Forward Current (tp≤100μs, Duty cycle=0.25)	I_{pulse}	240	mA
Reverse Curent	I_R	10	uA
Reverse Voltage	V_R	-	V
LED Junction Temperature	T_J	105	°C
Operating Temperature	-	-40 ~ +85	°C
Storage Temperature	-	-40 ~ +125	°C
Soldering Temperature	T_s	Reflow Soldering : 255~260°C/10~30sec Manual Soldering : 350°C/3sec	

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.

Characteristics

Parameter		Symbol	Value	Units
Viewing Angle	(Typ.)	$2\Theta_{1/2}$	120	Degree
Thermal resistance		-	10	°C/W
JEDEC Moisture Sensitivity		-	Level 3 **Floor Life** Conditions: ≤30°C / 60% RH **Soak Requirements(Standard)** Time (hours): 120+1/-0 Conditions: 60°C / 60% RH	-

Notes:
1. $2\theta_{1/2}$ is the off-axis angle where the luminous intensity is half of the axial luminous intensity.
2. CIE_x/y tolerance: ±0.005.
3. Color Rendering Index CRI tolerance: ±2

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Luminous Flux Characteristic

Luminous Flux Characteristics, I_F=60mA and T_J=25˚C

Color	Group	Min. Luminous Flux(lm)	Max. Luminous Flux(lm)	Forward Current (mA)	Order Code
PC Yellow	30	30	32	60	2T03X2PY00003001
	32	32	34		
	34	34	36		

Note:
1. The luminous flux performance is guaranteed within published operating conditions. Edison Opto maintains a tolerance of ±10% on flux measurements.

Voltage Bin Structure

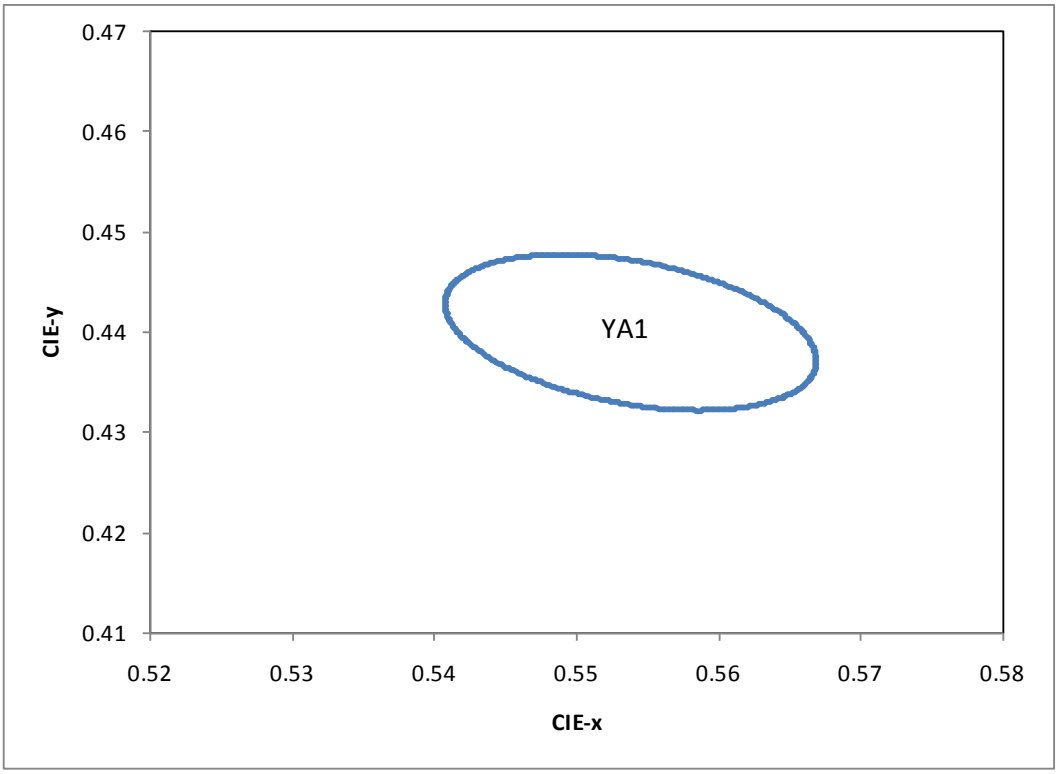
Group	Min. Voltage (V)	Max. Voltage (V)
VB0	2.6	2.7
VC0	2.7	2.8
VA1	2.8	2.9
VB1	2.9	3.0

Note:
Forward voltage measurement allowance is ± 0.06V.

Lighting Design Manufacturing Service

Color BIN code

PC Yellow



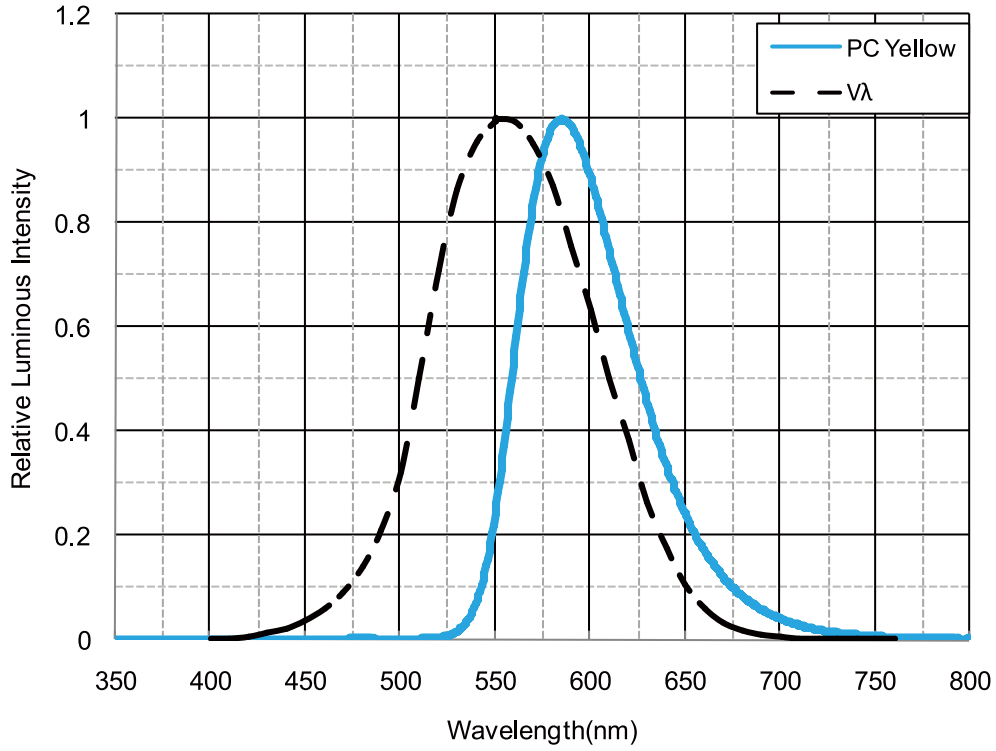
CCT	Steps	Cx	Cy	a	b	theta
YA1	5	0.55375	0.4400	0.0135	0.007	163

Notes:
1. PLCC 2835 PC Yellow Emitters are tested and binned by x,y coordinates.
2. Edison maintains a tester tolerence of ± 0.005 on x, y color coordinates.

Characteristic Curves

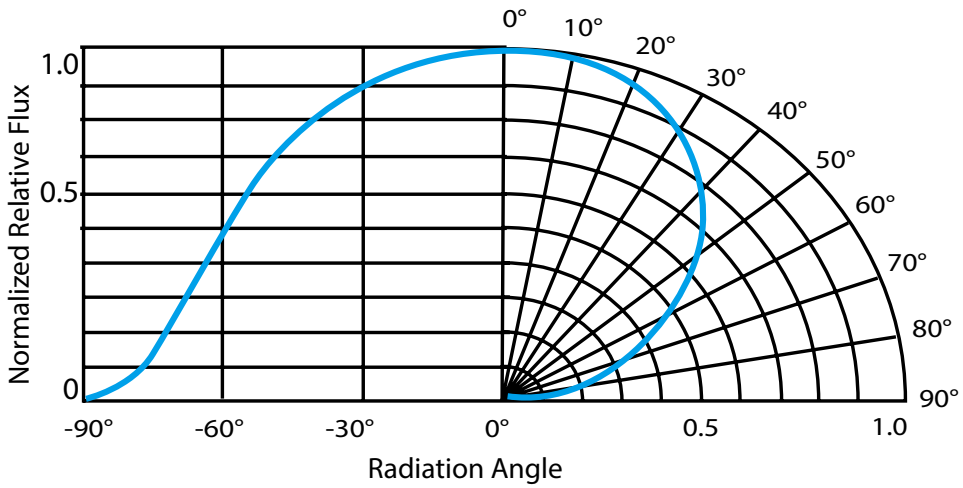
Color Spectrum

I_F =60 mA ; T_J = 25 °C



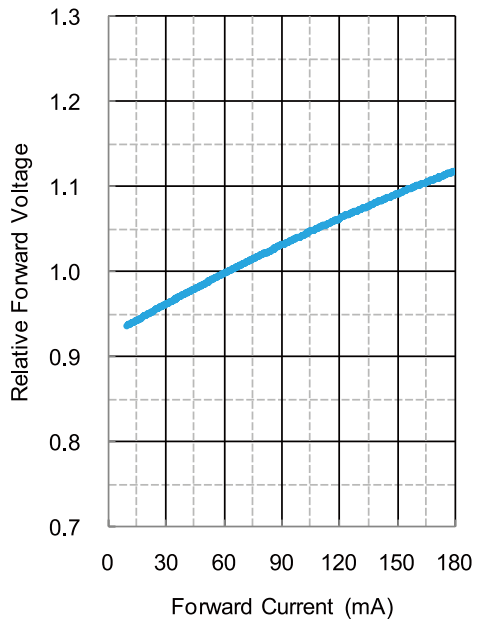
Beam Pattern

I_F =60 mA ; T_J = 25 °C



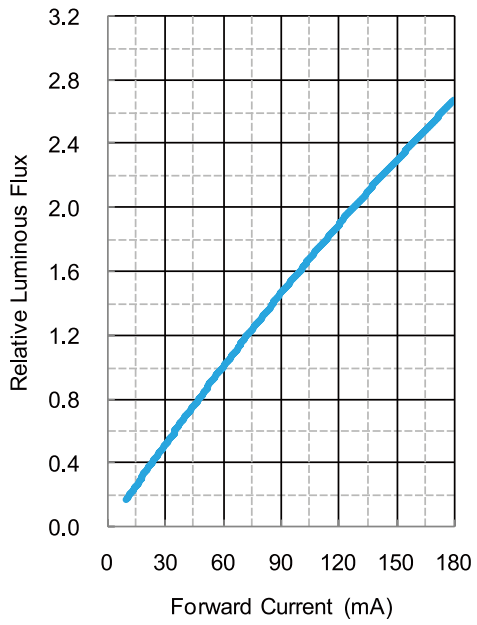
Relative Foward Voltage

$V_F/V_F(60\ mA) = f(V_F); T_J = 25\ °C$



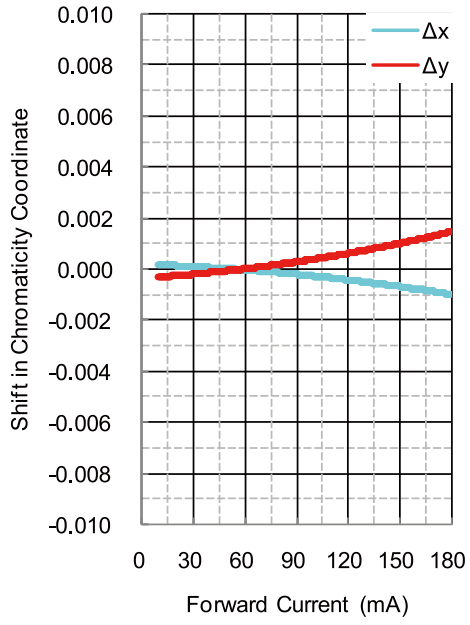
Relative Luminous Flux

$I_v/I_v(60\ mA) = f(I_v); T_J = 25\ °C$



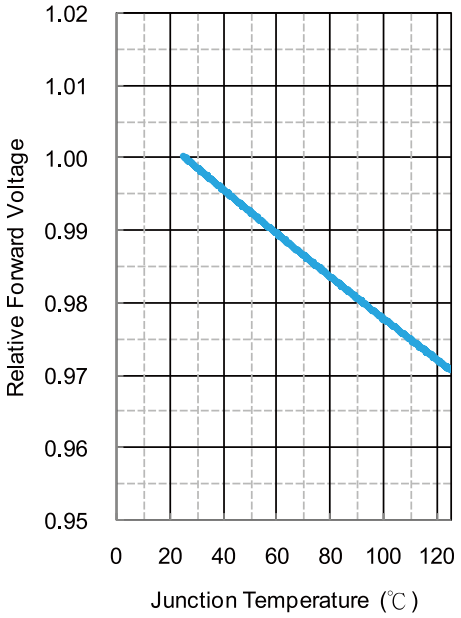
Chromaticity Coordinate Shift

$\Delta Cx, \Delta Cy = f(I_F); T_J = 25\ °C$



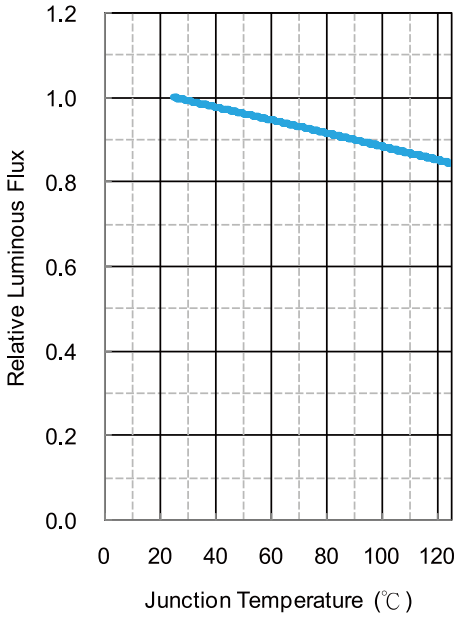
Relative Forward Voltage

$V_F/V_F(25\,°C) = f(V_F)$; $I_F = 60$ mA



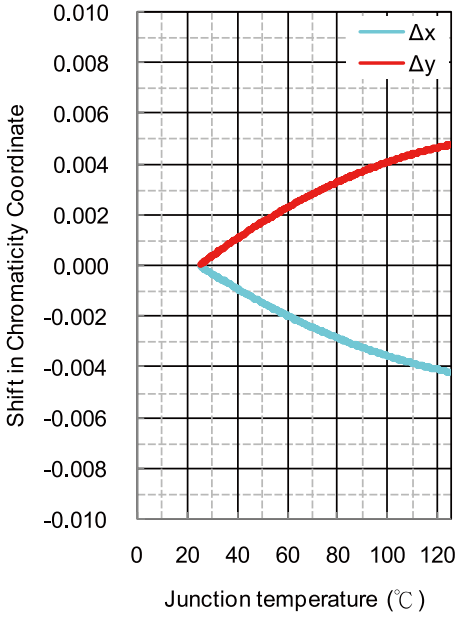
Relative Luminous Flux

$I_v/I_v(25\,°C) = f(I_v)$; $I_F = 60$ mA



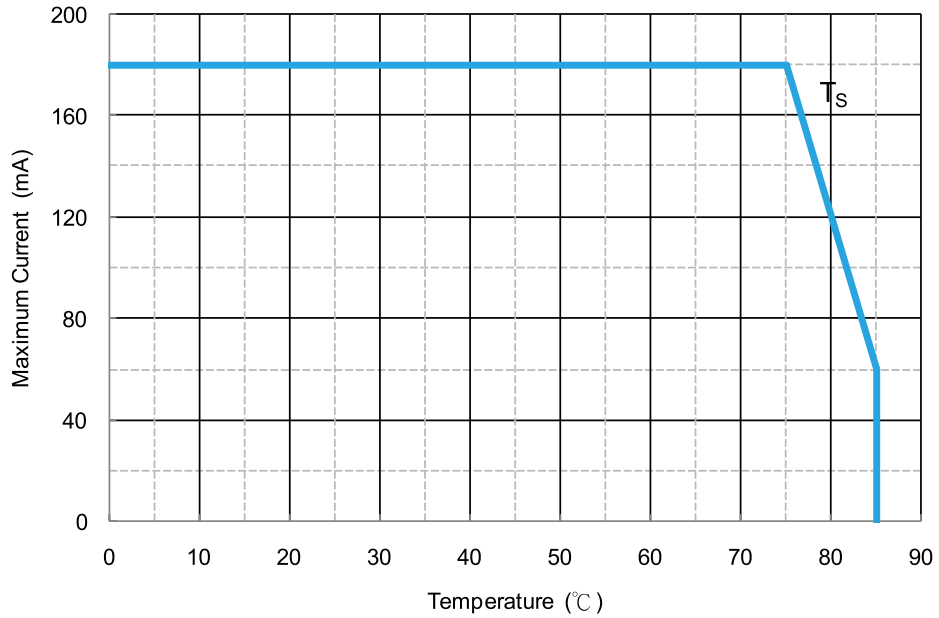
Chromaticity Coordinate Shift

$\Delta Cx, \Delta Cy = f(T_j)$; $I_F = 60$ mA



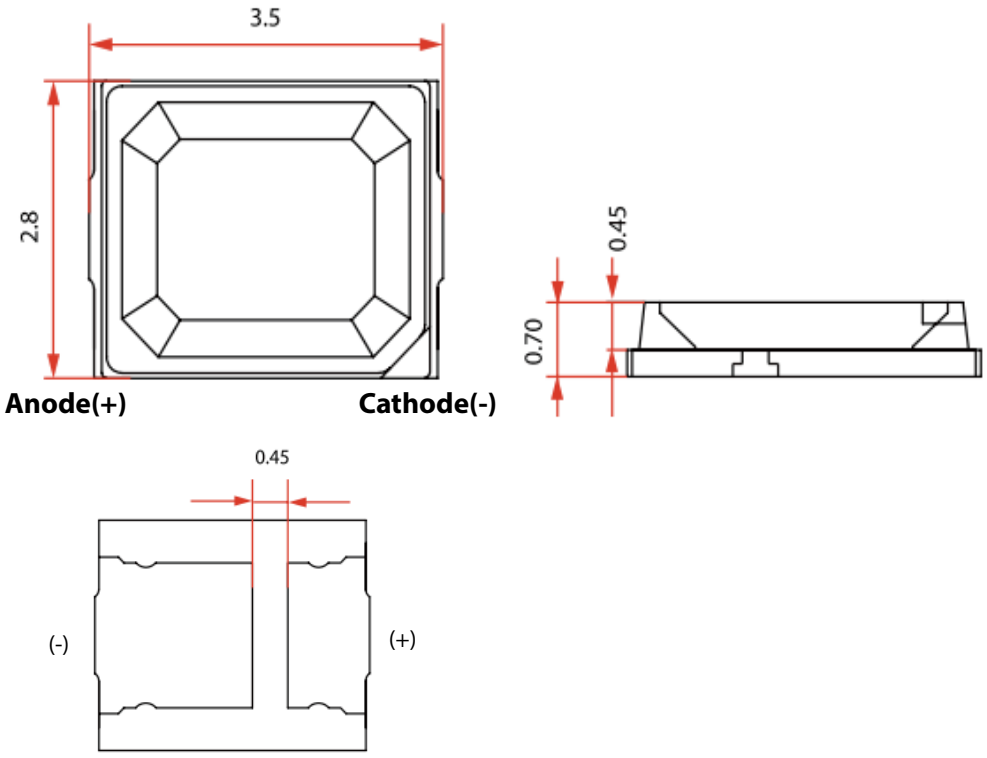
Max. Permissible Forward Current

$I_F = f(T)$

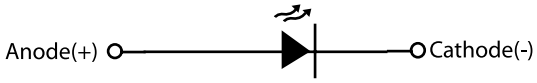


Mechanical Dimensions

Dimensional Drawing

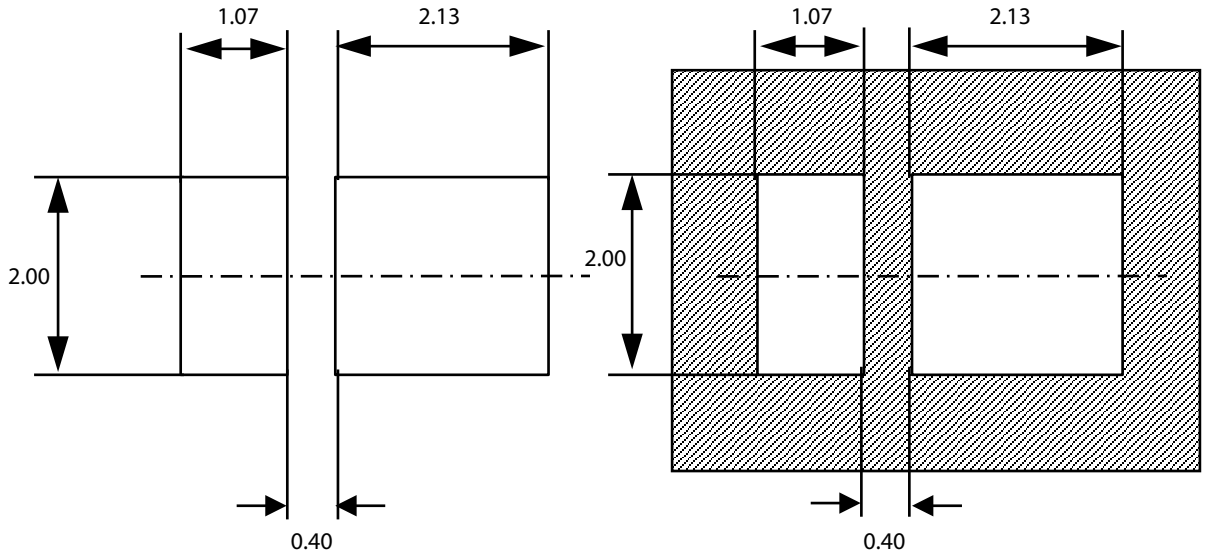


Circuit



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

Recommended Solder Pad



Paddesign for improved heat dissipation Solder resist Cu-area>16mm^2 per pad

Notes:
1. All dimensions are measured in mm.
2. Tolerance : ± 0.1 mm

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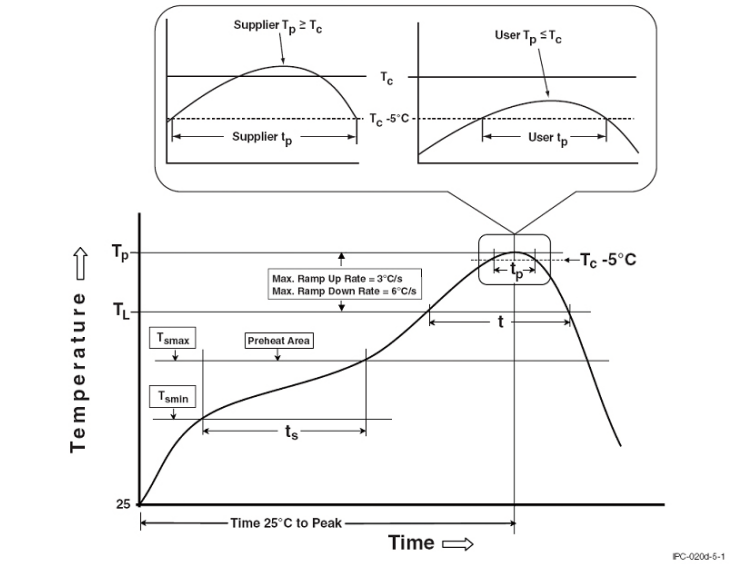
Reflow Profile

The following reflow profile is from IPC/JEDEC J-STD-020D which provided here for reference.



Reflow Profiles

Classification Reflow Profiles

Profile Feature	Pb-Free Assembly
Preheat & Soak Temperature min (Tsmin) Temperature max (Tsmax) Time (Tsmin to Tsmax) (ts)	150 °C 200 °C 60-120 seconds
Average ramp-up rate (Tsmax to Tp)	3 °C/second max.
Liquidous temperature (TL) Time at liquidous (tL)	217 °C 60-150 seconds
Peak package body temperature (Tp)	255 °C ~260 °C
Classification temperature (Tc)	260 °C
Time (tp) within 5 °C of the specified classification temperature (Tc)	30 seconds
Average ramp-down rate (Tp to Tsmax)	6°C/second max.
Time 25°C to peak temperature	8 minutes max.

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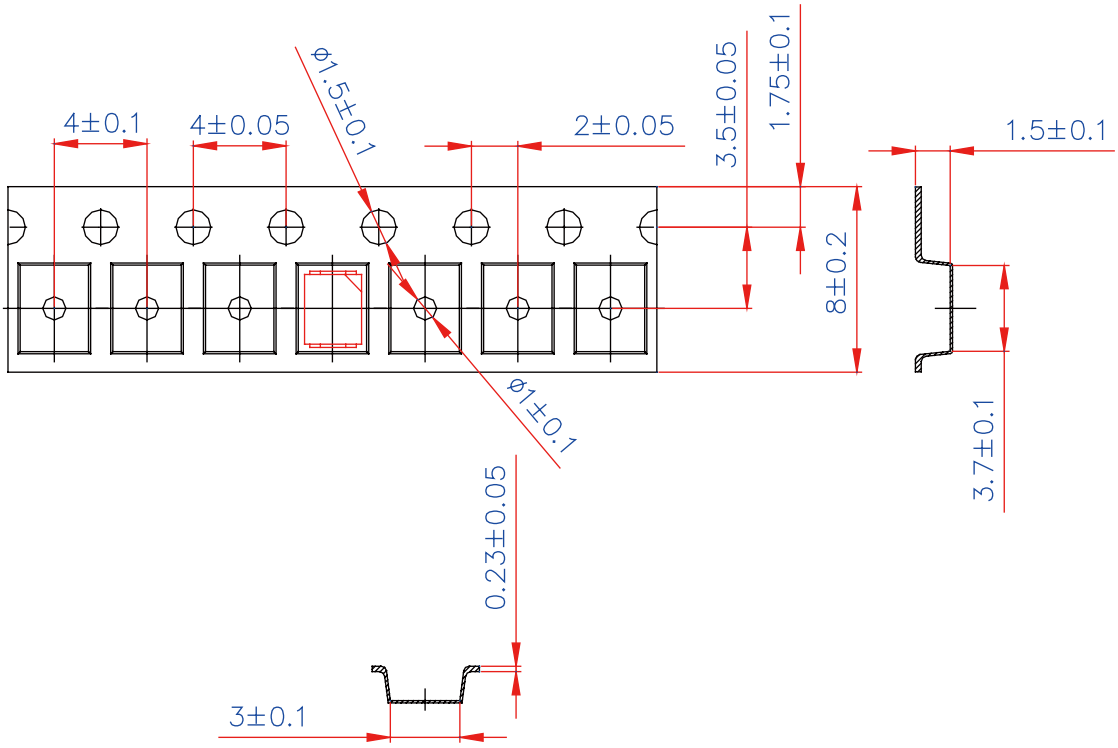
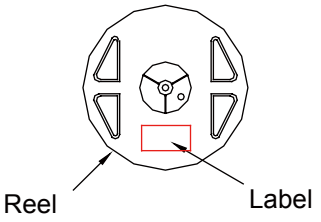
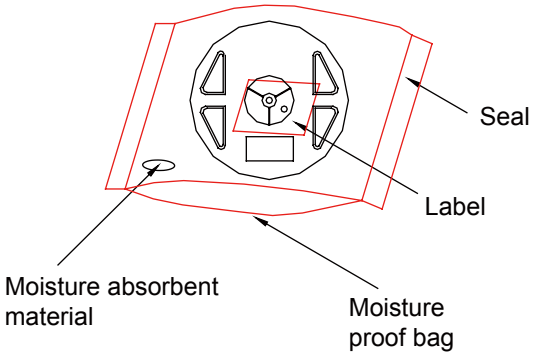
Product Packaging Information





Taping reel dimensions



Package & label

Item	Quantity	Total	Dimensions(mm)
Reel	4,000pcs	4,000pcs	R=178
Starting with 250pcs empty,and 150pcs empty at the last			

Lighting Design Manufacturing Service

Revision History

Versions	Description	Release Date
1	Establish a Datasheet	2024/03/20

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

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