

PU80S31

Product Specification

Updated on 2019/04/12

Preli

Approval Sheet

PU80S31 UVA Emitter
Product Specification

RoHS

Product	2835 PCT Emitter
Part Number	
Customer	
Issue Date	2018/9/15

Feature

- ✓ UVA LED Emitter
- ✓ Compact dimensions: 3.5 mm × 2.8 mm × 1.65 mm
- ✓ View angle: $\theta = 120^\circ$
- ✓ Environmental friendly ; RoHS compliance

Applications

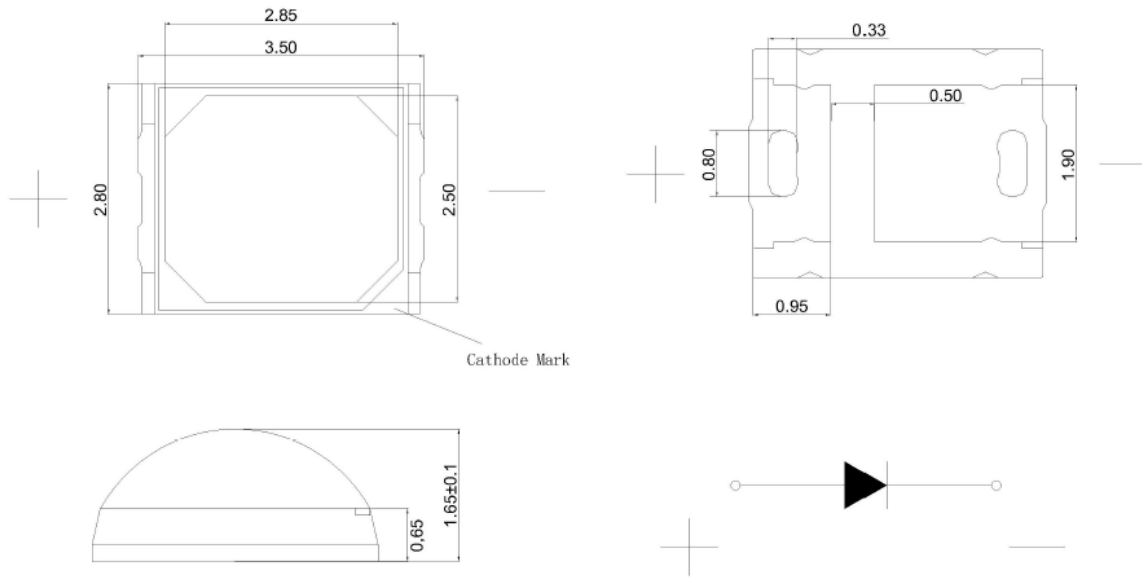
- ✓ UV curing
- ✓ Counterfeit banknote detection
- ✓ Photo catalytic purification
- ✓ Medical lights
- ✓ Indicators
- ✓ Clinical/ Telemedicine
- ✓

MAKER			CUSTOMER		
Prepared	Checked	Approved			
SP Lin	HW Huang	K.H. Shen			

Outline Dimension

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Outline Dimension



Unit: mm

Tolerance: ±0.15mm

Performance

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■ Optical Electrical Characteristics

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage ^{*(1)}	V _F	I _F =150mA	3.4	3.6	3.8	V
Wavelength ^{*(2)}	W _P	I _F =150mA	365	367	370	nm
View Angle	θ	I _F = 150mA	--	120	--	deg
Radiant Power ^{*(4)}	P _O	I _F = 150mA	180	--	240	mW

(1).The Forward Voltage tolerance is ±0.1V

(2).Peak Wavelength tolerance is ±5nm

(3).Thermal resistance is calculated from junction to solder

(4).The Radiant Power tolerance ±10%

■ Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
DC Forward Current	I _F	150	mA
Surge Forward Current ^{*(1)}	I _{FS}	200	mA
ESD	V _{ESD}	2000	V
Power Dissipation	P _d	570	mW
Soldering Temperature ^{*(2)}	T _S	260	°C
Junction Temperature	T _J	110	°C
Storage Temperature	T _{sig}	-40~+100	°C
Operation Temperature	T _{Op}	-30~+85	oC

(1) Frequency Duty<10%, t_p=100μ s.

(2) JEDEC STD-020 latest version compliant.

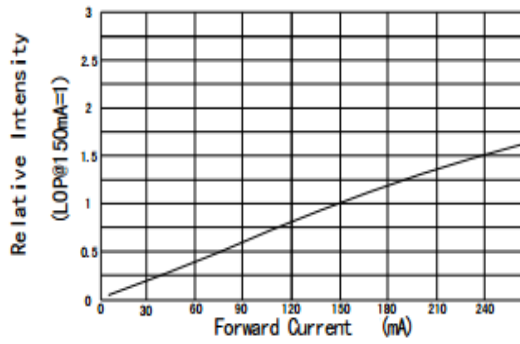
(3) Proper current rating must be observed to maintain junction temperature below T_J max.

Characteristics

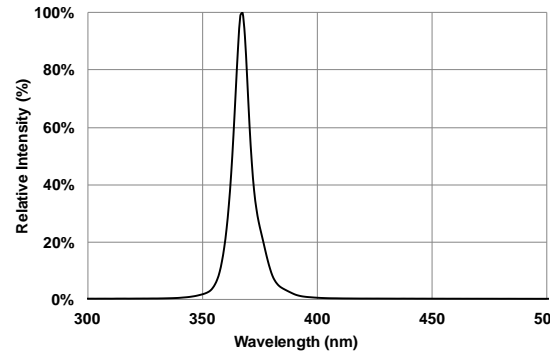
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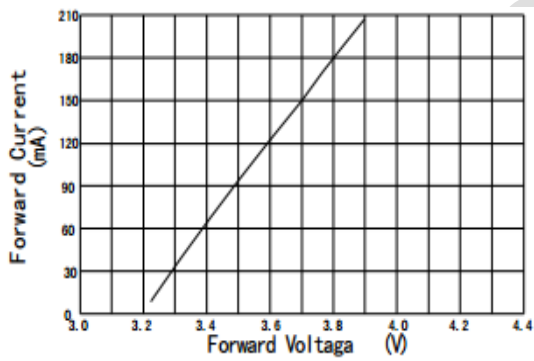
Relative Radiant Flux vs. Forward Current



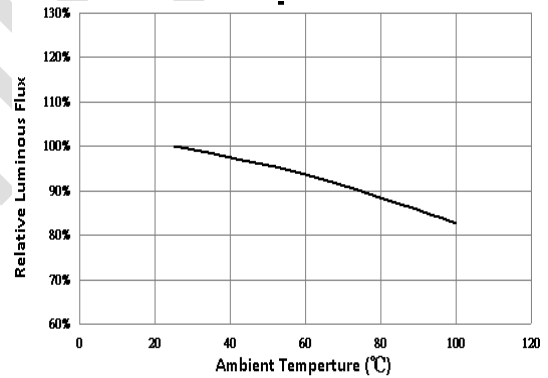
Relative Spectral Distribution vs. Wavelength at 25°C, I_F=150mA



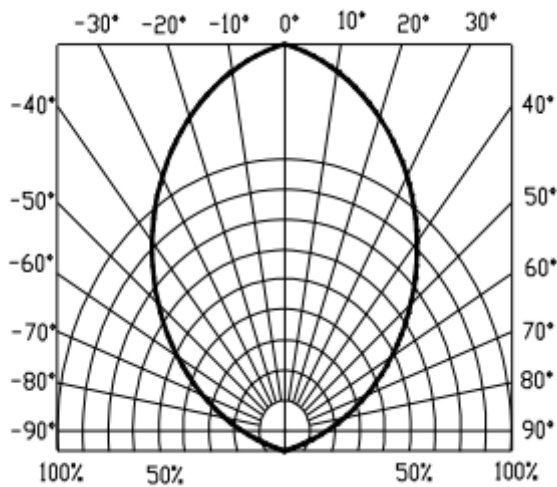
Forward Current vs. Forward Voltage at 25°C



Relative Radiant Flux vs. Ambient Temperature



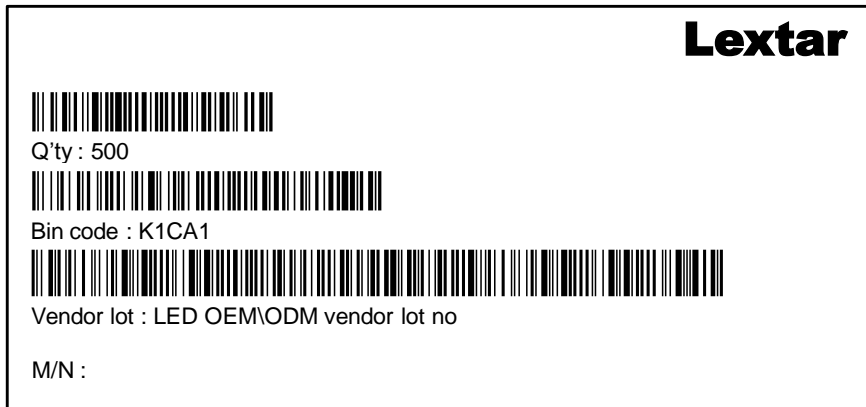
Directivity



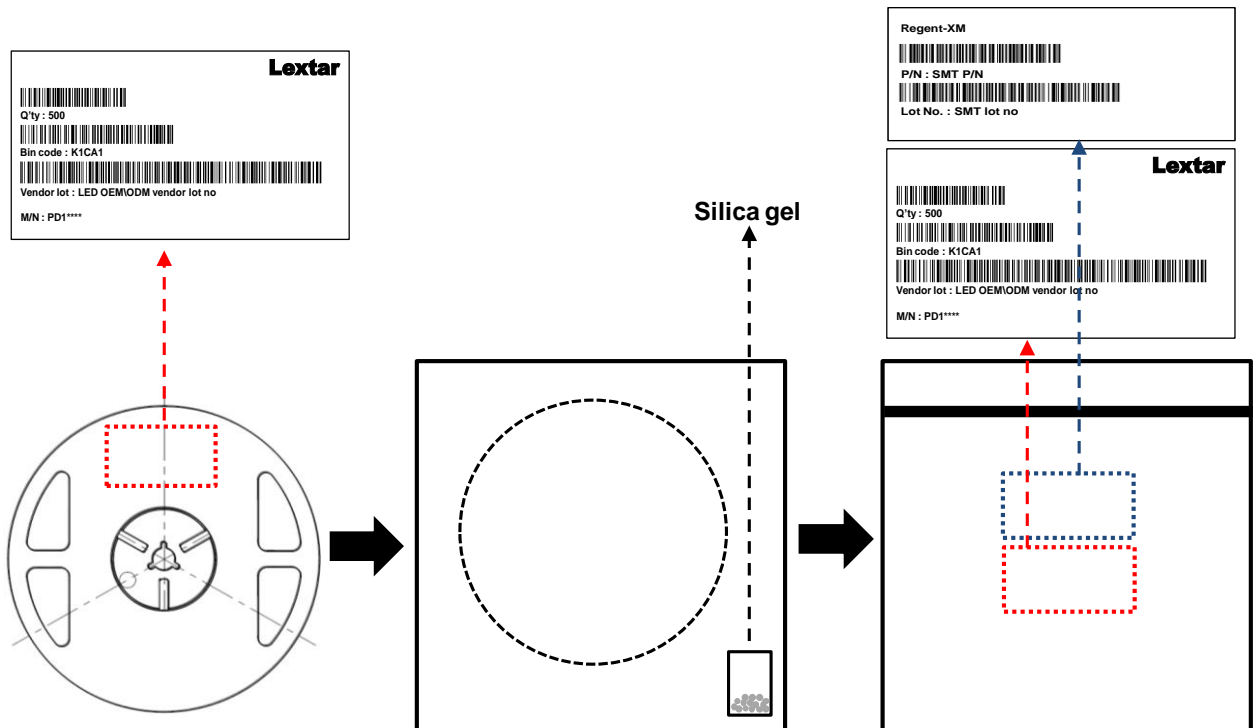
Packing

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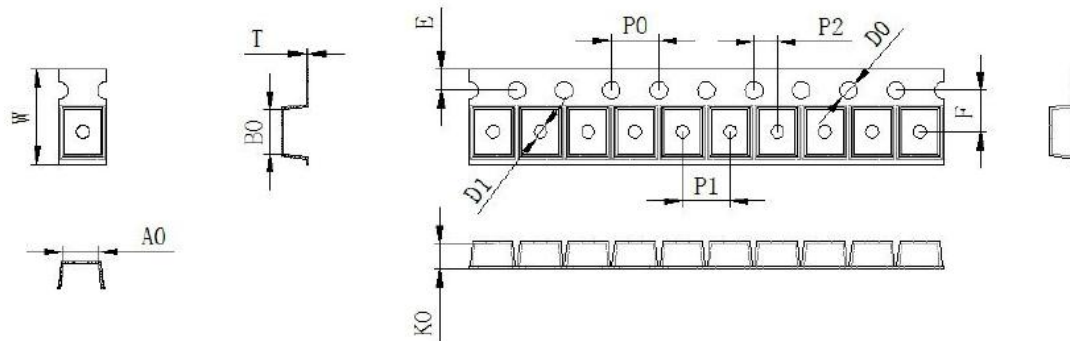
Label



Packing Process

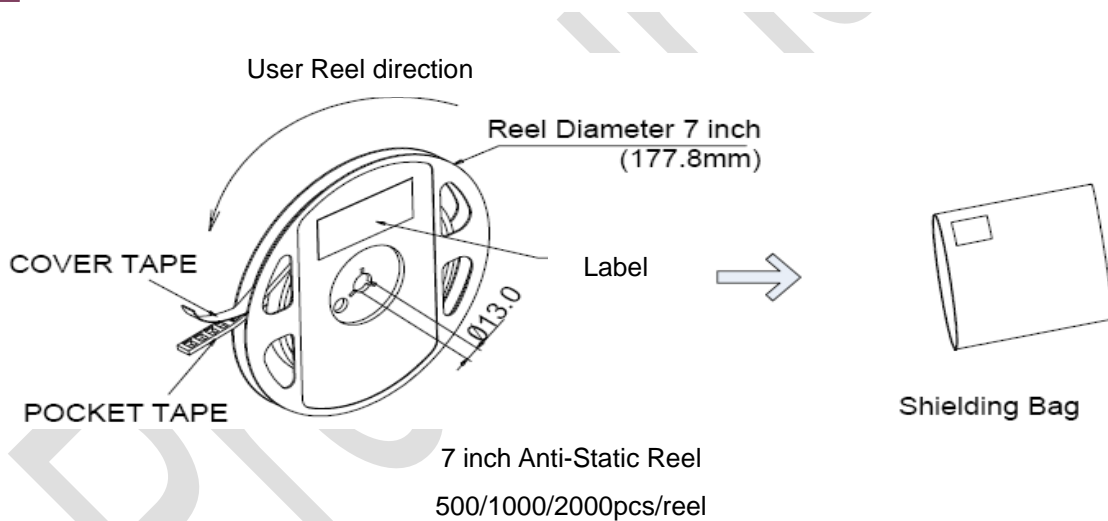


Packing Carrier



ITEM	W	A0	B0	KO	E	F	D0	D1	P0	P1	P2	T
DIM	8.00	3.05	3.75	2.15	1.75	3.50	1.50	1.10	4.00	4.00	2.00	0.19
TOLE	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.10	±0.03

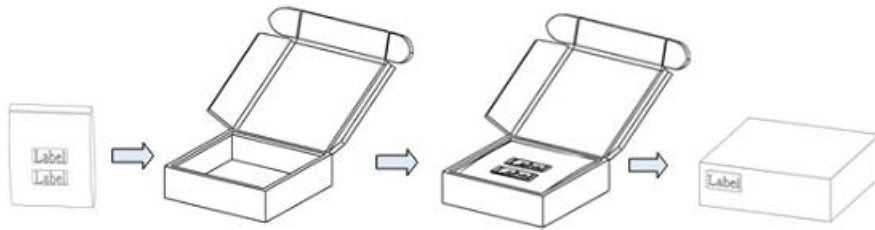
Reel Dimensions



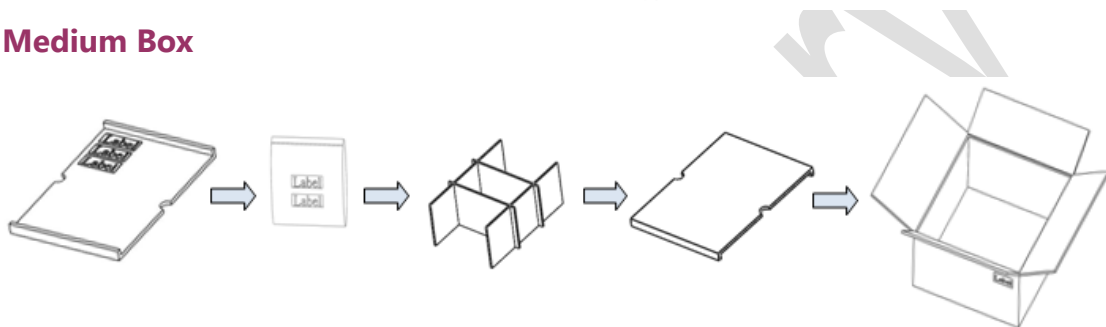
Packing

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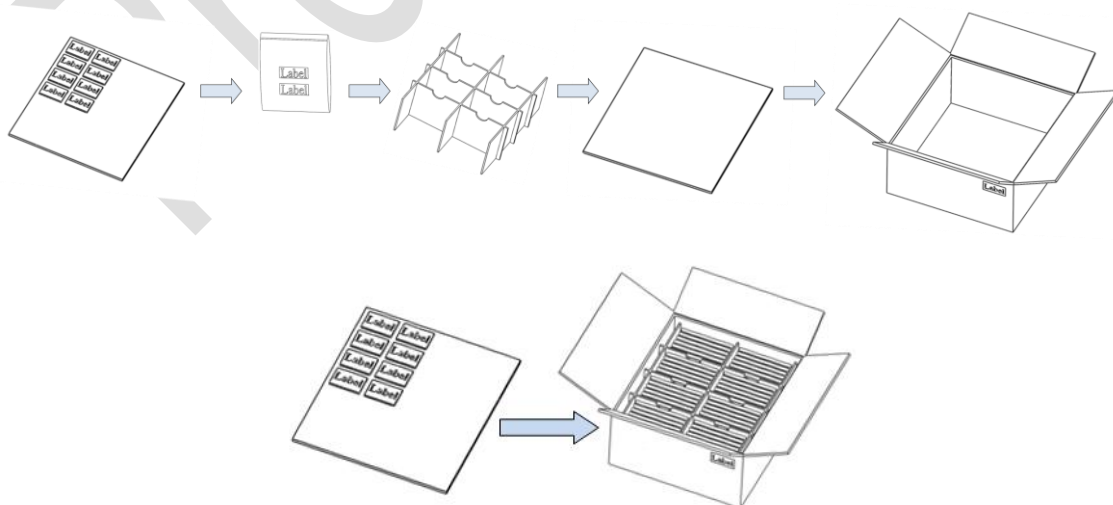
■ Small Box



■ Medium Box



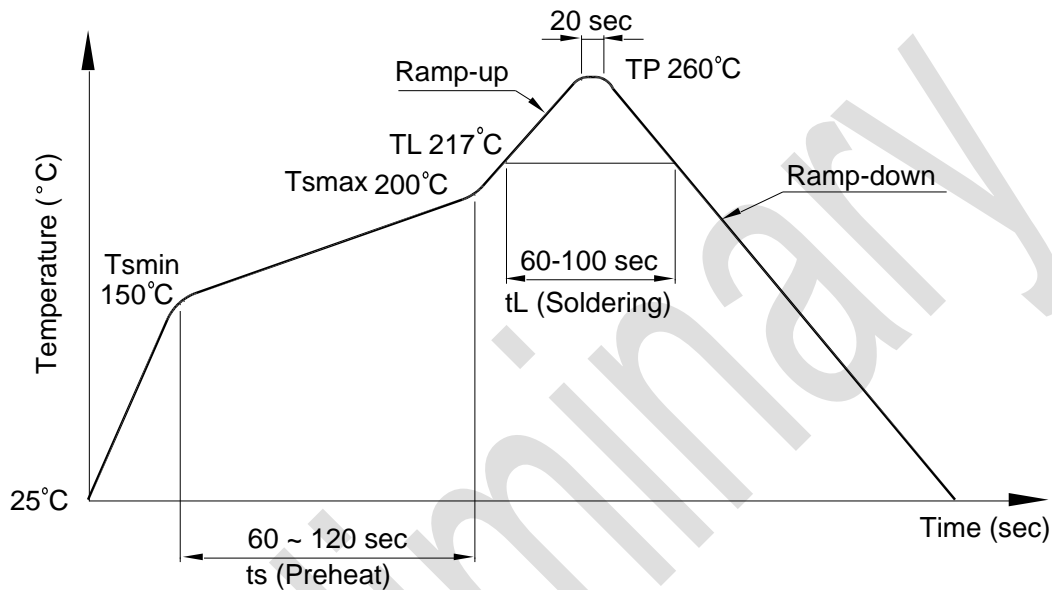
■ Large Box



Application Notes

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Recommended Reflow Soldering Profile (JEDEC-STD-020 latest version compliant)



Profile Items	Conditions
Preheat	
-Temperature Min.(T_{Smin})	150°C
-Temperature Max.(T_{Smax})	200°C
-Time(Min. to Max.)(t_s)	90±30 sec
Soldering Zone	
-Temperature(T_L)	217°C
-Time	60~100 sec
Peak Temperature(T_P)	260°C
Ramp-up rate	3°C / sec max.
Ramp-down rate	3~6°C / sec

Note:

1. One time soldering is recommended; do not exceed 3 times reflow process.
2. The recommended peak temperature is 245°C. The maximum soldering temperature should be controlled under 260°C.