No. 3, Gongye E. 3rd Road, Hsinchu Science Park, Hsinchu 30075, Taiwan
TEL：886-3-565-8800

Lextar

PU21S31

Product Specification

Updated on 2017/04/27

Approval Sheet

PU21S31 UVA Emitter
Product Specification

No. 3, Gongye E. 3rd Road, Hsinchu Science Park, Hsinchu 30075, Taiwan
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RoHS

Product	2016 Emitter
Part Number	95.U2016.ZVD100Z
Customer	
Issue Date	2017/4/27

Feature

- ✓ UVA LED Emitter
- ✓ Compact dimensions: 2.0 mm × 1.6 mm × 0.7 mm
- ✓ View angle: θ = 110°
- ✓ 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**	**Sherry Chiu**			

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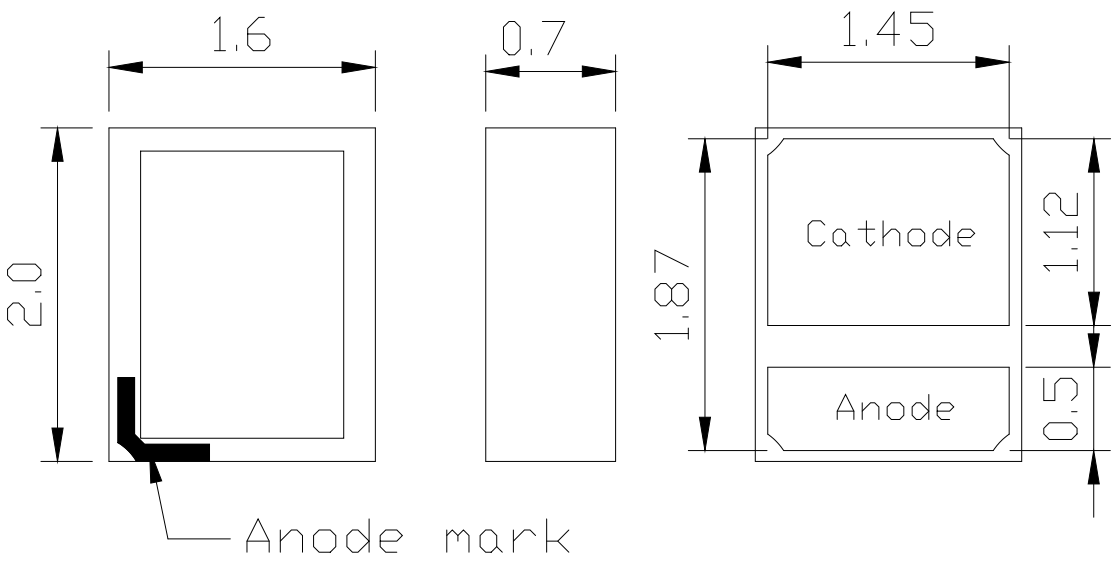
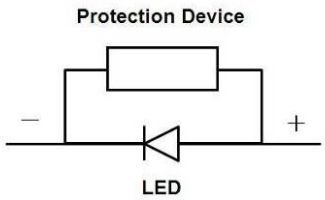
Outline Dimension





Unit: mm

Tolerance: ±0.15mm

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Optical Electrical Characteristics

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage*(1)	V_F	I_F =20mA	3.0	3.6	4.0	V
Wavelength*(2)	W_P	I_F =20mA	365	367	370	nm
View Angle	θ	I_F = 20mA	--	110	--	deg
Radiant Power*(4)	P_O	I_F = 20mA	13	16.5	25	mW

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

(2).Peak Wavelength tolerance is ±3nm

(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	40	mA
Surge Forward Current*(1)	I_{FS}	80	mA
ESD	V_{ESD}	8000	V
Power Dissipation	Pd	160	mW
Soldering Temperature*(2)	T_S	260	^oC
Junction Temperature	T_J	100	^oC
Storage Temperature	T_{Stg}	-40~+100	^oC
Operation Temperature	TOp	-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 Tj max.

Wavelength Rank (Ta=25℃)

W_P Rank	Min.	Max.	Unit	Condition
U0365	365	370	nm	I_F=20mA

Radiant Power Rank (Ta=25℃)

P_O Rank	Min.	Max.	Unit	Condition
01	13	15	mW	I_F=20mA
02	15	20	mW	I_F=20mA
03	20	25	mW	I_F=20mA

Forward Voltage Rank (Ta=25℃)

V_F Rank	Min.	Max.	Unit	Condition
A	3.0	3.2	V	I_F=20mA
B	3.2	3.4	V	I_F=20mA
C	3.4	3.6	V	I_F=20mA
D	3.6	3.8	V	I_F=20mA
E	3.8	4.0	V	I_F=20mA

Bin code definition (for example)

Wp Rank	P_O Rank	V_F Rank
U0365	02	C

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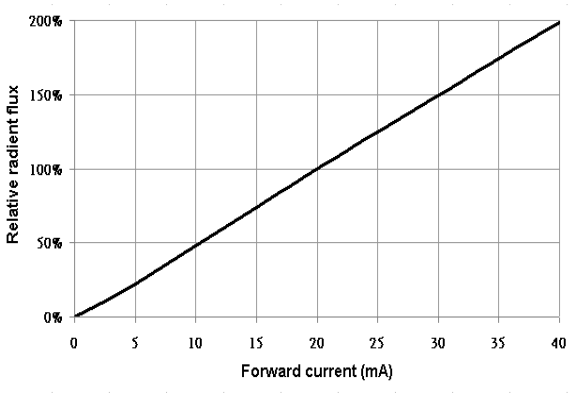
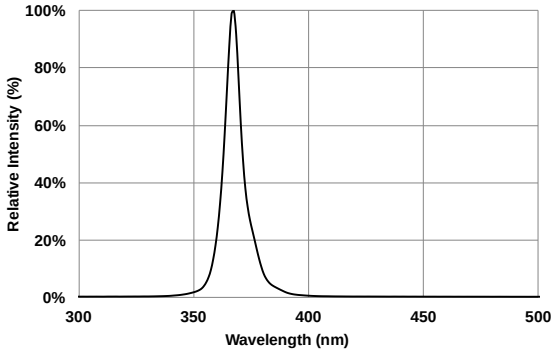
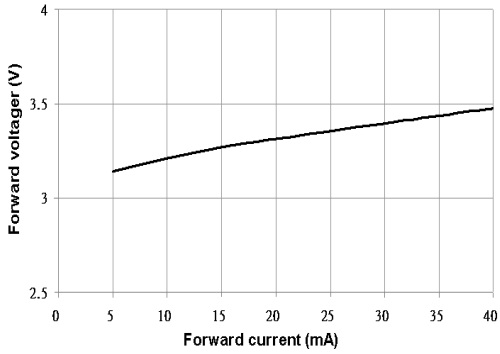
Relative Radiant Flux vs. Forward Current



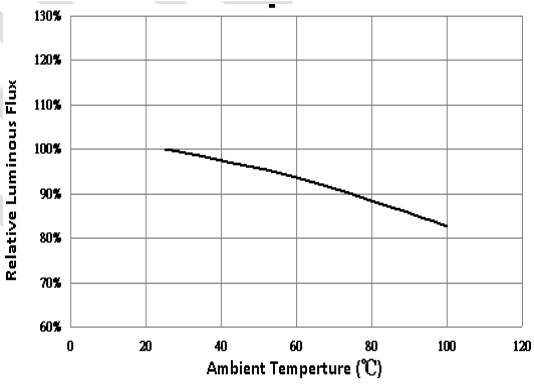
Relative Spectral Distribution vs. Wavelength at 25℃, I_F=20mA



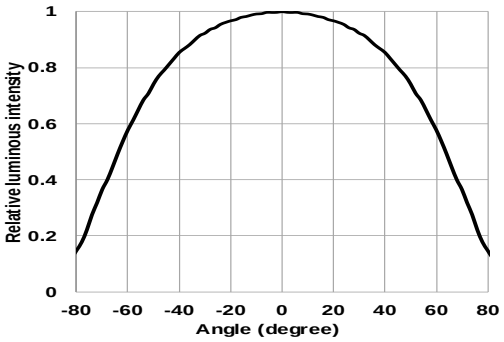
Forward Current vs. Forward Voltage at 25℃



Relative Radiant Flux vs. Ambient Temperature



Directivity



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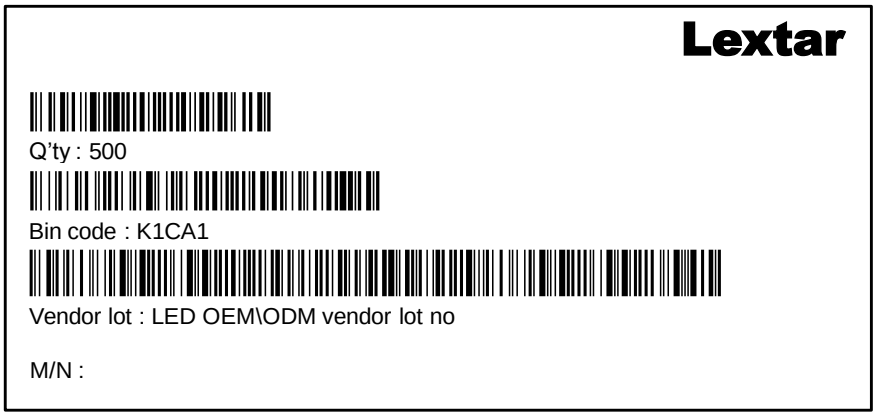
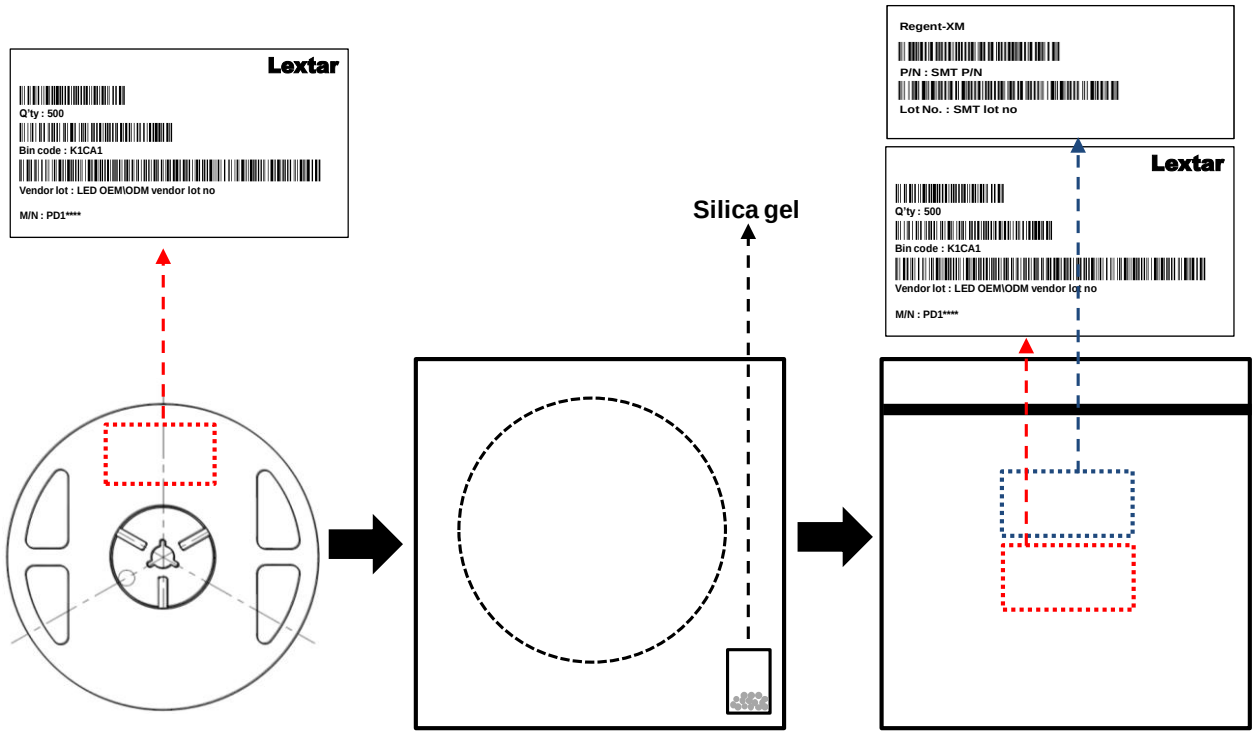
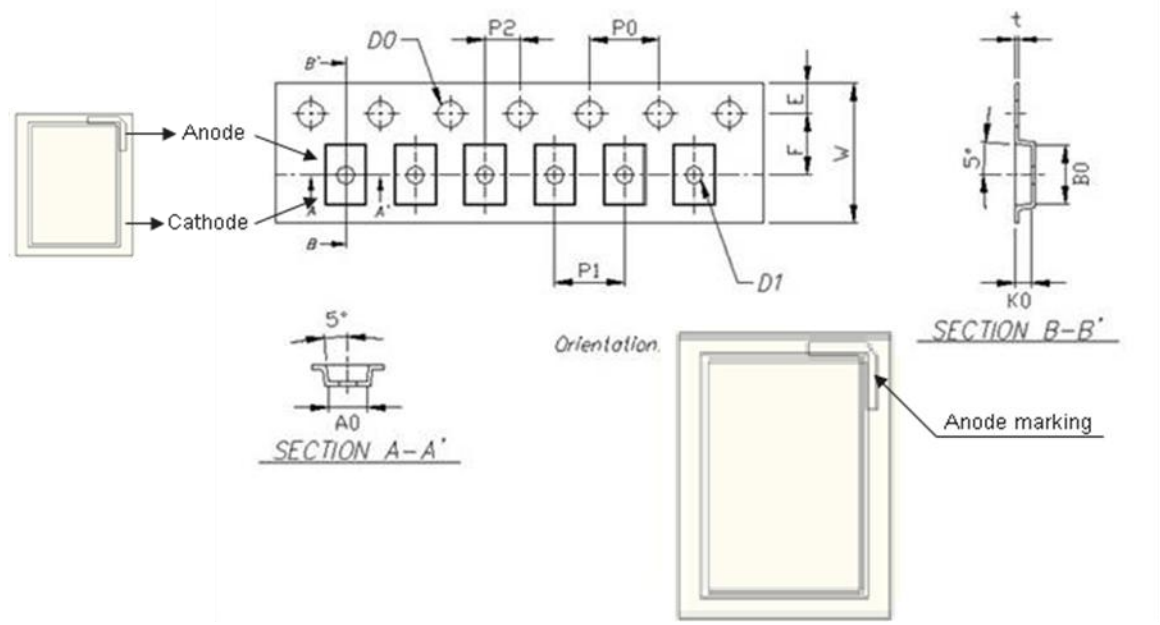
Label



Packing Process



Packing Carrier



Unit: mm

Item	Spec	Tol.(+/-)	Item	Spec	Tol.(+/-)
W	8.00	±0.25	P2	2.00	±0.10
E	1.75	±0.15	P0 × 10	40.00	±0.15
F	3.50	±0.10	t	0.23	±0.10
D0	1.50	±0.15	A0	1.90	±0.15
D1	1.50	±0.30	B0	2.30	±0.15
P0、P1	4.00	±0.15	K0	0.85	±0.15

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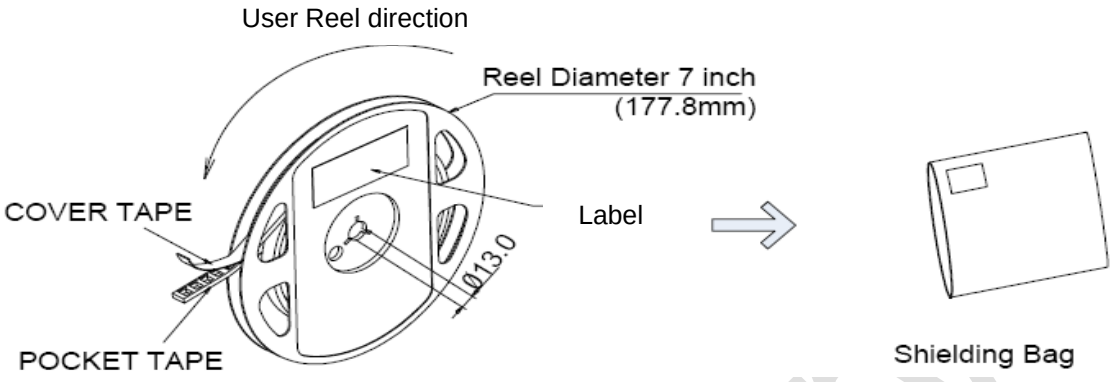
Reel Dimensions



7 inch Anti-Static Reel

500pcs/reel

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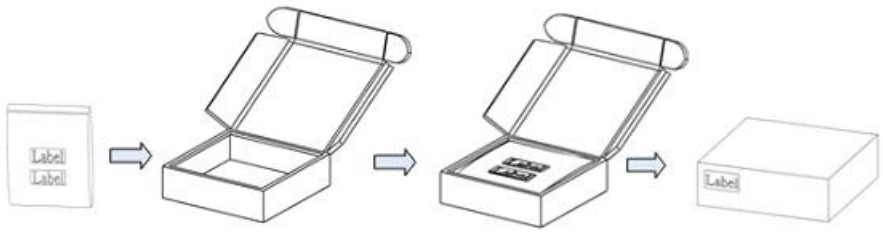
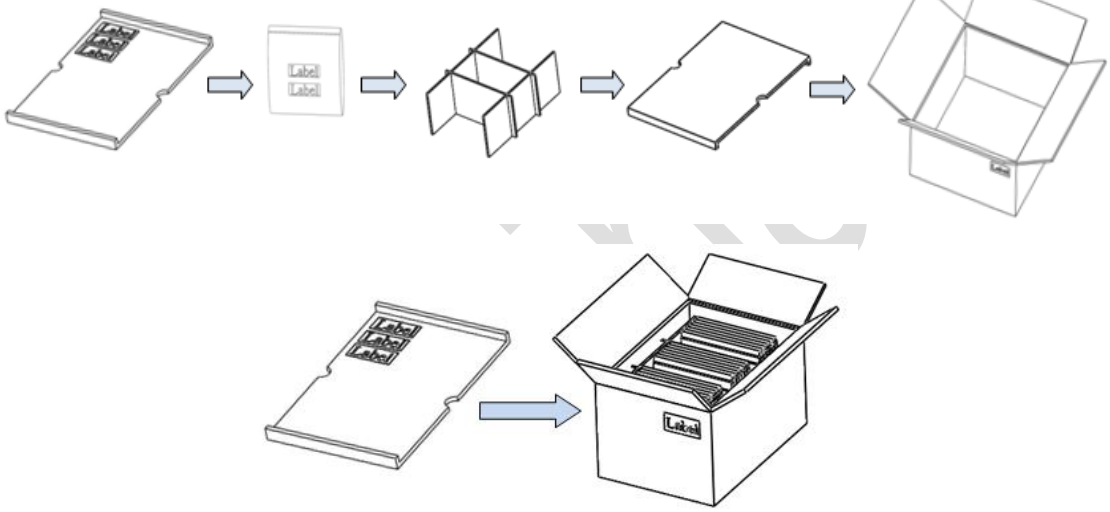
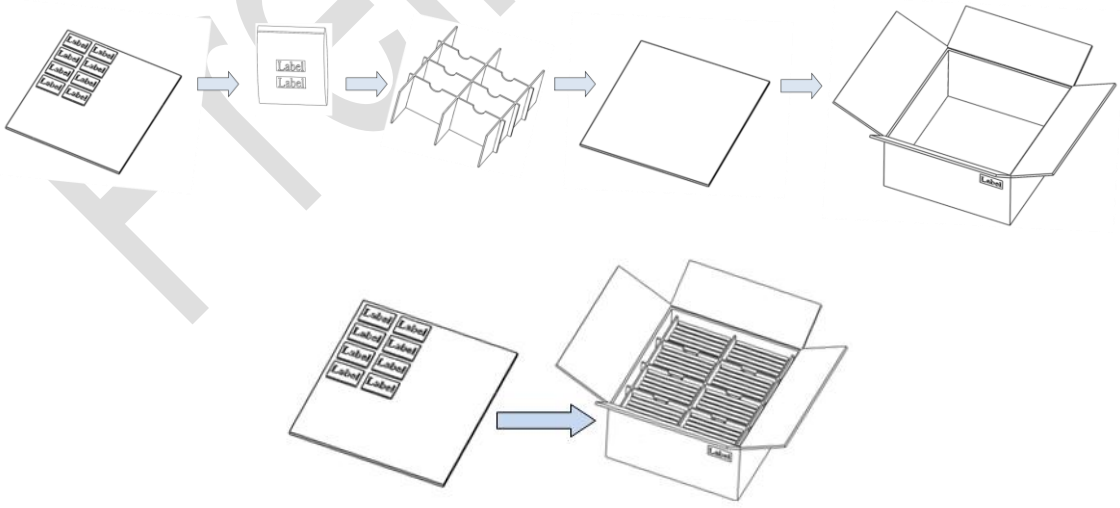
■ Small Box



■ Medium Box



■ Large Box



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■ Reliability

Test	Reference Standard	Test Conditions	Test Duration	Units Failed/Tested
Resistance to Soldering Heat (Reflowing soldering)	JEITA ED-4701 300 301	T_{Sld}=260℃, 10sec, 2 Reflows, Precondition: 30℃, 70%RH, 168hr		0/22
Temperature Cycle	JEITA ED-4701 100 105	-40℃(30min)~ 25℃(5min)~ 100℃(30min)~ 25℃(5min)	100 cycles	0/22
High Temperature Storage	JEITA ED-4701 200 201	Ta=100℃	1000 hours	0/22
Low Temperature Storage	JEITA ED-4701 200 202	Ta=-40℃	1000 hours	0/22
Room Temperature Operating Life		Ta=25℃, If=40mA	1000 hours	0/22
High Temperature Operating Life		Ta=85℃, If=40mA	1000 hours	0/22
Low Temperature Operating Life		Ta=-40℃, If=40mA	1000 hours	0/22

■ Failure Criteria

Items	Conditions	Failure Criteria
Forward Voltage (Vf)	I_F=20mA	>Initial value×1.1
Radiant Flux (Φ_E)	I_F=20mA	<Initial value×0.7

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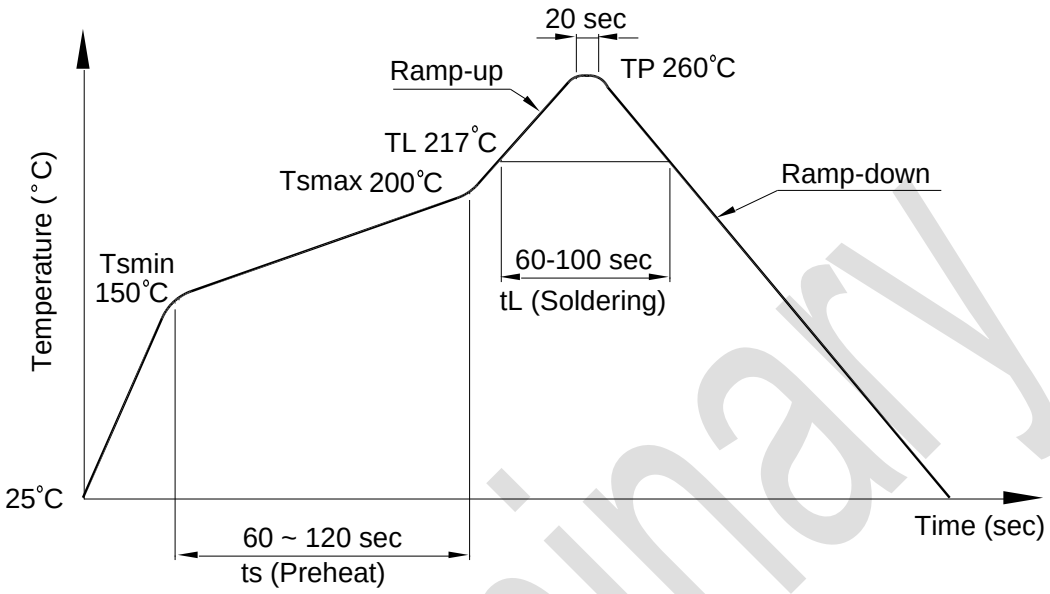
■ Recommended Reflow Soldering Profile (JEDEC-STD-020 latest version compliant)



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.

单击下面可查看定价，库存，交付和生命周期等信息

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