HVA-2314KPXA

2314 MINITOP 系列产品 / Productrs Series

具有高发光效率高一致性、高稳定性、高可靠性，主要用于汽车应用

High luminous efficiency, consistency, stability and reliability, it is mainly used in automobile applications.

特征

- 外观：白色PPA塑料，硅树脂封装
- 50% I_V 视角度：120°
- 颜色：琥珀色（612~624nm）
- 资格：可靠性测试符合AEC Q102
- 潮湿敏感等级-2

Features

- Package：silicon resin in white PPA cup
- Viewing angle at 50% I_V: 120°
- Color: Amber (612~624nm)
- Qualifications: Reliability test compliance with AEC Q102
- MSL-2

应用

- 信号灯
- 汽车内外部照明应用

Applications

- Signaling
- Interior and exterior lighting for automotive

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订购信息 / Ordering Information

型号 Type							发光强度 Luminous Intensity I_v @ I_f =20mA	订购编号 Ordering Code
HVA-2314KPXA	-	XXXX I 亮度档 Brightness	-	X I 颜色档 Color	-	XXXX I 电压档 Forward Voltage	280 - 900 mcd	XXXXXX

备注

■ 亮度档

单个最小包装只装有同一个亮度档次的产品，具体分档信息请见第4页

例如：HVA-2314KPXA-T1V1-XX-XXXX，单个卷盘中的产品只有T1、T2、U1、U2、V1中的某一档

■ 颜色档

单个最小包装只装有同一个颜色档次的产品，具体分档信息请见第4页

例如：HVA-2314KPXA-XXXX-24-XXXX，单个卷盘中的产品只有2、3、4中的某一档

■ 正向电压档

单个最小包装只装有同一个正向电压档次的产品，具体分档信息请见第4页

例如：HVA-2314KPXA-XXXX-XX-3A4B，单个卷盘中的产品只有3A、3B、4A、4B中的某一档

Note

■ Brightness Grouping

Only one brightness group will be packed in one reel. Please refer to page #4 for details.

E.g.: HVA-2314KPXA-T1V1-XX-XXXX, means only one bin of T1、T2、U1、U2 or V1 is in one reel.

■ Color Groups

Only one color group will be packed in one reel. Please refer to page #4 for details.

E.g.: HVA-2314KPXA-XXXX-24-XXXX, means only one bin of 2, 3 or 4 is in each reel.

■ Forward Voltage Groups

Only one forward voltage group will be packed in one reel. Please refer to page #4 for details.

E.g.: HVA-2314KPXA-XXXX-XX-3A4B, means only one bin of 3A, 3B, 4A or 4B is in one reel.

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极限参数 / Maximum Ratings

参数 Parameters	符号 Symbol	数值 Rating	单位 Unit
结温 / Junction Temperature	T_j	115	℃
正向电流 / Forward Current (T_s=25℃)	I_f	30	mA
峰值正向电流 Peak Forward Current (t≤10us; D=0.005; T_s=25℃)	I_{fp}	100	mA
反向电压 / Reverse Voltage (T_s=25℃)	V_r	不适用于反向操作 Not designed for reverse operation	V
抗静电能力 Electrostatic Discharge (HBM)	V_{ESD}	2000	V
操作温度 / Operating Temperature	T_{opr}	-40 ~ + 100	℃
储存温度 / Storage Temperature	T_{stg}	-40 ~ + 100	℃

特性 / Characteristics (T_s = 25 ℃; I_f = 20 mA)

参数 Parameters		符号 Symbol	数值 Rating	单位 Unit
峰值波长 / Wavelength at Peak Emission	typ.	λ_{peak}	624	nm
主波长 / Dominant Wavelength	min.	λ_{dom}	612	nm
	typ.	λ_{dom}	617	nm
	max.	λ_{dom}	624	nm
半波宽 / Spectral Bandwidth at 50% I_{rel} max	typ.	$\Delta\lambda$	16	nm
50 % I_V下的视角度 / Viewing Angle at 50 % I_V	typ.	2Φ	120	°
正向电压 / Forward Voltage	min.	V_f	1.90	V
	typ.	V_f	2.20	V
	max	V_f	2.50	V
反向电压 / Reverse Voltage （Vr）=5V	typ.	I_r	0.2	uA
	Max.	I_r	10	uA
实际热阻值（PN结-焊点）/ Real Thermal Resistance (Junction / Solder Point)	max.	$R_{th\ JS_{real}}$	330	℃/W

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亮度分档 / Brightness Grouping (T_s = 25 ℃; I_f = 20 mA)

档次 Grouping	发光强度 Luminous Intensity I_V（min.）	发光强度 Luminous Intensity I_V（max.）
T1	280 mcd	355mcd
T2	355 mcd	450 mcd
U1	450 mcd	560 mcd
U2	560 mcd	710 mcd
V1	710 mcd	900 mcd

正向电压分档 / Forward Voltage Grouping (T_s = 25 ℃; I_f = 20 mA)

档次 Grouping	正向电压 Forward Voltage V_f（min.）	正向电压 Forward Voltage V_f（max.）
3A	1.90 V	2.05 V
3B	2.05 V	2.20 V
4A	2.20 V	2.35 V
4B	2.35 V	2.50 V

主波长分档 / Dominant Wavelength Grouping (T_s = 25 ℃; I_f = 20 mA)

档次 Grouping	主波长 Dominant Wavelength λ_{dom}（min.）	主波长 Dominant Wavelength λ_{dom}（max.）
2	612 nm	616 nm
3	616 nm	620 nm
4	620 nm	624 nm

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标签信息 / Information on Label

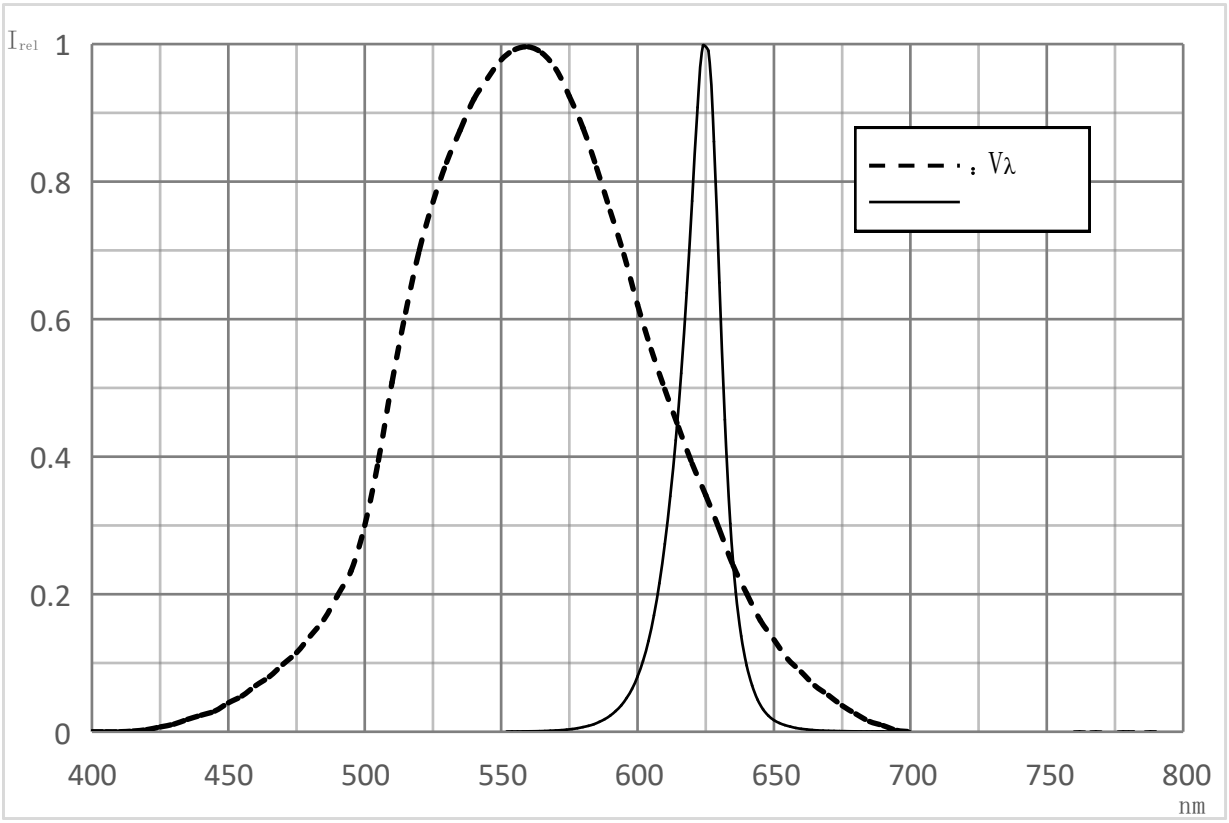
例 / E.g.：V2-1-3B

亮度档 / Brightness	颜色 / Color	正向电压 / Forward Voltage
V2	1	3B

相对发射光谱 - V(λ) = 标准人眼视觉曲线

Relative Spectral Emission - V(λ) = Standard Eye Response Curve

I_{rel} = f (λ); T_s = 25 ℃; I_f = 20 mA



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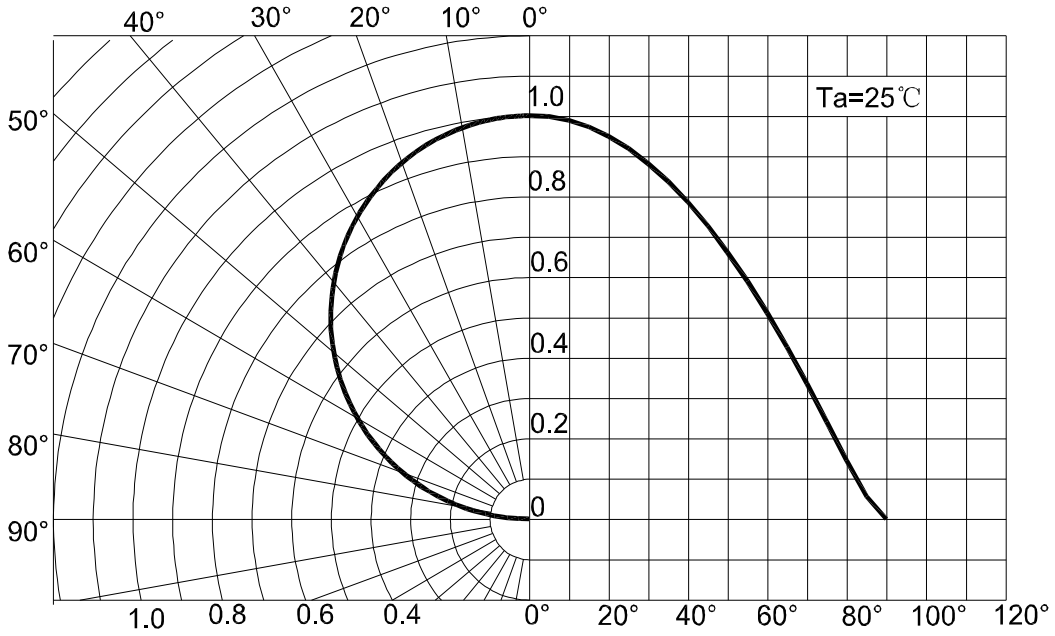
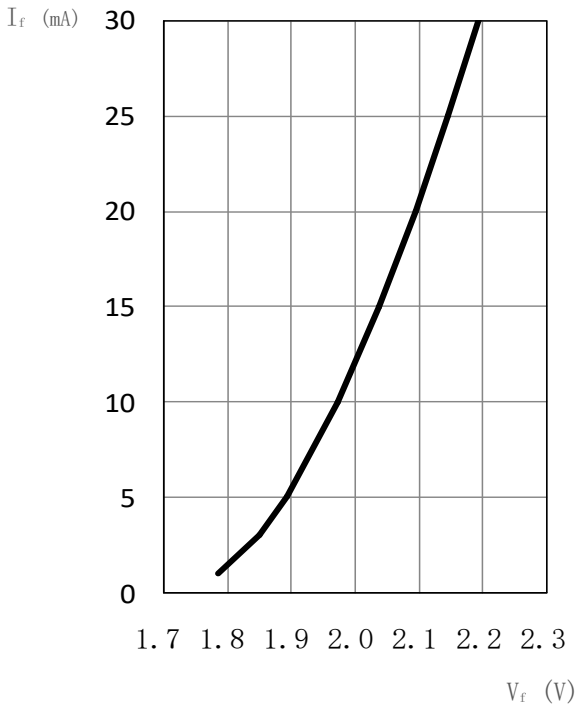
辐射特性 / Radiation Characteristics

$I_{rel} = f(\phi); T_s = 25\ ℃$



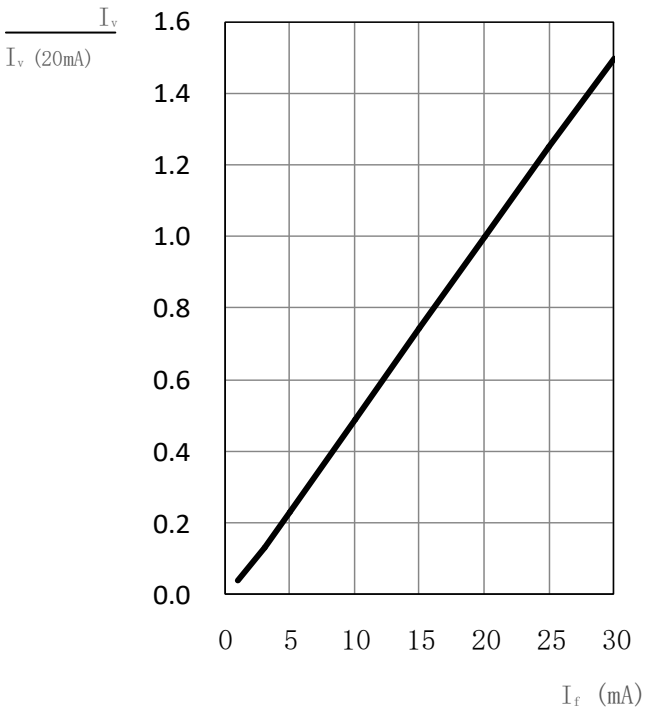
正向电流 / Forward Current

$I_f = f(V_f); T_a = 25\ ℃$



相对亮度特性曲线 / Relative Luminous Intensity

$I_v / I_v(20\ mA) = f(I_f); T_a = 25\ ℃$



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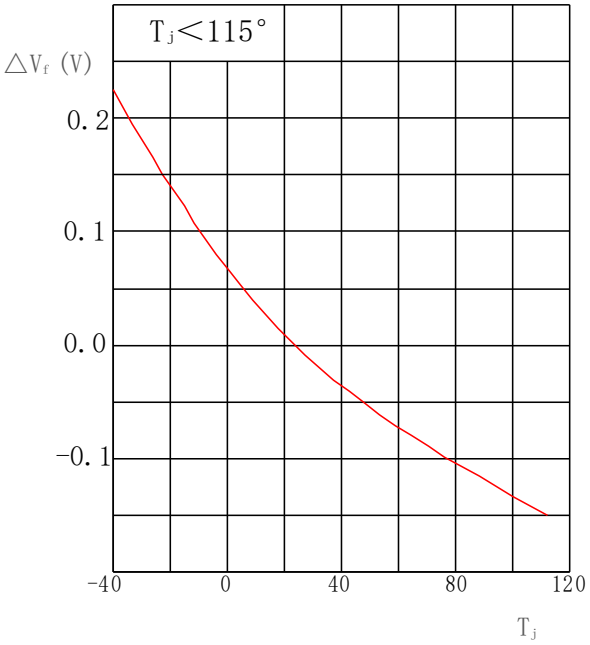
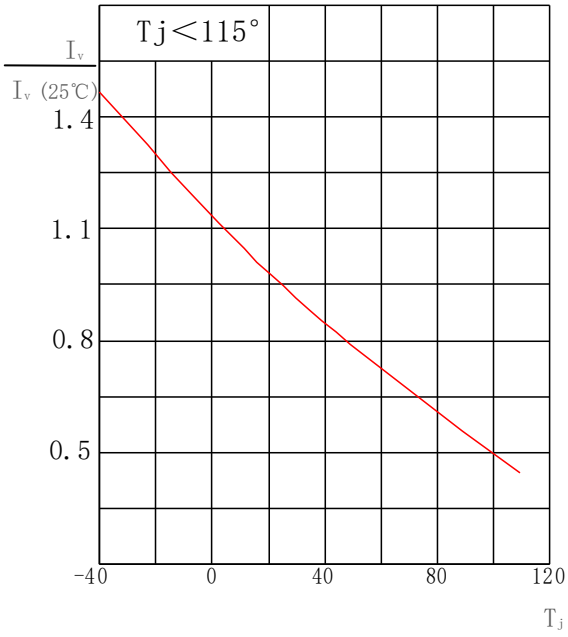
相对正向电压 / Relative Forward Voltage

$\Delta V_f = V_f - V_f\ (25\ ℃) = f\ (T_j);\ I_f = 20\ mA$



相对发光强度 / Relative Luminous Intensity

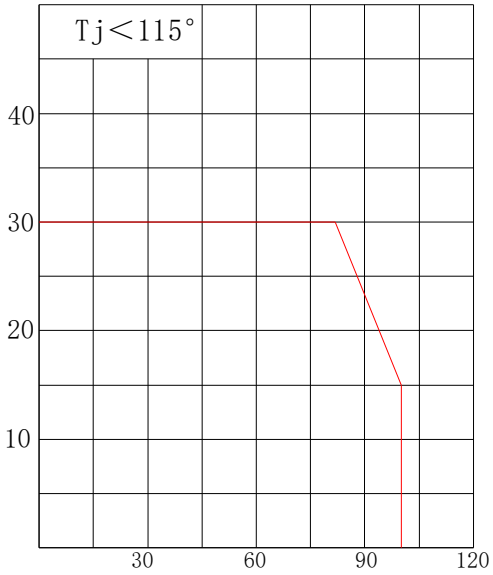
$I_v / I_v\ (25)℃ = f\ (T_j);\ I_f = 20\ mA$



环境温度与正向电流

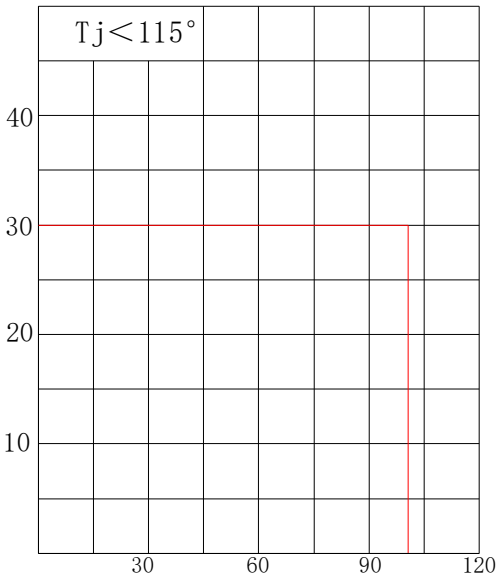
Ambient Temperature vs. Forward Current

$I_f = f\ (T_a)$



焊点温度与正向电流 / Solder Point Temperature vs. Forward Current

$I_f = f\ (T_s)$



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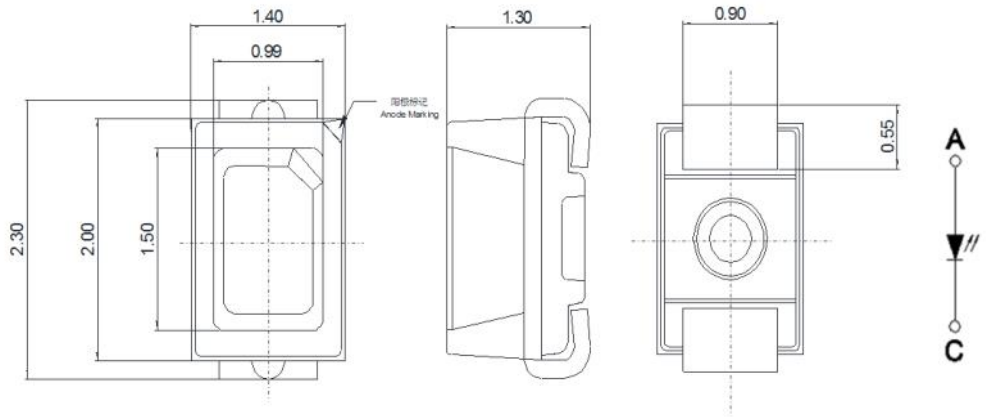
产品尺寸 / Package Outline



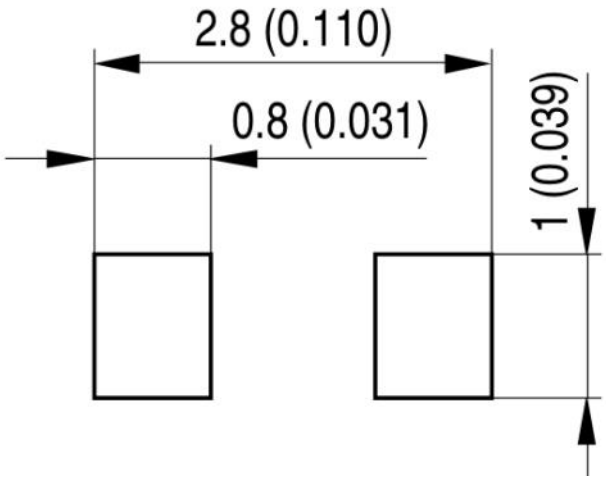
备注

- 统计质量： 10mg
- 标　　记： 正极

NOTE

- Approximate Weight: 10mg
- Mark: Anode

推荐焊盘 / Recommended Solder Pad



注释

- 不适合超声波清洗的封装

NOTE

- Package not suitable for ultrasonic cleaning

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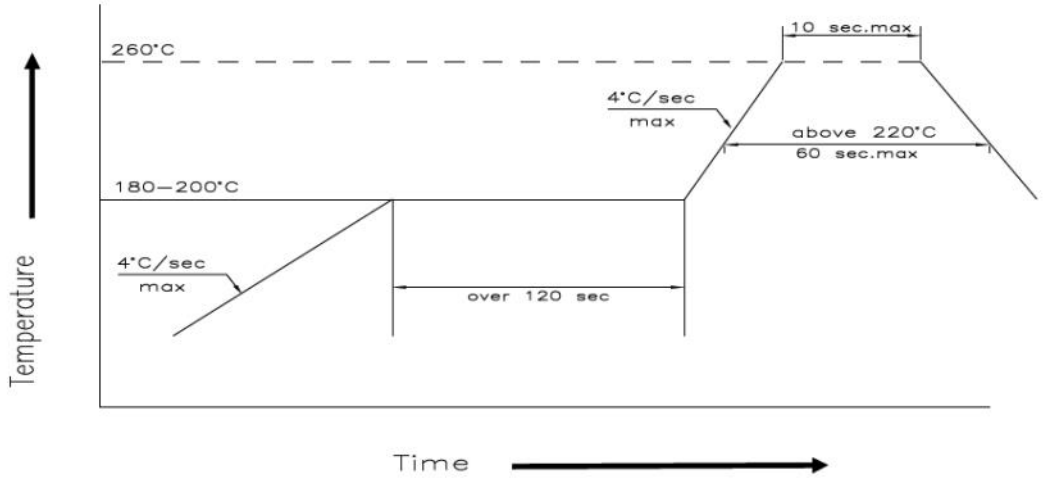
回流焊要求 / Reflow Soldering Profile



主要特性 Profile Feature	符号 Symbol	无铅焊接 Pb-Free Assembly			单位 Unit
		min.	rec.	max.	
预热升温速率 Ramp-up Rate to Preheat 25℃-150℃	-	-	2	3	℃/s
时间 / Time （T_{smin} to T_{smax}）	T_s	60	100	120	s
峰值升温速率 Ramp-up Rate to Peak （T_{smax} to T_p）	-	-	2	3	℃/s
熔点温度 Liquidus Temperature	T_l		217		℃
高于熔点温度的时间 Time above Liquidus Temperature	t_l	-	80	100	s
峰值温度 / Peak Temperature	T_p	-	255	260	℃
规定的峰值温度±5℃以内的时间 Time within 5℃ of the Specified Peak Temperature	t_p	10	20	30	s
降温速率 / Ramp-down Rate （T_p to 100℃）	-	-	3	6	℃/s
时间 / Time （25℃ to T_p）	-	-	-	480	s

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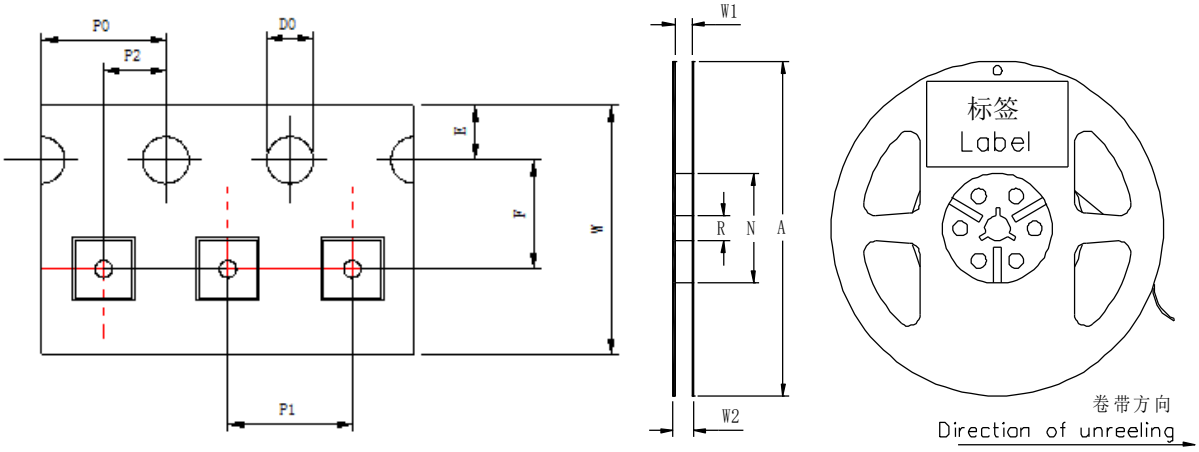
卷带与卷盘 / Tape and Reel



前端空带：最小400 mm；尾端空带： 最小160 mm；尺寸符合： IEC 60286-3, EIA 481-D标准

Leader: min. 400 mm; Trailer: min. 160 mm; Requirement acc. to IEC 60286-3, EIA 481-D

卷带尺寸 / Tape Dimensions（mm）

W	P0	P1	P2	D0	E	F
8±0.1	4±0.1	4±0.1	2±0.05	1.5±0.05	1.75±0.1	3.5±0.05

卷盘尺寸 / Reel Dimensions（mm）

A	W1	W2	N	R
177.8	9.3±0.3	11.2±0.3	58.5±0.2	13.5±0.2

数量（颗/卷）/ Quantity（pcs/reel）

3000

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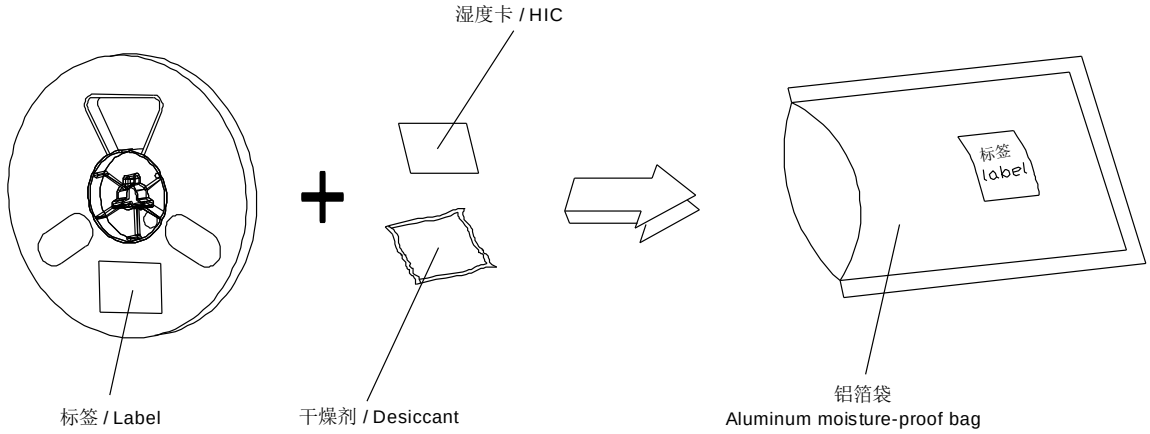
条形码标签 / Barcode-Product-Label (BPL)

包装材料及过程 / Dry Packing Process and Materials



备注

产品包装在一个干燥的铝箔袋里，同时内附有干燥剂和湿度卡。
对于干燥包装，您可以从网络或JEDEC标准里获取。

NOTE

Moisture-sensitive product is packed in a dry bag containing desiccant and HIC (humidity indicator card).
Regarding dry pack you may find further information in the internet or JEDEC.

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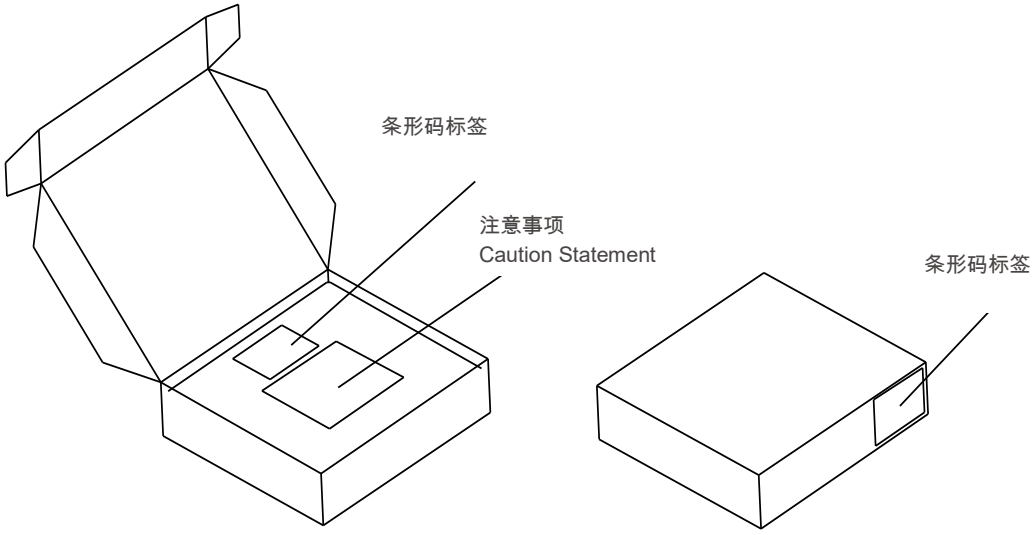
出货包装及材料 / Transportation Packing and Materials



出货箱尺寸 / Dimensions of Transportation Box (mm)

宽度 / Width	长度 / Length	高度 / Height
256±5	223±5	62±5
256±5	223±5	124±5

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注释

典　型　值:　每个产品的实际值可能与这些统计出的典型值不同。
公　　差:　除非图纸中有说明，公差默认为 ±0.1 mm。
正向电压：正向电压是在8ms脉冲电流并且内部再现性为±0.05V和一个±0.1V的外在不确定性（按照GUM K=3因子）来进行测试的。
波　　长：波长是在25ms脉冲电流并且内部再现性为±0.5nm和一个±1nm的外在不确定性（按照GUM K=3因子）来进行测试的。
亮　　度：亮度是在25ms脉冲电流并且内部再现性为±8%和一个±11%的外在不确定性（按照GUM K=3因子）来进行测试的。

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Glossary

Typical Values: Actual values of each product may differ from these statistical values .
Tolerance of Measure: Unless otherwise noted in drawing, tolerances are specified with +/-0.1mm.
Forward Voltage: The forward voltage is measured during a current pulse of typically 8 ms, with an internal reproducibility of ± 0.05 V and an expanded uncertainty of ± 0.1 V (acc. to GUM with a coverage factor of k = 3).
Wavelength: The wavelength is measured at a current pulse of typically 25 ms, with an internal reproducibility of ± 0.5 nm and an expanded uncertainty of ± 1 nm (acc. to GUM with a coverage factor of k = 3).
Brightness: Brightness values are measured during a current pulse of typically 25 ms, with an internal reproducibility of ± 8% and an expanded uncertainty of ± 11% (acc. to GUM with a coverage factor of k = 3).

Special Statement: The final interpretation of this specification shall be vested in Hongli-tronic, in the case of ambiguity, the Chinese version shall prevail.

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