HVCY-3535MGS

3535 系列产品 / Products 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EMC塑料，荧光硅胶封装
- 50% I_V视角度：120°
- 颜色：Cx=0.57,Cy=0.42（CIE1931）
- 资格：可靠性测试符合AEC Q102和 IEC 60810标准
- 潮湿敏感等级-2

Features

- Package: Colored diffused silicone in white EMC cup
- Viewing angle at 50% I_V: 120°
- Color: Cx=0.57,Cy=0.42（acc. to CIE1931）
- Qualifications: Reliability test compliance with AEC Q102 and IEC 60810
- 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	光通量 Luminous Flux Φ_v @ I_f=350mA	订单编号 Ordering Code
HVCY-3535MGS- XXXX - XX - XX 亮度档 Brightness / 色度坐标 Chromaticity Coordinate / 电压档 Forward Voltage	71 -112 lm	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：HVCY-3535MGS-5K8K-XX-XX，单个卷盘中的产品只有5K、6K、7K、8K中的某一档

■ 色度坐标档

具体信息请见第4页

■ 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：HVCY-3535MGS-XXXX-XX-8F8H，单个卷盘中的产品只有8F、8G、8H中的某一档

Note

■ Brightness Grouping

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

E.g.: HVCY-3535MGS-5K8K-XX-XX, means only one bin of 5K，6K，7K or 8K is in each reel.

■ Chromaticity Coordinate Grouping

Please refer to page #4 for details.

■ Forward Voltage Groups

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

E.g.: HVCY-3535MGS-XXXX-XX-8F8H, means only one bin of 8F、8G or 8H is in each 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	150	℃
正向电流 / Forward Current (T_s=25℃)	I_f	500	mA
峰值正向电流 Peak Forward Current (t≤10us；D=0.005；T_s=25℃)	I_{fp}	1000	mA
反向电压 / Reverse Voltage (T_s=25℃)	V_r	不可施加反向电压 / 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 ~ +125	℃
储存温度 / Storage Temperature	T_{stg}	−40 ~ +125	℃

特性 / Characteristics (T_s = 25 ℃; I_f = 350 mA)

参数 Parameters		符号 Symbol	数值 Rating	单位 Unit
色坐标 / Chromaticity coordinates acc. to CIE 1931	typ.	Cx Cy	0.57 0.42	− −
50 % I_V下的视角度 / Viewing Angle at 50 % I_V	typ.	2Φ	120	°
正向电压 / Forward Voltage	min. typ. max	V_f V_f V_f	2.75 3.25 3.75	V V V
反向电流 / Reverse Current （V_R=12V)	typ. max.	I_r I_r	不可施加反向电压 / not designed for reverse operation	uA uA
实际热阻值（PN结−焊点）/ Real Thermal Resistance (Junction / Solder Point)	max.	$R_{th\ JS_{real}}$	7.2	K/W

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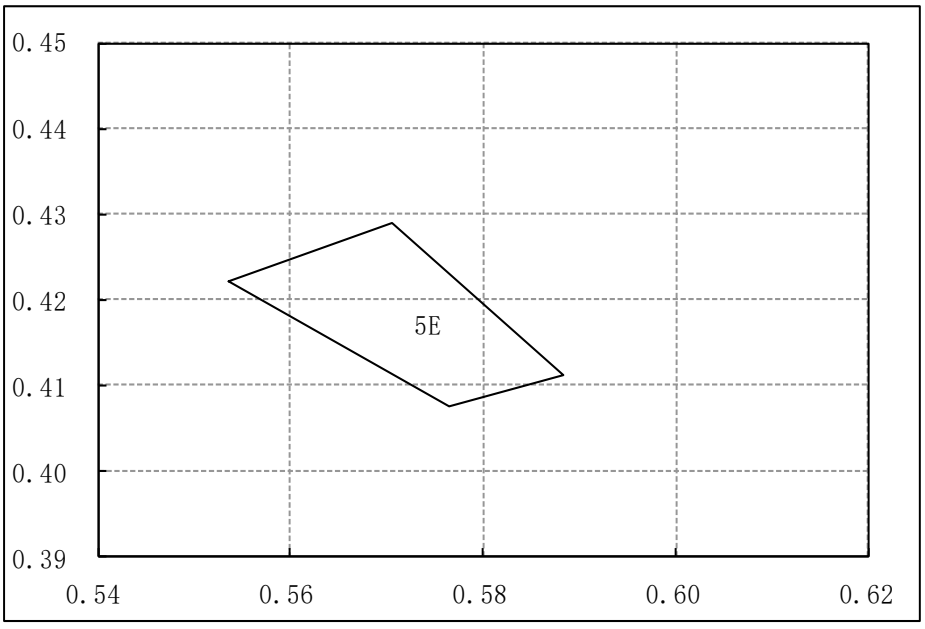
亮度分档 / Brightness Grouping (T_s = 25 ℃; I_f = 350 mA)

档次 Grouping	光通量 Luminous Flux Φ_v (min.)	光通量 Luminous Flux Φ_v (max.)
5K	71 lm	80 lm
6K	80 lm	90 lm
7K	90 lm	100 lm
8K	100 lm	112 lm

正向电压分档 / Forward Voltage Grouping (T_s = 25 ℃; I_f = 350 mA)

档次 Grouping	正向电压 Forward Voltage V_f (min.)	正向电压 Forward Voltage V_f (max.)
8E	2.75 V	3.00 V
8F	3.00 V	3.25 V
8G	3.25 V	3.50 V
8H	3.50 V	3.75 V

颜色色度分档 / Colour Chromaticity Groups (T_s = 25 ℃; I_f = 350 mA)



5E	
X	Y
0.5536	0.4221
0.5705	0.4289
0.5764	0.4075
0.5883	0.4111

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标签信息 / Information on Label

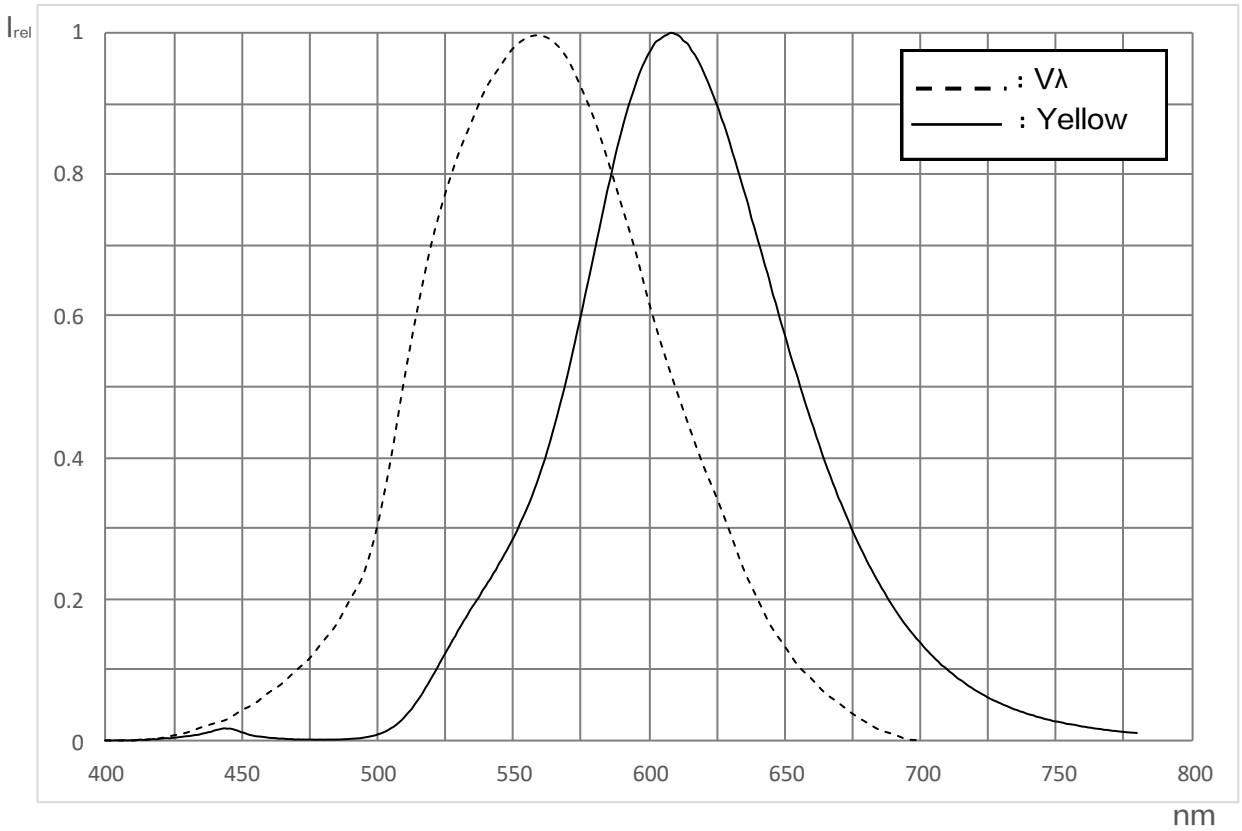
例 / E.g.：5K-5E-8G

亮度档 / Brightness	颜色 / Color	正向电压 / Forward Voltage
5K	5E	8G

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

$I_{rel} = f(\lambda)$; T_s = 25 ℃; I_f = 350 mA



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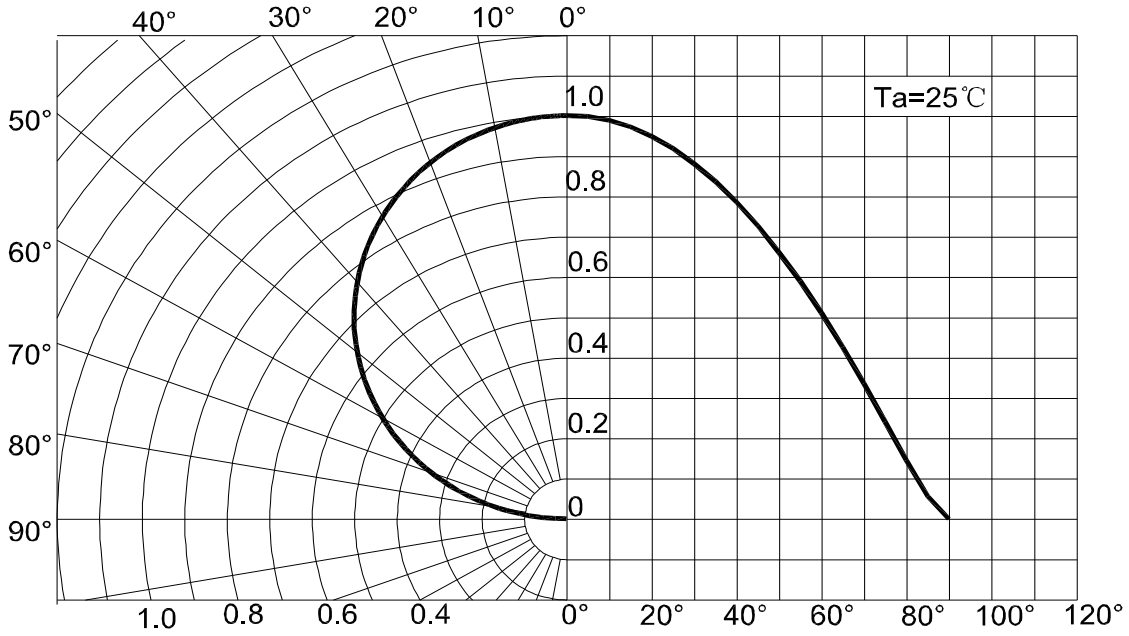
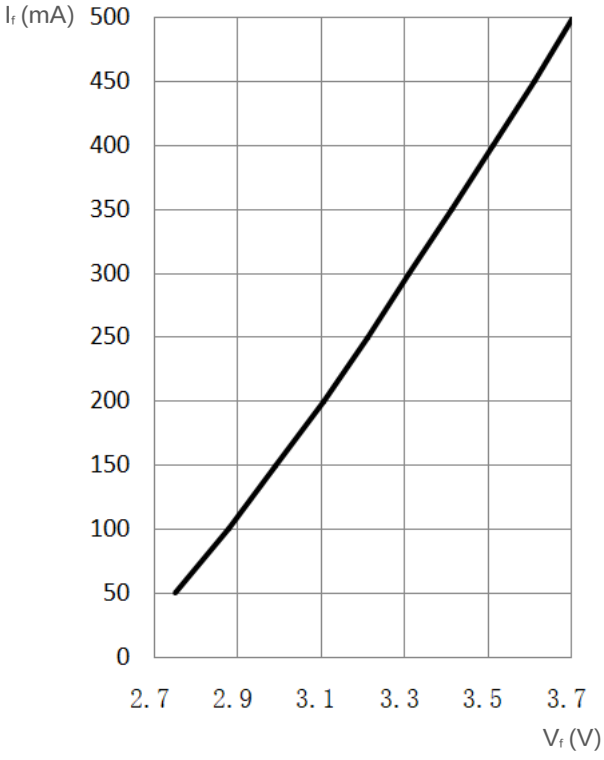
辐射特性 / Radiation Characteristics

$I_{rel} = f(\phi)$; $T_s = 25$ ℃



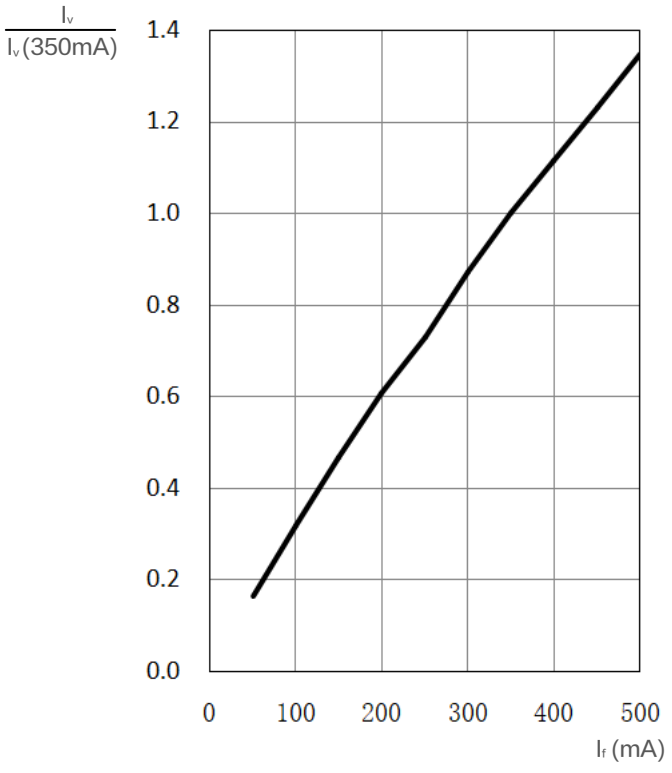
正向电流 / Forward Current

$I_f = f(V_f)$; $T_a = 25$ ℃



相对亮度特性曲线 / Relative Luminous Intensity

$I_v / I_v(350\ mA) = f(I_f)$; $T_a = 25$ ℃



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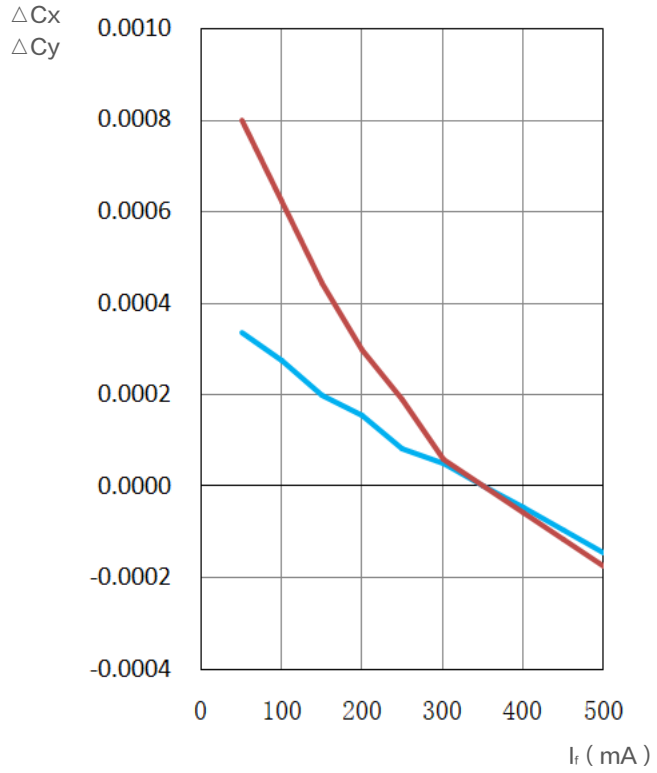
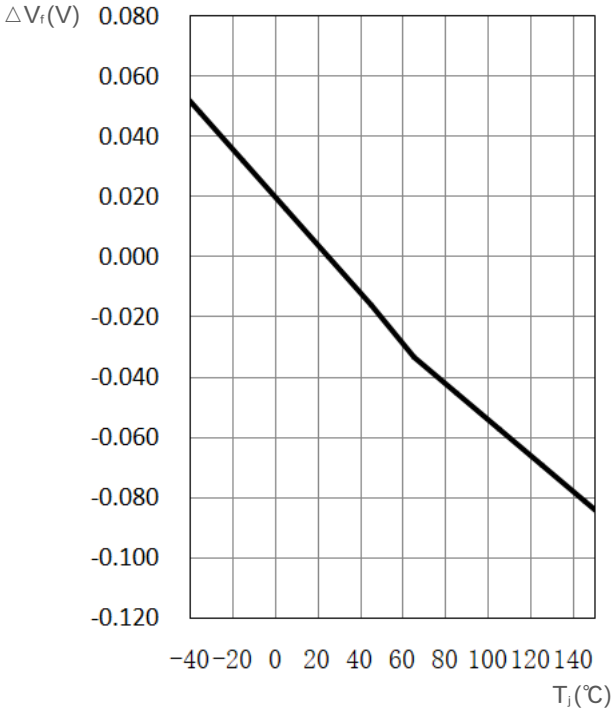
色坐标数据表/Chromaticity coordinate shift

$\Delta Cx,\Delta Cy=f(I_f);T_s=25℃$



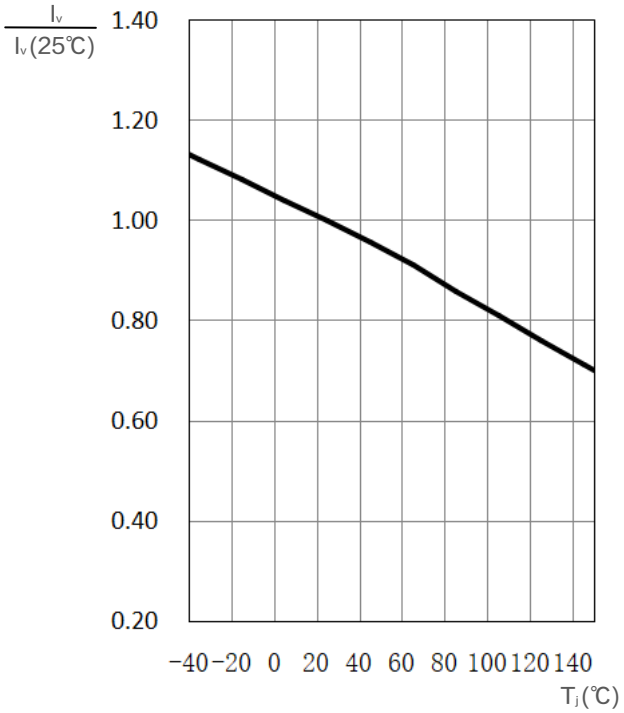
相对正向电压 / Relative Forward Voltage

$\Delta V_f = V_f - V_f\ (25\ ℃) = f\ (T_j);\ I_f = 350\ mA$



相对发光强度 / Relative Luminous Intensity

$I_v/I_v(25)℃ = f\ (T_j);\ I_f = 350\ mA$



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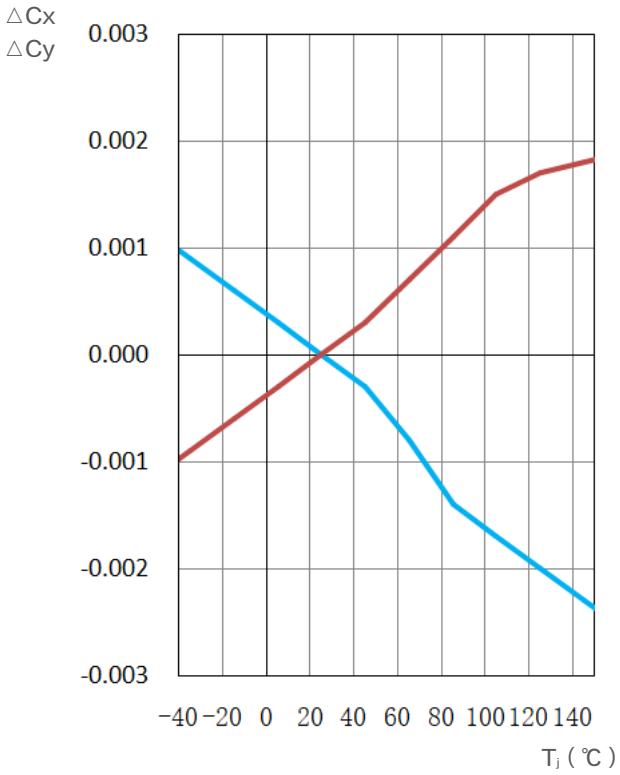
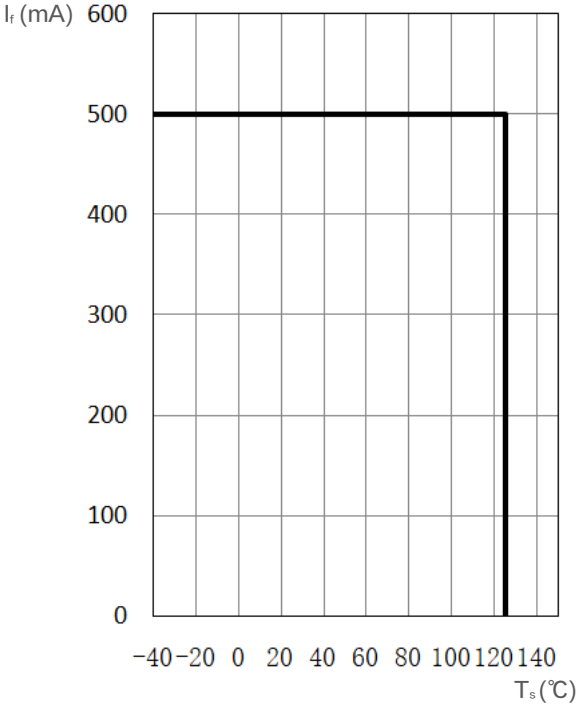
色坐标数据表/Chromaticity coordinate shift

ΔCx,ΔCy=f(I_f);I_f=350mA



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

$I_f = f(T_s)$



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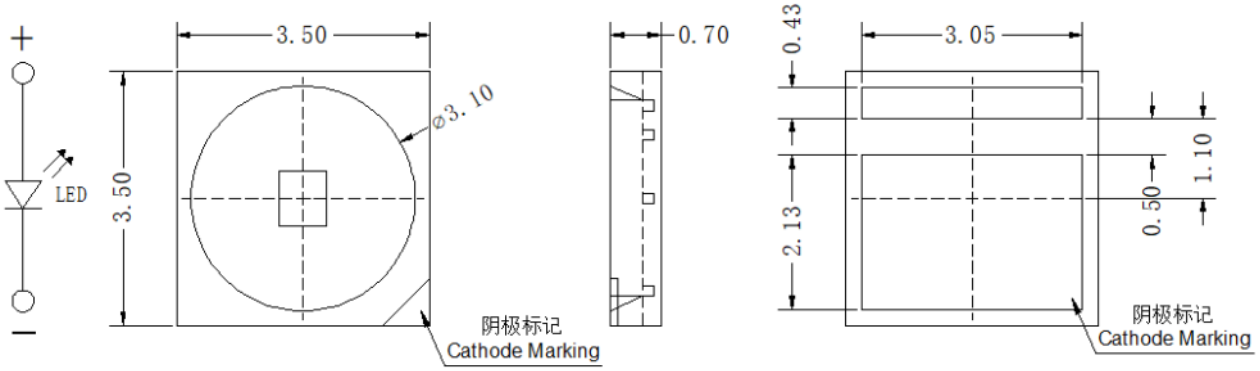
产品尺寸 / Package Outline

Unit: mm
Error range: ±0.1



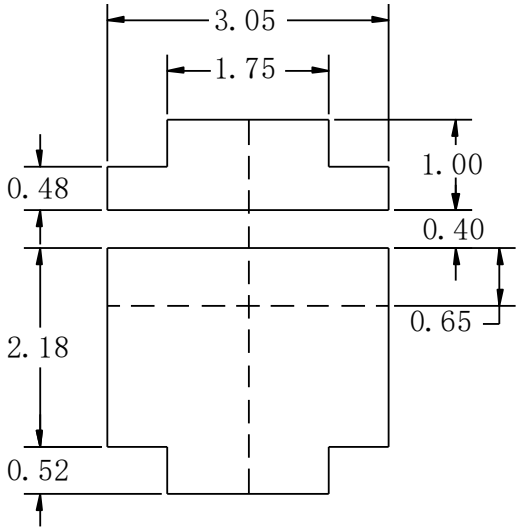
备注

- 统计质量： 60mg
- 标　　记： 阴极

NOTE

- Approximate Weight: 60mg
- Mark: Cathode

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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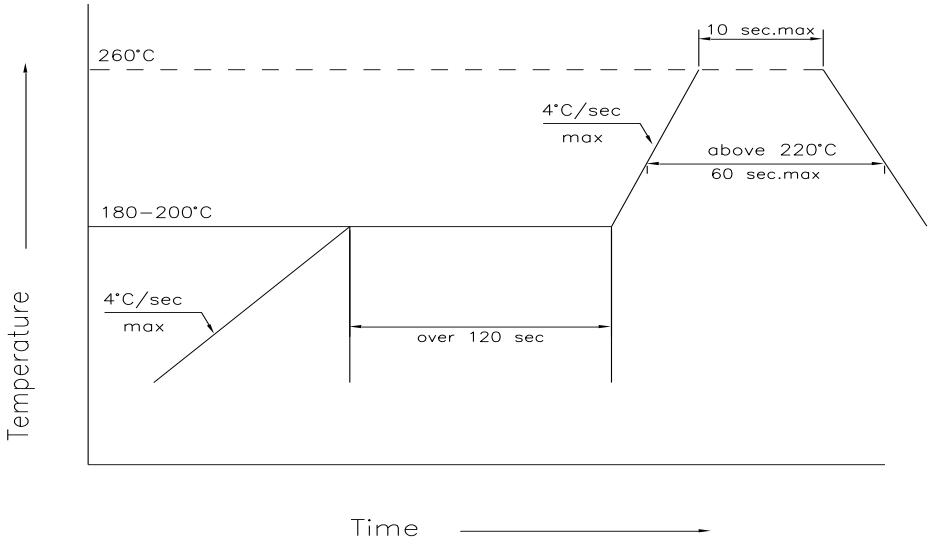
回流焊要求 / Reflow Soldering Profile



主要特性 Profile Feature	符号 Symbol	无铅焊接 Pb-Free (SnAgCu) 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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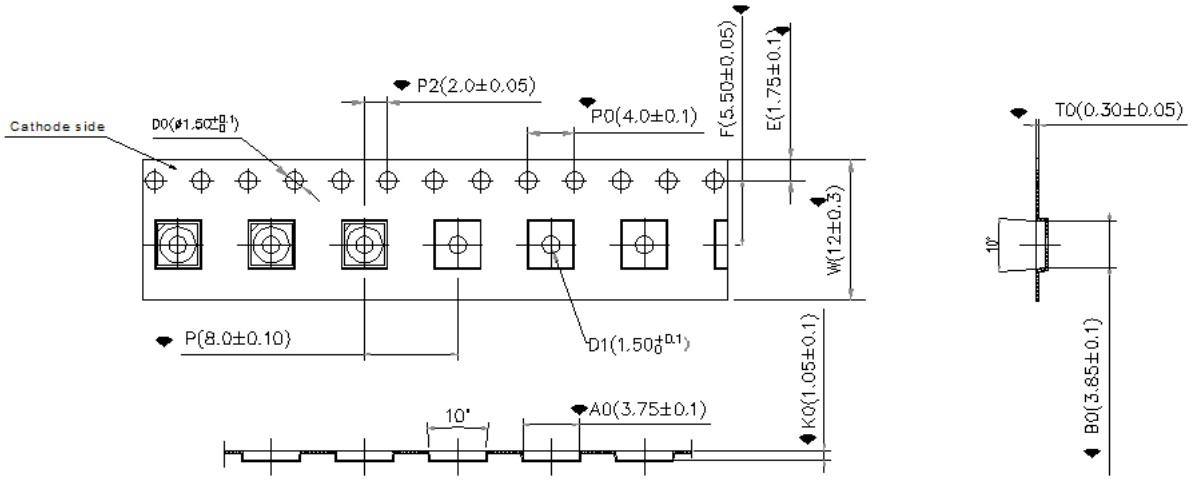
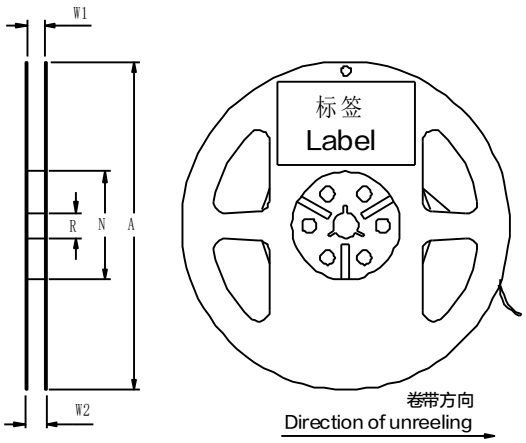
卷带与卷盘 / Tape and Reel





前端空带: 最小400 mm；尾端空带: 最小160 mm；尺寸符合: EIA 481-C标准

Leader: min. 400 mm；Trailer: min. 160 mm；Requirement acc. to EIA 481-C

卷带尺寸 / Tape Dimensions（mm）

W	P0	P	P2	D0	E	F
12±0.3	4±0.1	8±0.1	2±0.05	1.50±0.1	1.75±0.1	5.50±0.05

卷盘尺寸 / Reel Dimensions（mm）

A	W1	W2	N	R
178.0±0.2	8.0±0.5	8.0±0.5	60.0±0.4	13.5±0.3

数量 (颗/卷) / Quantity（pcs/reel）

2000

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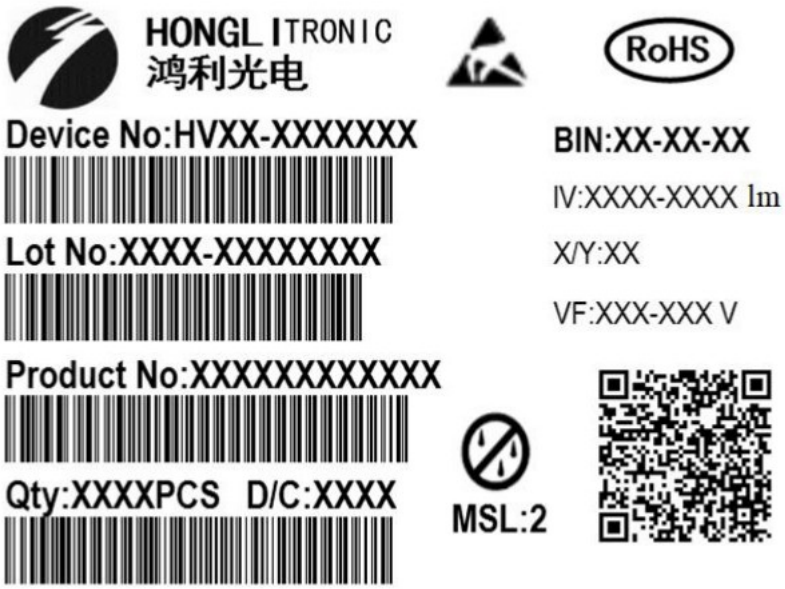
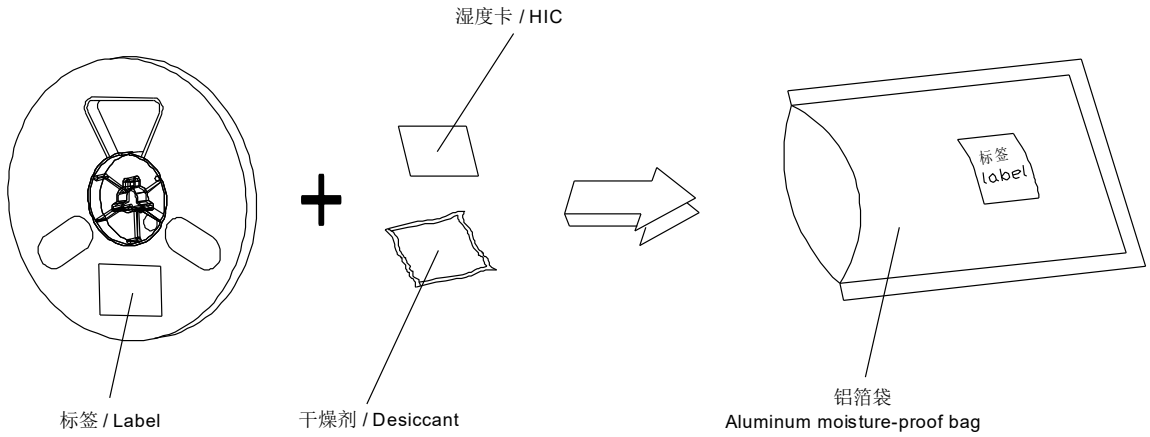
条形码标签 / Barcode-Product-Label (BPL)



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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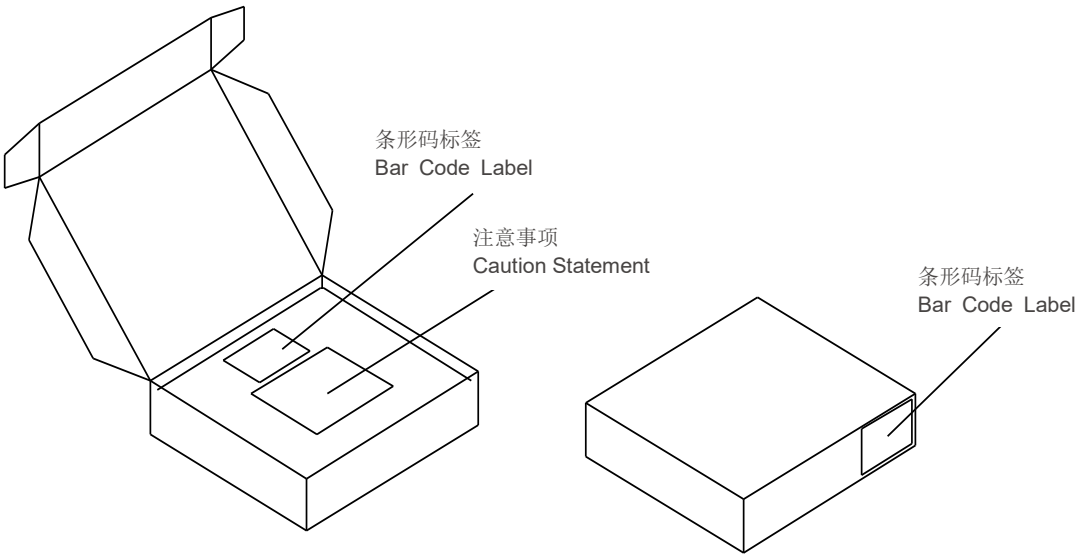
出货包装及材料 / Transportation Packing and Materials



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。
色度坐标：色度坐标是在25ms脉冲电流并且内部再现性为±0.005和一个±0.01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).
Chromaticity coordinate groups: Chromaticity coordinate groups is measured at a current pulse of typically 25 ms, with an internal reproducibility of ± 0.005 and an expanded uncertainty of ±0.0 1 (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 Honglitronic, in the case of ambiguity, the Chinese version shall prevail.

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