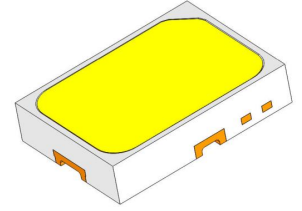


## LWE1FM



采用 SMD 环氧封装，便于集成，良好的散热性能；采用垂直结构芯片，亮度高；  
硅胶密封，透过率高，抗紫外和高温性能好；  
SMD epoxy package, easy to be integrated, good heat  
dissipation; Vertical-chip technology, high optical output efficiency; Silicone  
sealed, high transmittance, excellent UV protection and thermal stability;

### 特点 | Features:

- ▲ 封装：SMD 环氧封装  
Package: SMD epoxy package
- ▲ 视角：120°  
Viewing angle: 120°
- ▲ 颜色：Cx = 0.3220, Cy = 0.3350 根据 CIE 1931 (white)  
Color: Cx = 0.3220, Cy = 0.3350 acc. to CIE 1931 (white)
- ▲ ESD: 8 千伏, HBM Class 3B  
ESD: 8 kV, HBM Class 3B
- ▲ 认证：AEC-Q102  
Qualifications: AEC-Q102
- ▲ MSL: 等级 2  
MSL: Level 2

### 应用 | Applications:

- ▲ 汽车信号灯  
Automotive lights
- ▲ 电器指示灯  
Signaling lamp of apparatus
- ▲ 灯具  
Lanterns
- ▲ 仪器、仪表盘背光显示  
Dashboard backlight

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## 目录 | Table of Contents

器件最大允许值   Maximum Ratings .....	3
关键指标参数   Characteristics .....	4
亮度分档   Brightness Groups .....	5
电压分档   Forward Voltage Groups .....	5
色度分档   Chroma Groups .....	6
相对光谱分布曲线   Relative Spectral Emission Curve .....	8
辐射特性   Radiation Characteristics .....	8
正向电流-正向电压   Forward current-Forward Voltage .....	9
正向电流-相对光通量   Forward current-Relative Luminous Flux .....	9
正向电流-色度偏移   Forward current-Color Shift Characteristics .....	10
结温-正向电压   Junction Temperature-Forward Voltage .....	10
结温-相对光通量   Junction Temperature-Relative Luminous Flux .....	11
结温-色度偏移   Junction Temperature-Color Shift Characteristics .....	11
最大容许正向电流   Max. Permissible Forward Current .....	12
外形尺寸   Mechanical Dimensions .....	13
推荐焊盘   Recommended Solder Pad .....	14
回流焊曲线   Reflow Soldering Profile .....	15
编带   Taping .....	16
包装信息-产品标签   Packaging Information- Product Label .....	17

## 器件最大允许值 | Maximum Ratings

参数 Parameter	符号 Symbol	值 Values	单位 Unit
工作温度 Operating temperature	$T_{op}$	-40-110	°C
存储温度 Storage temperature	$T_{stg}$	-40-110	°C
结温 P/N junction temperature	$T_j$	125	°C
正向电流 Forward current	$I_f$	300	mA
脉冲峰值电流 Surge current ( $t \leq 10\mu S$ ; $D=0.005$ ; $T_s=25^\circ C$ )	$I_{fm}$	500	mA
反向击穿电压 Reverse voltage	$V_R$	not designed for reverse operation	V
抗静电电压 ESD withstand voltage (acc. To ANSI/ESDA/JEDEC JS-001-HBM, Class 3B)	$V_{ESD}$	8	kV

## 关键指标参数 | Characteristics (Ts=25°C, If=200mA)

参数 Parameter	符号 Symbol	值 Values	单位 Unit
色温 Color temperature	CCT	typ. 6000	K
色坐标 Chromaticity Coordinate	Cx Cy	typ. 0.3220 typ. 0.3350	
发光角度 Viewing angle at 50% Iv	2θ	typ. 120	deg. [ ° ]
正向电压 Forward voltage	Vf	min. 2.6 typ. 3.27 max. 3.4	V
反向漏电流 Reverse current (VR=10V)	I <sub>R</sub>	not designed for reverse operation	μA
光通量 Luminous flux	Φ	typ. 53	lm
热阻 (P/N 结到焊接点) Thermal resistance (P/N junction to soldering point)	R <sub>thJs ele</sub>	max. 20	K/W

亮度分档 | Brightness Groups ( $T_s=25^{\circ}\text{C}$ ,  $I_f=200\text{mA}$ )

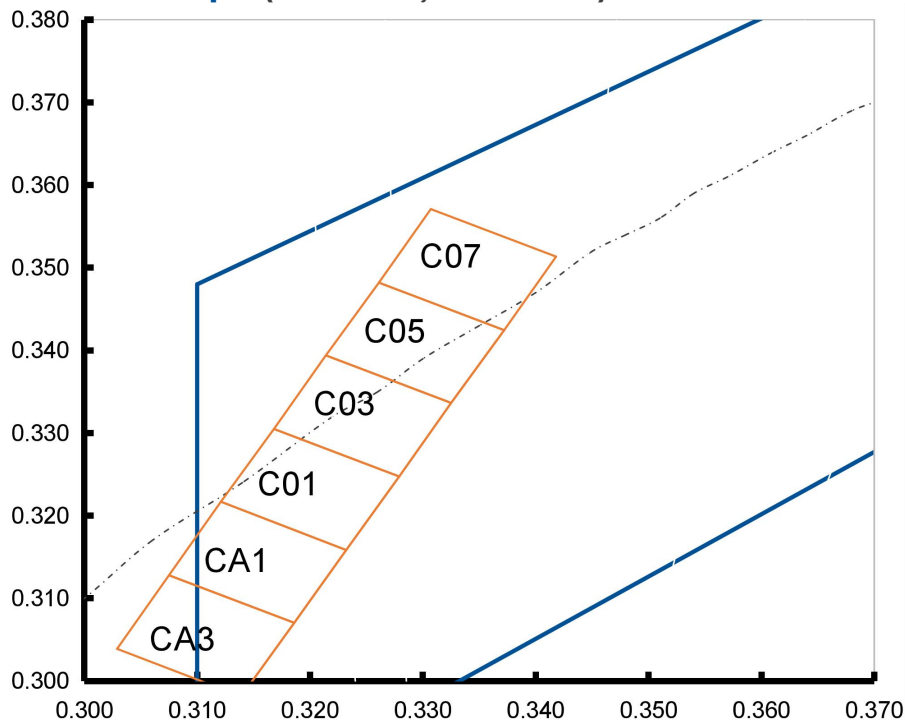
组 Group	符号 Symbol	最小值 Min.	最大值 Max.	单位 Unit
B1	$\Phi_V$	45	50	lm
B2	$\Phi_V$	50	55	lm
B3	$\Phi_V$	55	60	lm
B4	$\Phi_V$	60	65	lm
B5	$\Phi_V$	65	70	lm
B6	$\Phi_V$	70	75	lm
B7	$\Phi_V$	75	80	lm
B8	$\Phi_V$	80	85	lm
B9	$\Phi_V$	85	90	lm

\* $T_s$ : soldering point temperature

电压分档 | Forward Voltage Groups ( $T_s=25^{\circ}\text{C}$ ,  $I_f=200\text{mA}$ )

组 Group	符号 Symbol	最小值 Min.	最大值 Max.	单位 Unit
V1	$V_f$	2.6	2.8	V
V2	$V_f$	2.8	3.0	V
V3	$V_f$	3.0	3.2	V
V4	$V_f$	3.2	3.4	V

## 色度分档 | Chroma Groups (Ts=25°C, If=200mA)

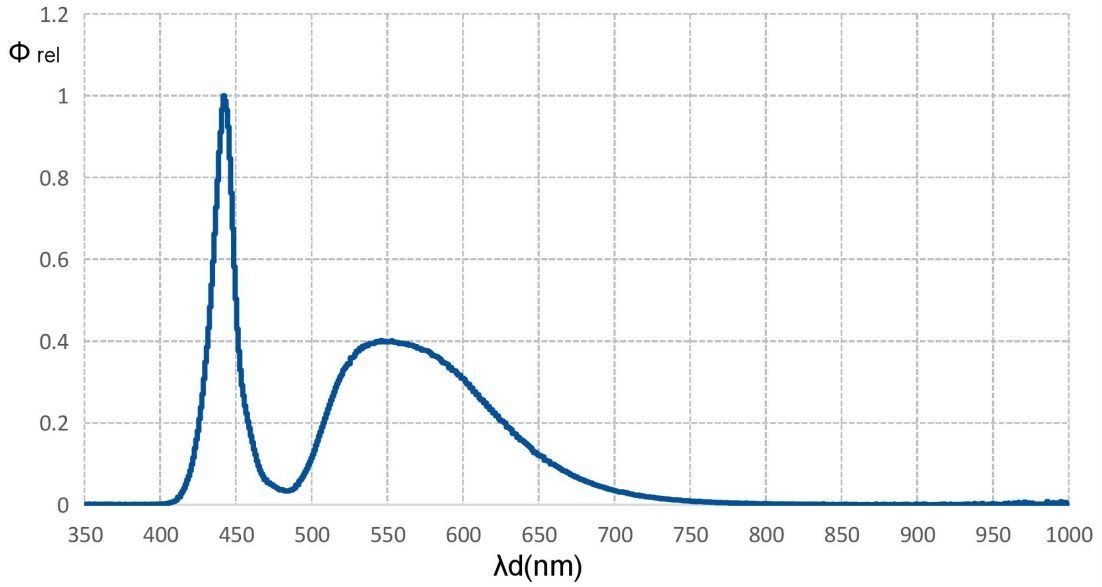


组 Group	符号 Symbol	Cx Cx	Cy Cy	单位 Unit
<b>CA3</b>	CCT	0.3139	0.2982	
	CCT	0.3029	0.3039	
	CCT	0.3075	0.3128	
	CCT	0.3186	0.3071	
<b>CA1</b>	CCT	0.3186	0.3071	
	CCT	0.3075	0.3128	
	CCT	0.3121	0.3217	
	CCT	0.3232	0.3159	
<b>C01</b>	CCT	0.3232	0.3159	
	CCT	0.3121	0.3217	
	CCT	0.3168	0.3305	
	CCT	0.3279	0.3248	
<b>C03</b>	CCT	0.3279	0.3248	
	CCT	0.3168	0.3305	
	CCT	0.3214	0.3394	
	CCT	0.3325	0.3337	

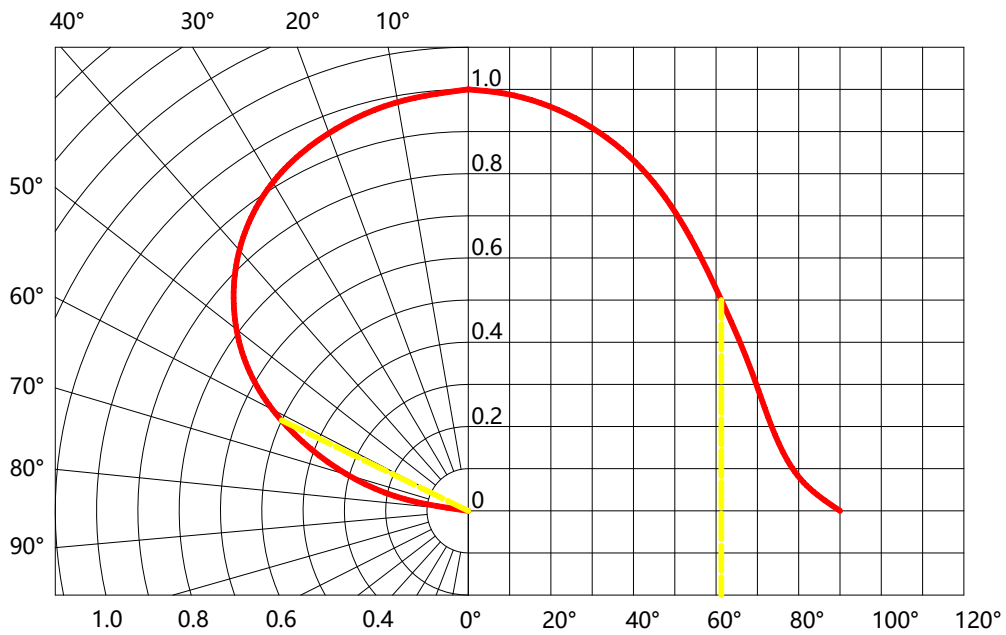


组 Group	符号 Symbol	Cx Cx	Cy Cy	单位 Unit
<b>C05</b>	CCT	0.3325	0.3337	
	CCT	0.3214	0.3394	
	CCT	0.3261	0.3482	
	CCT	0.3372	0.3425	
<b>C07</b>	CCT	0.3372	0.3425	
	CCT	0.3261	0.3482	
	CCT	0.3307	0.3571	
	CCT	0.3418	0.3514	

相对光谱分布曲线 | Relative Spectral Emission Curve (Ts=25°C, If=200mA)

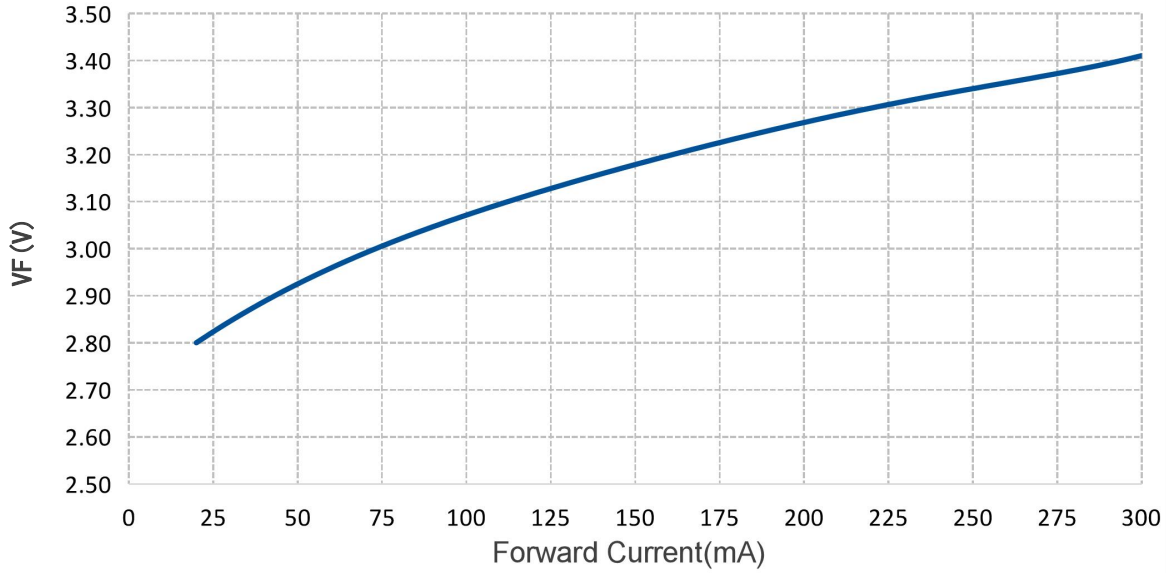


辐射特性 | Radiation Characteristics (Ts=25°C, If=200mA)

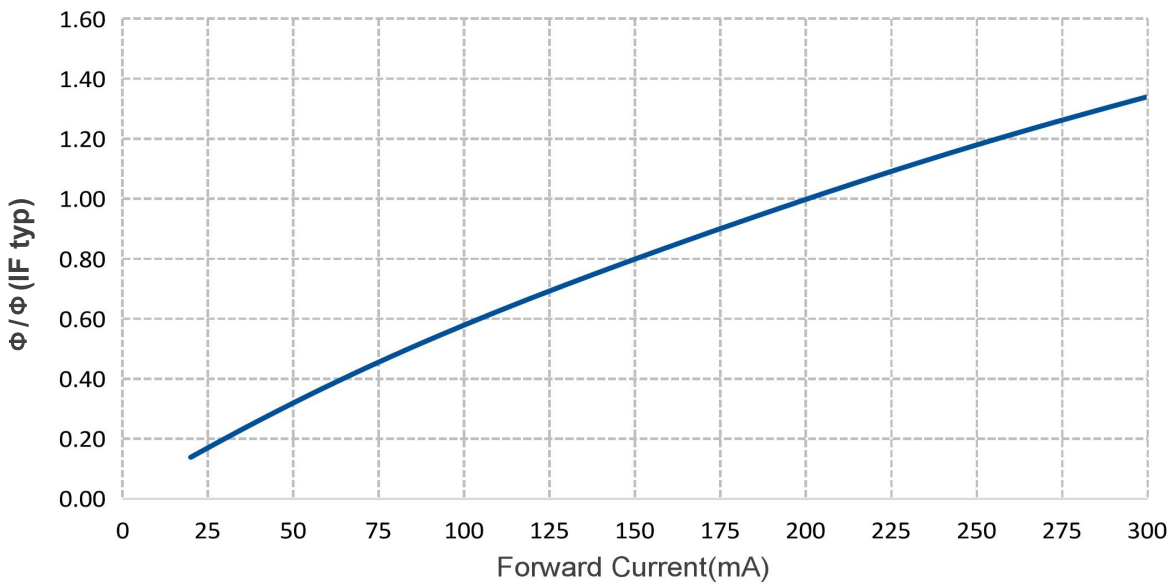




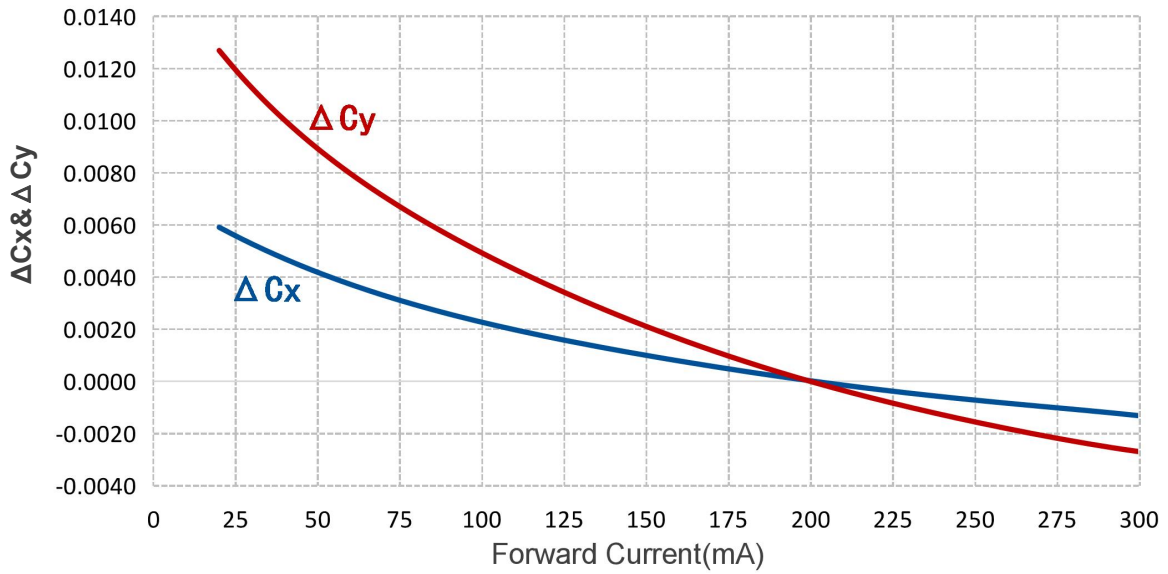
正向电流-正向电压 | Forward current-Forward Voltage (Ts=25°C)



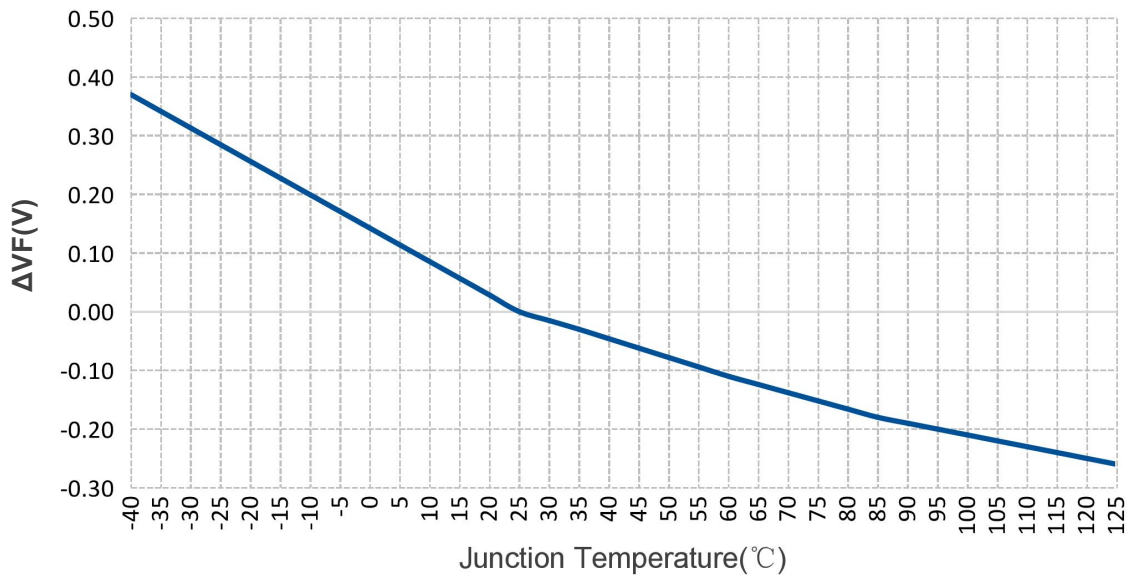
正向电流-相对光通量 | Forward current-Relative Luminous Flux (Ts=25°C)



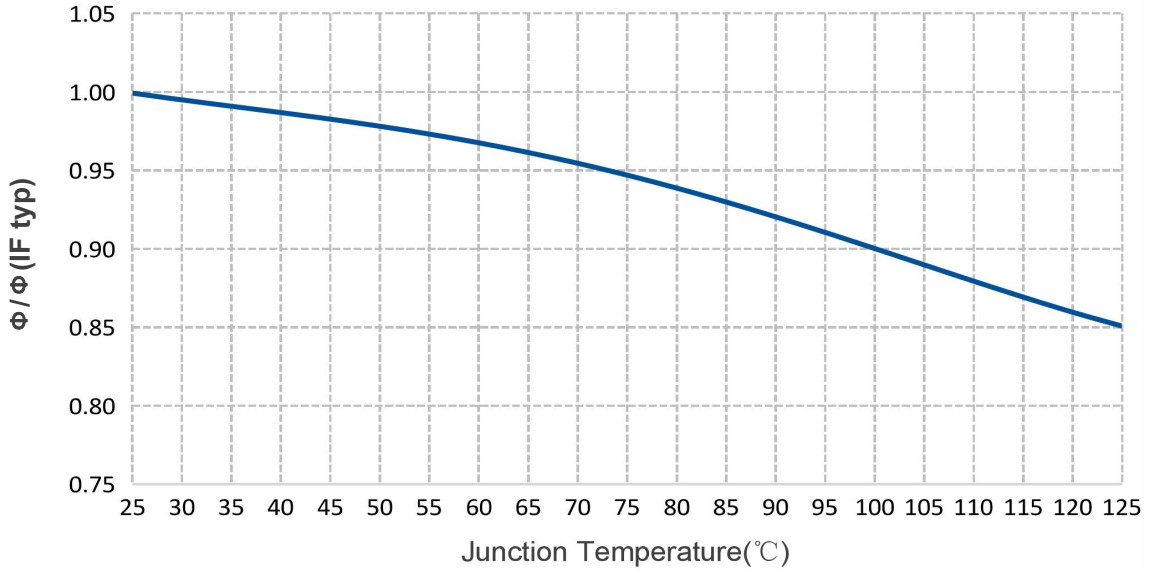
正向电流-色度偏移 | Forward current-Color Shift Characteristics (Ts=25°C)



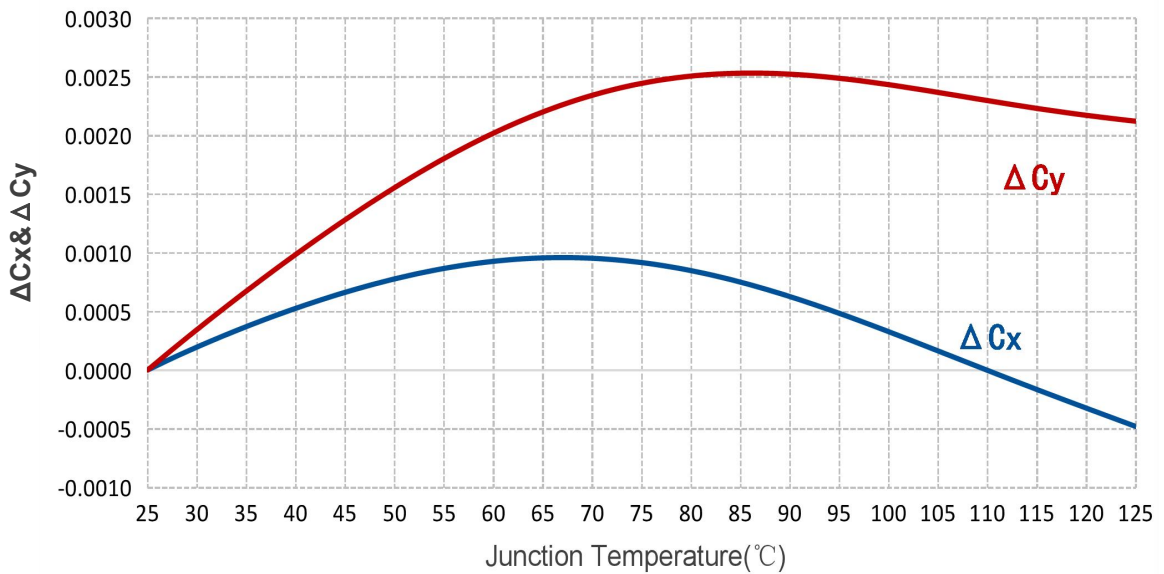
结温-正向电压 | Junction Temperature-Forward Voltage (If=200mA)



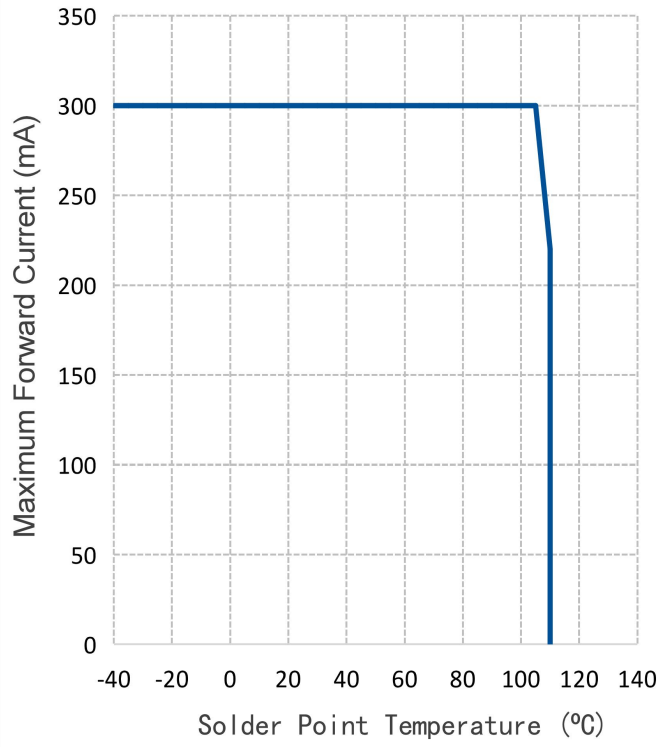
结温-相对光通量 | Junction Temperature-Relative Luminous Flux (If=200mA)



结温-色度偏移 | Junction Temperature-Color Shift Characteristics(If=200mA)

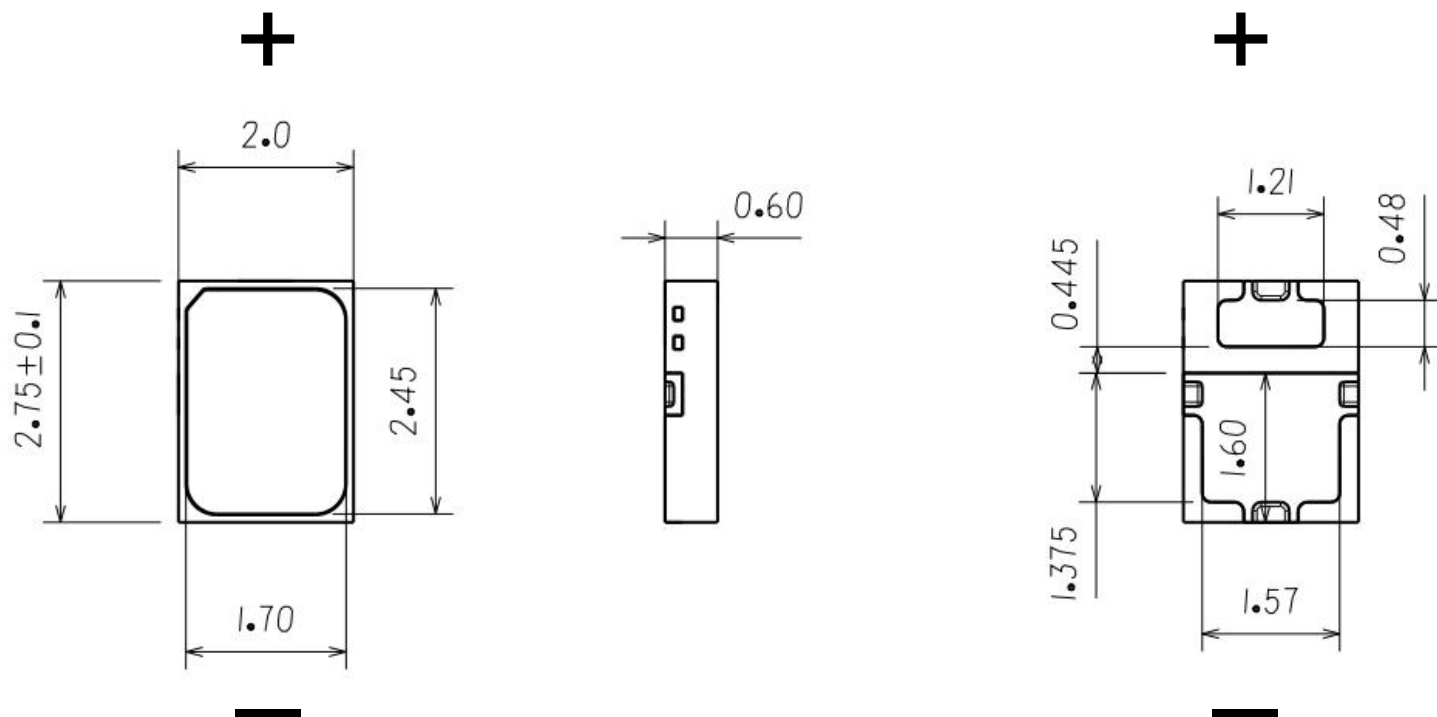


最大容许正向电流 | Max. Permissible Forward Current



外形尺寸 | Mechanical Dimensions

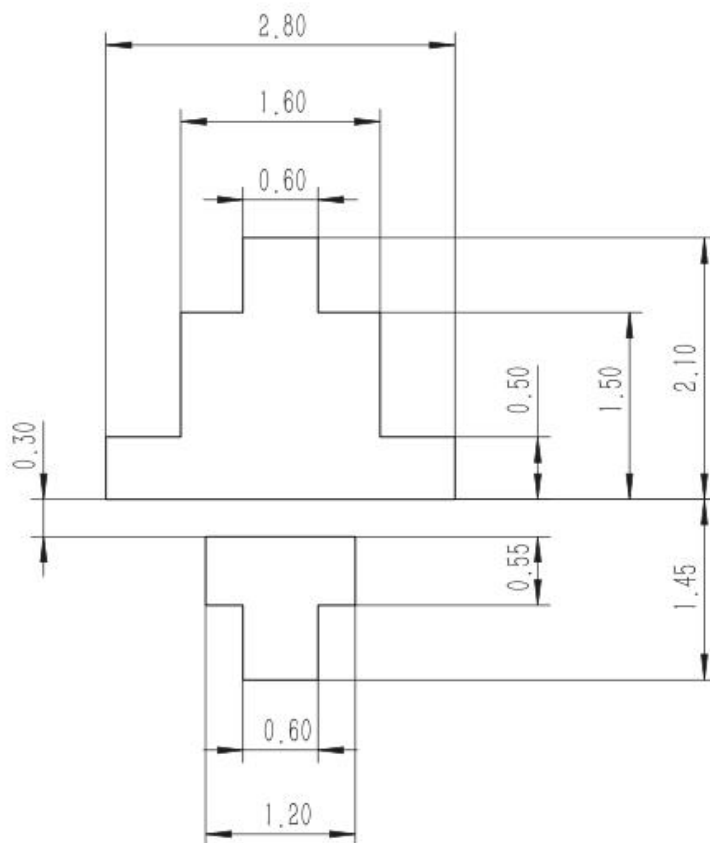
单位 | Unit: mm



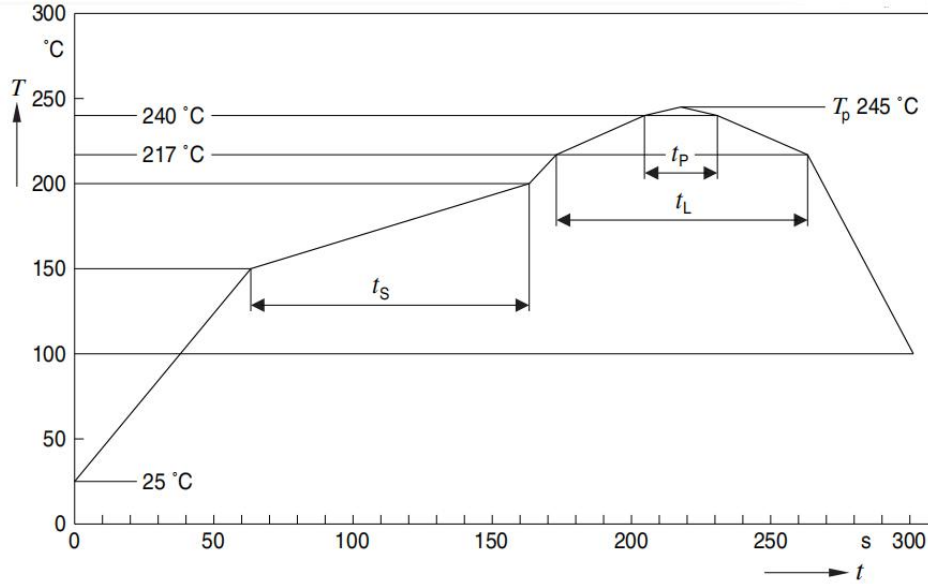
尺寸   Size	公差   Tolerance
*.*	$\pm 0.1\text{mm}$
*.**	$\pm 0.05\text{mm}$
*.***	$\pm 0.05\text{mm}$

推荐焊盘 | Recommended Solder Pad

单位 | Unit: mm



## 回流焊曲线 | Reflow Soldering Profile

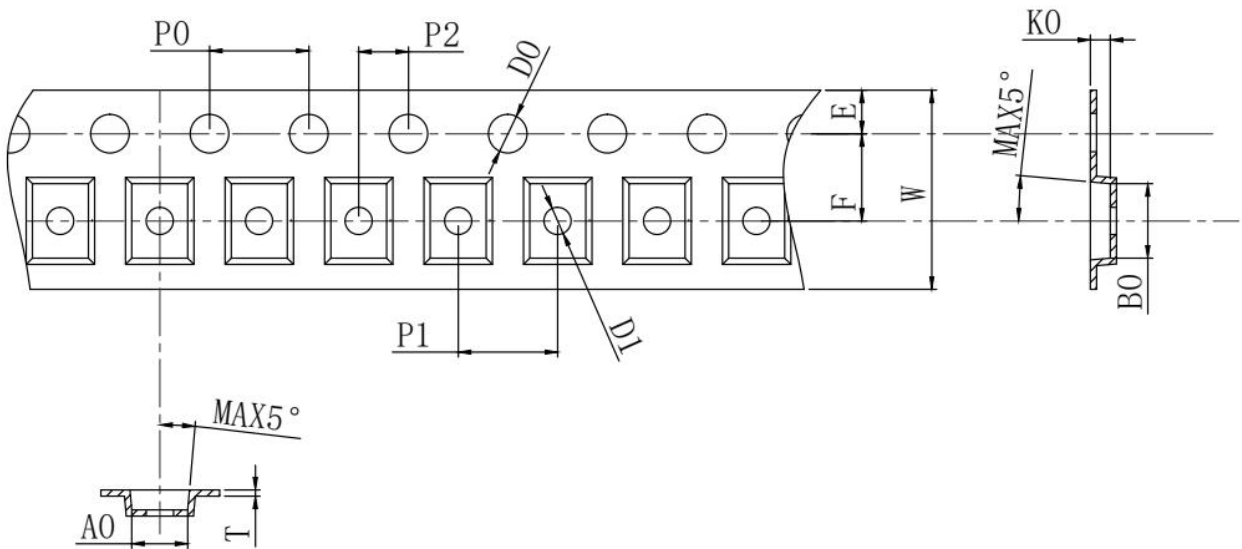
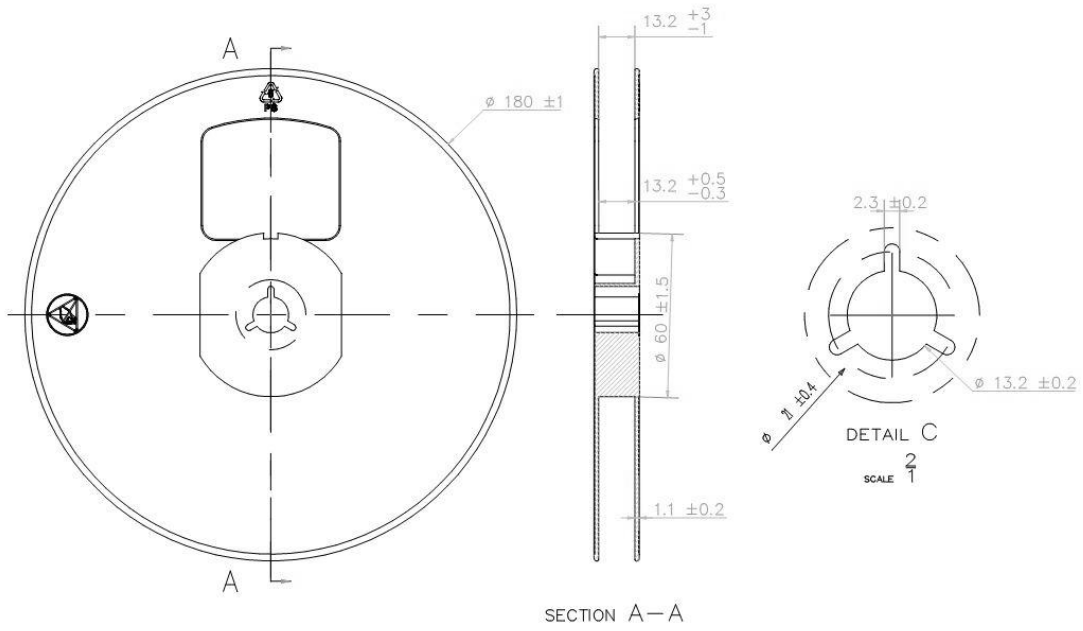


回流焊步骤 Profile Feature	符号 Symbol	无铅回流焊 (SnAgCu) Pb-Free (SnAgCu) Assembly			单位 Unit
		最小值 Min.	设定值 Reco.	最大值 Max.	
预热升温速率 25 °C to 150 °C Ramp-up rate to preheat			2	3	K/s
升温时间 (T <sub>smin</sub> -T <sub>smax</sub> )	t <sub>s</sub>	60	100	120	s
从 T <sub>smax</sub> 升温到最高温度的速率 Ramp-up rate to peak			2	3	K/s
达到液相的温度 Liquidus temperature			217		°C
在液相温度以上的时间 Time above liquidus temperature	t <sub>L</sub>		80	100	s
最高温度 Peak temperature	T <sub>p</sub>		245	260	°C
在高于最高温度 5°C 范围内停留的时间 Time within 5 °C of the specified peak temperature TP - 5 K	t <sub>p</sub>	10	20	30	s
降到 100°C 的速率 Ramp-down rate* TP to 100 °C			3	6	K/s
从最高温降到 25°C 的时间 Time 25 °C to TP				480	s

\*LED complies to MSL Level 2 (JEDEC J-STD-020E)

编带 | Taping

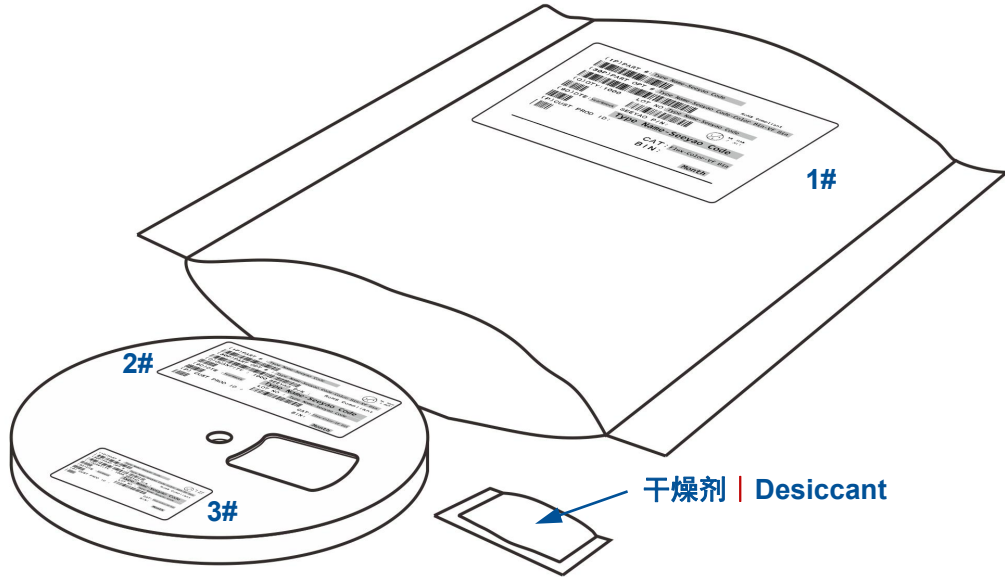
单位 | Unit: mm



SYMBOL	A0	B0	K0	P0	P1	P2
SPEC	2.20 ± 0.05	2.95 ± 0.05	0.75 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10
SYMBOL	T	E	F	D0	D1	W
SPEC	0.20 ± 0.05	1.75 ± 0.10	3.50 ± 0.10	1.55 ± 0.05	1.10 ± 0.10	8.00 ± 0.10



包装信息-产品标签 | Packaging Information- Product Label



标签 1# | Label 1#

(1P) PART # : Type Name-Seeeyao Code  
 RoHS Compliant  
 (30P) PART OPT # : Type Name-Seeeyao Code-Color Bin-Vf Bin  
 (Q) QTY : 1000 LOT NO : Type Name-Seeeyao Code  
 (9D) DTE : Year/Week SEEYAO P/N :  
 Type Name-Seeeyao Code  
 (P) CUST PROD ID : CAT : Flux-Color-Vf Bin  
 BIN :  
 Month

标签 2# | Label 2#

(1P) PART # : Type Name-Seeeyao Code  
 (30P) PART OPT # : Type Name-Seeeyao Code-Color Bin-Vf Bin  
 RoHS Compliant  
 (Q) QUANTITY : 1000 SEEYAO P/N :  
 Type Name-Seeeyao Code  
 (9D) DTE : Year/Week LOT NO : Type Name-Seeeyao Code  
 (P) CUST PROD ID : CAT : Flux-Color-Vf Bin  
 BIN :  
 Month

标签 3# | Label 3#

DT: 0123456789  
 Num: 1000  
 Bin: Bin012#  
 ABCDEF-GH0123456789  
 SALME0123456789  
 Bin0123456789012345