



SUNSHINE ELECTRONICS TRADING LIMITED

SEL-2835-(4730-13000)-6V150

#### Features

Emitting Color: White

Lens Type: Yellow Diffused

Device Outline: 3.5x2.8x0.8 mm

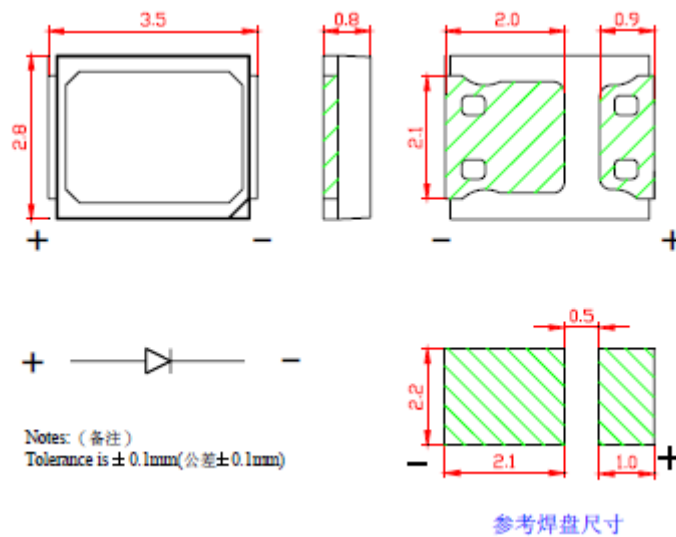
HBM ESD: Class 2

Pb-Free

RoHS compliant: RoHS

#### Application

Backlight of Mobile, Machine Vision. LCD Display, Indoor Lighting





## SPECIFICATION

| MODEL                              |                                           |                |     |
|------------------------------------|-------------------------------------------|----------------|-----|
| Absolute<br>Maximum<br>Ratings     | Power Dissipation (Pd), mW                | 1000           |     |
|                                    | Forward Current (Ifm), mA                 | 150            |     |
|                                    | Pulse Forward Current (If), mA            | 240            |     |
|                                    | Reverse Voltage, (VR), IR = 150 mA        | >7             |     |
|                                    | Operating Temperature (Topr), °C          | up -40 to +85  |     |
|                                    | Storage Temperature (Tstg), °C            | up -40 to +100 |     |
| Electro-Optical<br>Characteristics | Forward Voltage (IF=150mA), V             | Min.           | -   |
|                                    |                                           | Typ.           | 6.2 |
|                                    |                                           | Max.           | 6.8 |
|                                    | Reverse Voltage (Vr=7V), mA               | Min.           | -   |
|                                    |                                           | Max.           | 30  |
|                                    | Half Intensity Angle (IF=150mA), deg.     | 120            |     |
|                                    | Junction Temperature (Tj), °C             | 115            |     |
|                                    | Thermal Resistance Rthj-s IF =150mA, °C/w | 30             |     |
| Color, Luminous<br>flux and CRI    | Emitted color                             | white          |     |
|                                    | CCT, K                                    | 4730-13000     |     |
|                                    | CRI (Typ.)                                | 80             |     |
|                                    | Luminous flux ( IF=150mA), lm             | Min.           | -   |
|                                    |                                           | Typ.           | 110 |
|                                    |                                           | Max.           | -   |



**Product Ranks/产品分档范围:**

| 亮度分档标准          |      | 电压分档标准          |      |
|-----------------|------|-----------------|------|
| 光通量 $\Phi$ (Lm) | 代表符号 | 正向电压 $V_F$ 值(V) | 代表符号 |
| IF=150mA        |      | IF=150mA        |      |
| 100-110         | L100 | 5.6-5.8         | V21  |
| 110-120         | L110 | 5.8-6.0         | V22  |
| 120-130         | L120 | 6.0-6.2         | V23  |
|                 |      | 6.2-6.4         | V24  |
|                 |      | 6.4-6.6         | V25  |
|                 |      | 6.6-6.8         | V26  |
|                 |      |                 |      |
|                 |      |                 |      |

Notes/备注: Rank error/分档误差:  $V_F$ :  $\pm 0.10V$ ,  $\Phi$ :  $\pm 15\%$

色坐标误差:  $\pm 0.005$ 

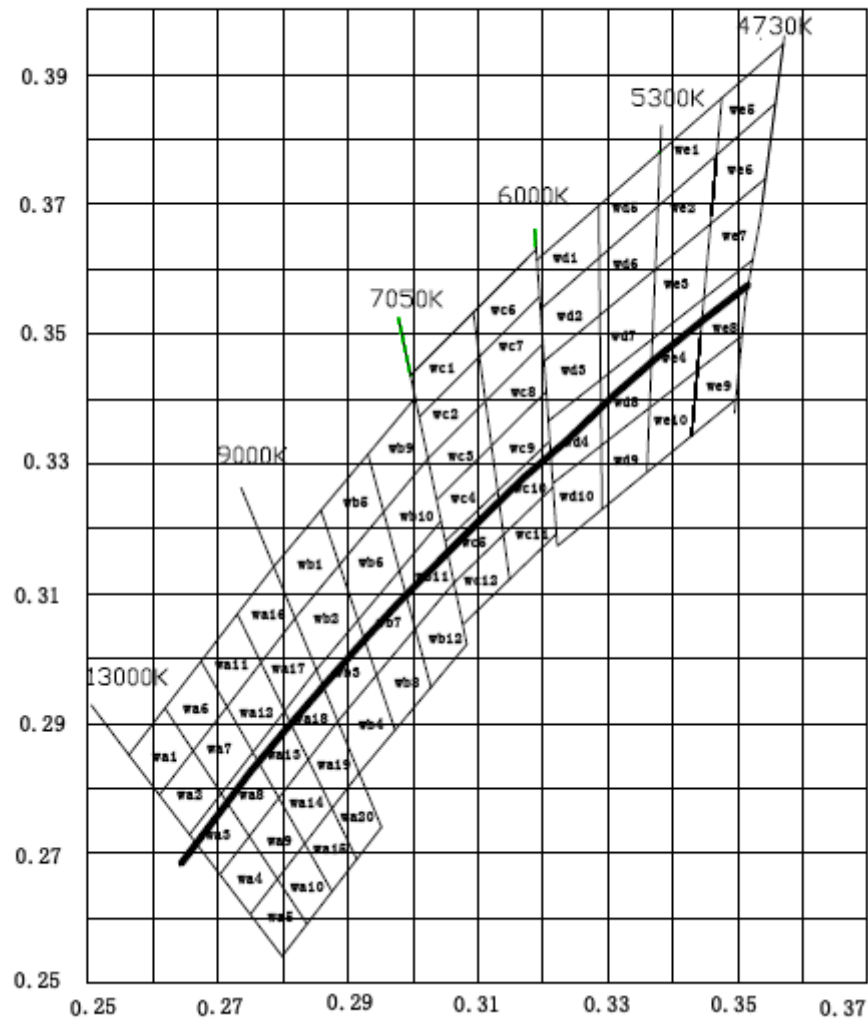
| 代码   | 轴 | 参数     |        |        |        | 代码   | 轴 | 参数     |        |        |        |
|------|---|--------|--------|--------|--------|------|---|--------|--------|--------|--------|
| Wa1  | X | 0.2568 | 0.2623 | 0.2666 | 0.2614 | Wa2  | X | 0.2614 | 0.2666 | 0.2710 | 0.2661 |
|      | Y | 0.2848 | 0.2920 | 0.2854 | 0.2786 |      | Y | 0.2786 | 0.2854 | 0.2788 | 0.2725 |
| Wa3  | X | 0.2661 | 0.2710 | 0.2753 | 0.2708 | Wa4  | X | 0.2708 | 0.2753 | 0.2796 | 0.2754 |
|      | Y | 0.2725 | 0.2788 | 0.2723 | 0.2664 |      | Y | 0.2664 | 0.2723 | 0.2657 | 0.2602 |
| Wa5  | X | 0.2754 | 0.2796 | 0.2842 | 0.2804 | Wa6  | X | 0.2623 | 0.2679 | 0.2719 | 0.2666 |
|      | Y | 0.2602 | 0.2657 | 0.2587 | 0.2538 |      | Y | 0.2920 | 0.2992 | 0.2922 | 0.2854 |
| Wa7  | X | 0.2666 | 0.2719 | 0.2758 | 0.2710 | Wa8  | X | 0.2710 | 0.2758 | 0.2798 | 0.2753 |
|      | Y | 0.2854 | 0.2922 | 0.2852 | 0.2788 |      | Y | 0.2788 | 0.2852 | 0.2781 | 0.2723 |
| Wa9  | X | 0.2753 | 0.2798 | 0.2838 | 0.2796 | Wa10 | X | 0.2796 | 0.2838 | 0.2880 | 0.2842 |
|      | Y | 0.2723 | 0.2781 | 0.2711 | 0.2657 |      | Y | 0.2657 | 0.2711 | 0.2637 | 0.2587 |
| Wa11 | X | 0.2679 | 0.2735 | 0.2771 | 0.2719 | Wa12 | X | 0.2719 | 0.2771 | 0.2807 | 0.2758 |
|      | Y | 0.2992 | 0.3065 | 0.2990 | 0.2922 |      | Y | 0.2922 | 0.2990 | 0.2915 | 0.2852 |
| Wa13 | X | 0.2758 | 0.2807 | 0.2844 | 0.2798 | Wa14 | X | 0.2798 | 0.2844 | 0.2880 | 0.2838 |
|      | Y | 0.2852 | 0.2915 | 0.2840 | 0.2781 |      | Y | 0.2781 | 0.2840 | 0.2766 | 0.2711 |
| Wa15 | X | 0.2838 | 0.2880 | 0.2918 | 0.2880 | Wa16 | X | 0.2735 | 0.2791 | 0.2823 | 0.2771 |
|      | Y | 0.2711 | 0.2766 | 0.2687 | 0.2637 |      | Y | 0.3065 | 0.3138 | 0.3058 | 0.2990 |
| Wa17 | X | 0.2771 | 0.2823 | 0.2856 | 0.2807 | Wa18 | X | 0.2807 | 0.2856 | 0.2889 | 0.2844 |
|      | Y | 0.2990 | 0.3058 | 0.2979 | 0.2915 |      | Y | 0.2915 | 0.2979 | 0.2899 | 0.2840 |
| Wa19 | X | 0.2844 | 0.2889 | 0.2922 | 0.2880 | Wa20 | X | 0.2880 | 0.2922 | 0.2957 | 0.2918 |
|      | Y | 0.2840 | 0.2899 | 0.2820 | 0.2766 |      | Y | 0.2766 | 0.2820 | 0.2737 | 0.2687 |
| Wb1  | X | 0.2791 | 0.2863 | 0.2892 | 0.2823 | Wb2  | X | 0.2823 | 0.2892 | 0.2920 | 0.2856 |
|      | Y | 0.3138 | 0.3224 | 0.3140 | 0.3058 |      | Y | 0.3058 | 0.3140 | 0.3055 | 0.2979 |
| Wb3  | X | 0.2856 | 0.2920 | 0.2949 | 0.2889 | Wb4  | X | 0.2889 | 0.2949 | 0.2977 | 0.2922 |
|      | Y | 0.2979 | 0.3055 | 0.2971 | 0.2899 |      | Y | 0.2899 | 0.2971 | 0.2886 | 0.2820 |
| Wb5  | X | 0.2863 | 0.2935 | 0.2960 | 0.2892 | Wb6  | X | 0.2892 | 0.2960 | 0.2984 | 0.2920 |
|      | Y | 0.3224 | 0.3311 | 0.3221 | 0.3140 |      | Y | 0.3140 | 0.3221 | 0.3131 | 0.3055 |
| Wb7  | X | 0.2920 | 0.2984 | 0.3008 | 0.2949 | Wb8  | X | 0.2949 | 0.3008 | 0.3032 | 0.2977 |
|      | Y | 0.3055 | 0.3131 | 0.3042 | 0.2971 |      | Y | 0.2971 | 0.3042 | 0.2952 | 0.2886 |
| Wb9  | X | 0.2935 | 0.3008 | 0.3028 | 0.2960 | Wb10 | X | 0.2960 | 0.3028 | 0.3048 | 0.2984 |
|      | Y | 0.3311 | 0.3398 | 0.3303 | 0.3221 |      | Y | 0.3221 | 0.3303 | 0.3208 | 0.3131 |



| 代码   | 轴 | 参数     |        |        |        | 代码   | 轴 | 参数     |        |        |        |
|------|---|--------|--------|--------|--------|------|---|--------|--------|--------|--------|
| Wb11 | X | 0.2984 | 0.3048 | 0.3068 | 0.3008 | Wb12 | X | 0.3008 | 0.3068 | 0.3088 | 0.3032 |
|      | Y | 0.3131 | 0.3208 | 0.3113 | 0.3042 |      | Y | 0.3042 | 0.3113 | 0.3018 | 0.2952 |
| Wc2  | X | 0.3014 | 0.3107 | 0.3116 | 0.3028 | Wc3  | X | 0.3028 | 0.3116 | 0.3126 | 0.3041 |
|      | Y | 0.3368 | 0.3461 | 0.3392 | 0.3303 |      | Y | 0.3303 | 0.3392 | 0.3323 | 0.3240 |
| Wc4  | X | 0.3041 | 0.3126 | 0.3134 | 0.3054 | Wc5  | X | 0.3054 | 0.3134 | 0.3144 | 0.3068 |
|      | Y | 0.3240 | 0.3323 | 0.3255 | 0.3177 |      | Y | 0.3177 | 0.3255 | 0.3186 | 0.3113 |
| Wc12 | X | 0.3068 | 0.3144 | 0.3153 | 0.3081 | Wc7  | X | 0.3107 | 0.3200 | 0.3204 | 0.3116 |
|      | Y | 0.3113 | 0.3186 | 0.3118 | 0.3048 |      | Y | 0.3461 | 0.3553 | 0.3480 | 0.3392 |
| Wc8  | X | 0.3116 | 0.3204 | 0.3210 | 0.3126 | Wc9  | X | 0.3126 | 0.3210 | 0.3215 | 0.3134 |
|      | Y | 0.3392 | 0.3480 | 0.3407 | 0.3323 |      | Y | 0.3323 | 0.3407 | 0.3334 | 0.3255 |
| Wc10 | X | 0.3134 | 0.3215 | 0.3220 | 0.3144 | Wc11 | X | 0.3144 | 0.3220 | 0.3225 | 0.3153 |
|      | Y | 0.3255 | 0.3334 | 0.3260 | 0.3186 |      | Y | 0.3186 | 0.3260 | 0.3188 | 0.3118 |
| Wc1  | X | 0.3001 | 0.3098 | 0.3107 | 0.3014 | Wc6  | X | 0.3098 | 0.3195 | 0.3200 | 0.3107 |
|      | Y | 0.3433 | 0.3529 | 0.3461 | 0.3368 |      | Y | 0.3529 | 0.3626 | 0.3553 | 0.3461 |
| Wd2  | X | 0.3201 | 0.3291 | 0.3292 | 0.3207 | Wd3  | X | 0.3207 | 0.3292 | 0.3293 | 0.3213 |
|      | Y | 0.3534 | 0.3613 | 0.3527 | 0.3459 |      | Y | 0.3459 | 0.3527 | 0.3425 | 0.3362 |
| Wd4  | X | 0.3213 | 0.3293 | 0.3295 | 0.3220 | Wd10 | X | 0.3220 | 0.3295 | 0.3295 | 0.3227 |
|      | Y | 0.3362 | 0.3425 | 0.3323 | 0.3267 |      | Y | 0.3267 | 0.3323 | 0.3226 | 0.3170 |
| Wd6  | X | 0.3291 | 0.3382 | 0.3378 | 0.3292 | Wd7  | X | 0.3292 | 0.3378 | 0.3373 | 0.3293 |
|      | Y | 0.3613 | 0.3693 | 0.3596 | 0.3527 |      | Y | 0.3527 | 0.3596 | 0.3488 | 0.3425 |
| Wd8  | X | 0.3293 | 0.3373 | 0.3368 | 0.3295 | Wd9  | X | 0.3295 | 0.3368 | 0.3364 | 0.3295 |
|      | Y | 0.3425 | 0.3488 | 0.3380 | 0.3323 |      | Y | 0.3323 | 0.3380 | 0.3284 | 0.3226 |
| Wd1  | X | 0.3195 | 0.3291 | 0.3291 | 0.3201 | Wd5  | X | 0.3291 | 0.3385 | 0.3382 | 0.3291 |
|      | Y | 0.361  | 0.3692 | 0.3613 | 0.3534 |      | Y | 0.3692 | 0.3776 | 0.3693 | 0.3613 |
| We2  | X | 0.3382 | 0.3473 | 0.3462 | 0.3378 | We3  | X | 0.3378 | 0.3462 | 0.3452 | 0.3373 |
|      | Y | 0.3693 | 0.3772 | 0.3664 | 0.3596 |      | Y | 0.3596 | 0.3664 | 0.3550 | 0.3488 |
| We4  | X | 0.3373 | 0.3452 | 0.3442 | 0.3368 | We10 | X | 0.3368 | 0.3442 | 0.3434 | 0.3364 |
|      | Y | 0.3488 | 0.3550 | 0.3438 | 0.3380 |      | Y | 0.3380 | 0.3438 | 0.3339 | 0.3284 |
| We6  | X | 0.3473 | 0.3562 | 0.3547 | 0.3462 | We7  | X | 0.3462 | 0.3547 | 0.3528 | 0.3452 |
|      | Y | 0.3772 | 0.3851 | 0.3736 | 0.3664 |      | Y | 0.3664 | 0.3736 | 0.3610 | 0.3550 |
| We8  | X | 0.3452 | 0.3528 | 0.3510 | 0.3442 | We9  | X | 0.3442 | 0.3510 | 0.3502 | 0.3434 |
|      | Y | 0.3550 | 0.3610 | 0.3492 | 0.3438 |      | Y | 0.3438 | 0.3492 | 0.3395 | 0.3339 |
| We1  | X | 0.3385 | 0.348  | 0.3473 | 0.3382 | We5  | X | 0.348  | 0.3575 | 0.3562 | 0.3473 |
|      | Y | 0.3776 | 0.3859 | 0.3772 | 0.3693 |      | Y | 0.3859 | 0.3942 | 0.3851 | 0.3772 |



Diagram



**Typical electrical/optical characteristic curves/光电特性曲线:**

Fig.1 正向电流 Vs. 正向电压

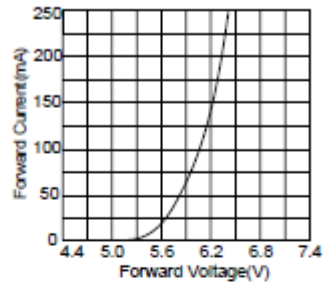


Fig.2 相对亮度 Vs. 正向电流

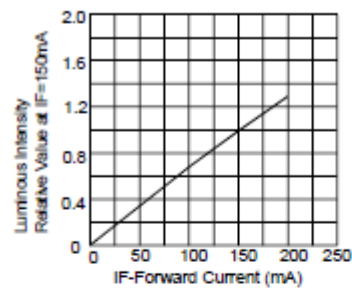


Fig.3 正向电流 Vs. 环境温度

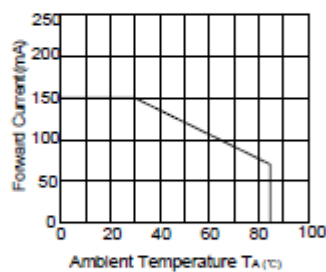
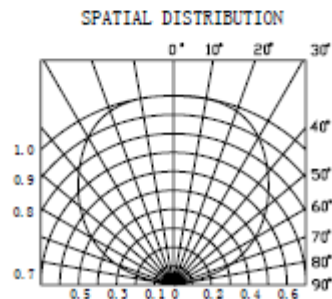
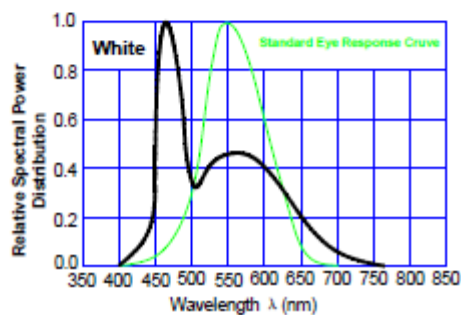
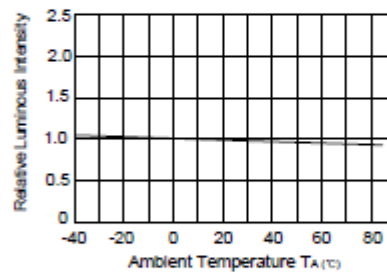


Fig.4 相对亮度 Vs. 环境温度



**Reliability Analysis/可靠性试验****Test Items And Results/测试项目和判据**

| No. | Item/项目                              | Test Condition/测试条件                                           | Spec. / 引用标准           | Q'ty/ 数量 | Time/ 时间              | Standard/判定 |
|-----|--------------------------------------|---------------------------------------------------------------|------------------------|----------|-----------------------|-------------|
| 1   | IR Reflow (Reflow Soldering)<br>回流焊接 | Tsld=220℃, 10sec                                              | GB/T 4937, II, 2.2     | 20       | 2times                | ALL PASS    |
| 2   | Solder ability<br>可焊性                | Tsld=235±5℃, 3sec                                             | GB/T 4937, II, 2.1     | 20       | 1times<br>Over<br>95% | ALL PASS    |
| 3   | Temperature Cycle<br>高低温循环           | -40℃——100℃<br>30min ~ 30min<br>The cut is not more than 5 min | GB/T 4937, III, 1      | 20       | 50cycles              | ALL PASS    |
| 4   | Moisture Resistance Cyclic<br>湿热循环   | 25℃/12hr~<br>55℃/12hr<br>95%RH                                | GB/T 4937, III, 4      | 20       | 6cycles               | ALL PASS    |
| 5   | High Temperature Storage<br>高温储存     | Ta=100℃                                                       | GB/T 4937, III, 2      | 20       | 1000hrs               | ALL PASS    |
| 6   | Low Temperature Storage<br>低温储存      | Ta=-40℃                                                       | GB/T 4937, III, 2      | 20       | 1000hrs               | ALL PASS    |
| 7   | Steady State perating Life<br>电耐久性   | IF=150mA<br>Ta=25℃                                            | GB/T 18904.3<br>Part A | 20       | 1000hrs               | ALL PASS    |

**8.2 Criteria For Judging Damage/判断标准**

| Item/项目               | Symbol/ 符号 | Test conditions /测试条件 | Criteria for Judgement /判断标准 |           |
|-----------------------|------------|-----------------------|------------------------------|-----------|
|                       |            |                       | Min./最小值                     | Max./最大值  |
| Luminous Intensity/亮度 | Iv         | IF=150mA              | L.S.L *0.7                   | /         |
| Forward Voltage/正向电压  | VF         | IF=150mA              | /                            | U.S.L*1.1 |
| Reverse current/反向电流  | IR         | VR=7v                 | /                            | U.S.L*2   |

\*U.S.L.: Upper Standard Level / 上限

\*L.S.L.: Lower Standard Level / 下限

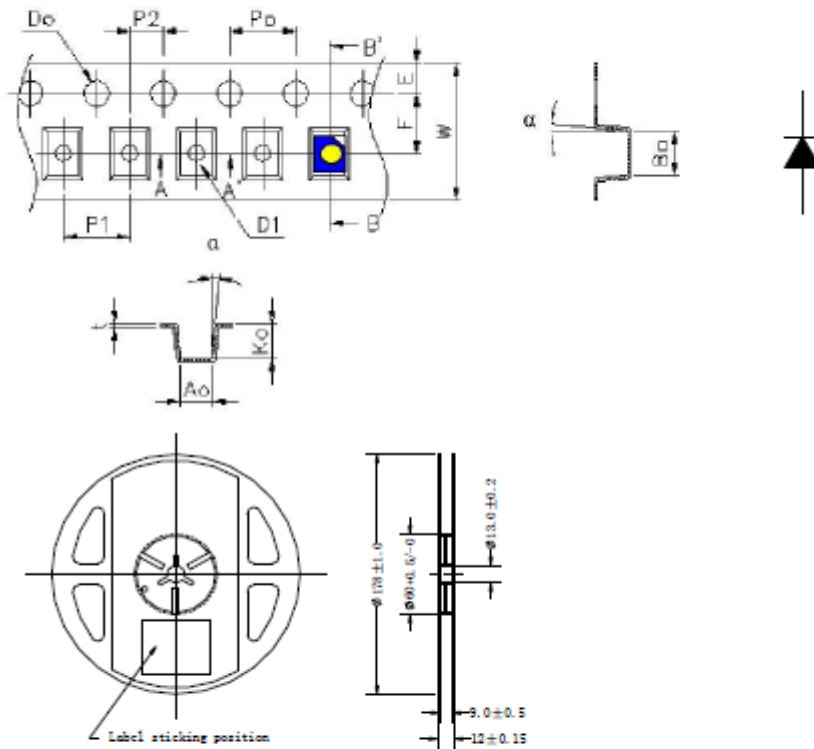


## 9、Specification of Packing /包装规格

### 9.1 Taping and Orientation/编带和方向

Quantity/数量 : 3000units/reel

Diameter/直径 : 178 mm



| Item/项目 | Spec/数值 | Tol.(+/-)/误差 | Item/项目 | Spec/数值 | Tol.(+/-)/误差 |
|---------|---------|--------------|---------|---------|--------------|
| W       | 8.00    | ±0.10        | P2      | 2.00    | ±0.05        |
| E       | 1.75    | ±0.10        | T       | 0.20    | ±0.02        |
| F       | 3.50    | ±0.010       | A0      | 3.00    | ±0.10        |
| D0      | 1.55    | ±0.05        | B0      | 3.75    | ±0.10        |
| D1      | 1.10    | ±0.1         | K0      | 1.25    | ±0.10        |
| P0      | 4.00    | ±0.1         | α       | Max 5°  |              |



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