

规格书

Specifications

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|----------------------|--|
| 品名 Name | 2 位数码管 2 Digit Seven-segment LED Display |
| 型号 Model | YD-S5022E (共阴 Share Cathode) |
| | YD-S5022F (共阳 Share Anode) |
| 发光颜色 Color | 红-R 超亮红-SR 黄绿-G 黄-Y 蓝-B 翠绿-PG 白-W Red-R, Super Red-SR, Yellow Green-G, Yellow-Y, Blue-B, Pure Green-PG, White-W |
| 8 字高度 "8" Height | 0.50 英寸 12.70mm 0.50inch, 12.70mm |
| 总芯片数 Total LED Chips | 16 |
| 表面颜色 Cover Color | 黑色 Black |
| 胶体颜色 Colloid Color | 乳白/红 Ivory/Red |
| 备注 Remark | |

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一.特性描述 (Characteristics)

- ★★★ 能在低电压、小电流条件下驱动发光
Lower working voltage and current
- ★★★ 发光响应时间极短($<0.1 \mu s$),高频特性好,单色性好,亮度高
Lighting answering Time $<0.1 \mu s$, better high frequency, chromaticity uniformity, high brightness.
- ★★★ 体积小,重量轻,抗冲击性能好. 固态封装, 封装方式为灌胶型,稳定性高
Smaller volume, lighter weight, better impact resistance, solid sealing, good steady.
- ★★★ 寿命长,使用寿命在 5 万小时以上
Long life for 50,000 hours.
- ★★★ 可连续扫描驱动各字节
Keep scanning and driving every segment continuously.
- ★★★ 良好的显示效果、视角宽
Better showeffect and wider visual angle.
- ★★★ 推荐恒流使用,恒压会出现亮度不均匀现象
Recommend constant current driver.
- ★★★ 表面有保护膜的产品,可以在使用前撕下来
Protective coating, and rip off when using.
- ★★★ 焊接温度: 260°C 停留时间最长 5 秒
Solder temperature: 260°C ,and stay time less than 5 seconds.
- ★★★ 当工作温度高于 25°C 时, I_{fm} , I_{fp} 和 I_d 必须降低;电流降低率是 $-0.36\text{mA}/^{\circ}\text{C}$ (直流驱动), 或 $-0.86\text{mA}/^{\circ}\text{C}$ (脉冲驱动) 功耗率是 $-0.75\text{mW}/^{\circ}\text{C}$ 。产品的工作电流不能大于对应工作温度条件 I_{fm} 或 I_{fp} 的 60%。
For operation above 25°C , The I_{fm} I_{fp} & P_d must be derated, the Current derating is $-0.36\text{mA}/^{\circ}\text{C}$ for DC drive and $-0.86\text{mA}/^{\circ}\text{C}$ for pulse drive, the power dissipation is $-0.75\text{mW}/^{\circ}\text{C}$. The product working current must not more than the 60% of the I_{fm} or I_{fp} according to the working temperature.
- ★★★ 蓝色,翠绿色,白色请采取防静电措施
Electrostatic prevention for Blue, Pure Green and White ones.

二. 极限参数 (Limited Parameters)

| 参数 Parameters | 符号 Symbol | 极限参数 Limited parameter |
|----------------------------------|-----------|------------------------|
| 脉冲电流 Peak Forward Current | Ifp | 100mA |
| 直流电流 Continuous Forward Current | If | 20 mA |
| 反向电压 Reverse Voltage | Vr | 5V |
| 工作温度 Operating temperature Range | Topr | -25 to +70°C |
| 储存温度 Storage temperature Range | Tstg | -40 to +85°C |

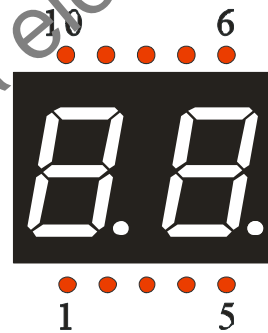
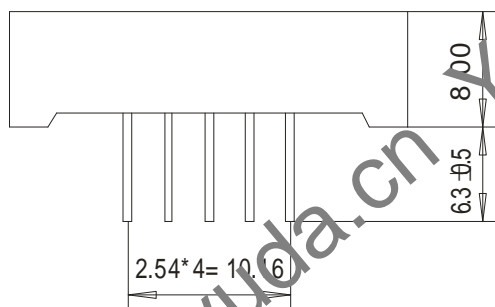
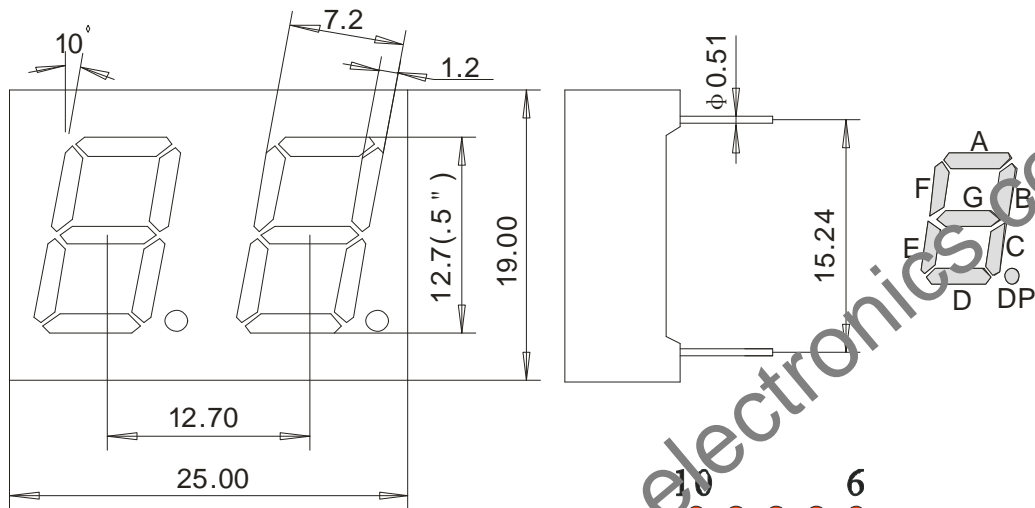
三. 光电参数 (Photoelectric Parameters)

| 参数 Parameter | 正向电压 Forward voltage | | 反向电流 Reverse current | | 发光强度 Luminous Intensity | 波长 Wavelength | 功耗 Power consumption |
|---------------------------|-------------------------|------------|-------------------------|------------|----------------------------|------------------|-------------------------|
| | 符号 Name | VF | IR | | IV | λ_p | Pt |
| 单位 Unit | V | | uA | | mcd | nm | mW |
| 条件 Condition | IF=20 mA | | VR=5V | | IF=20mA | IF=20mA | IF=20mA |
| | 平均 Arrange | 最大 Max. | 平均 Arrange | 最大 Max. | 平均 Arrange | 平均 Arrange | 平均 Arrange |
| 高亮红 High red R | 2 | 2.4 | -- | 20 | 11 | 635 | 36 |
| 超高亮红 super red SR | 2.2 | 2.6 | -- | 20 | 80 | 620 | 40 |
| 黄绿色 Yellow green G | 2.2 | 2.6 | -- | 20 | 11 | 571 | 44 |
| 黄色 Yellow Y | 2.1 | 2.5 | -- | 20 | 85 | 590 | 42 |
| 蓝色 Blue B | 3.3 | 4 | -- | 20 | 12 | 465 | 66 |
| 翠绿色 Pure green PG | 3.3 | 4 | -- | 20 | 220 | 515 | 66 |
| 白色 White W | 3.3 | 4 | -- | 20 | -- | -- | 66 |

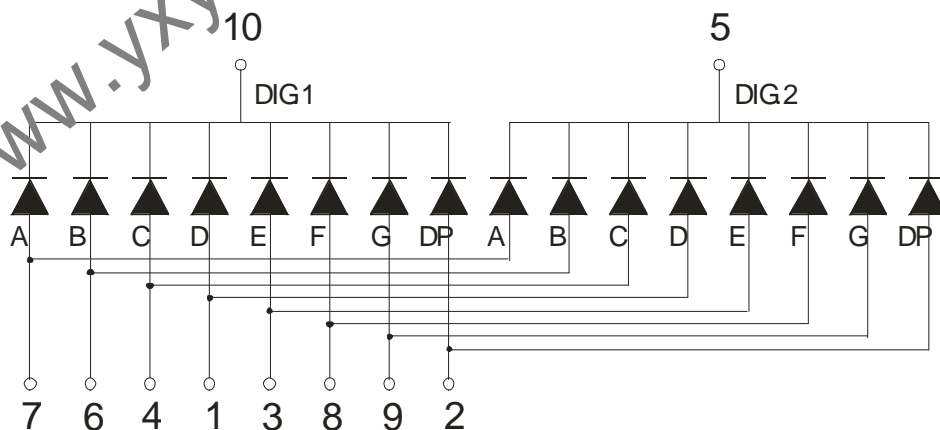
四.外形尺寸及电路原理图: 25.00mm×19.00mm×8.00mm

Figure Size & Circuit Principle Diagram: 25.00mm×19.00mm×8.00mm

5022E



数码管显示及引脚位置图



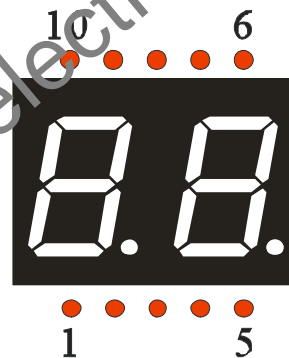
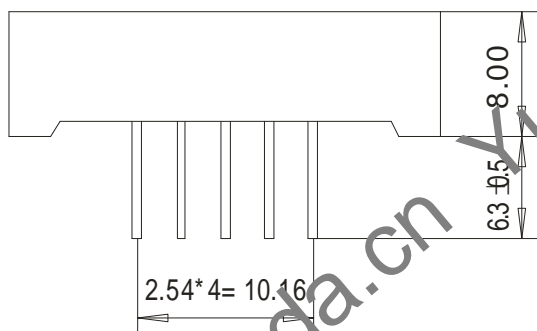
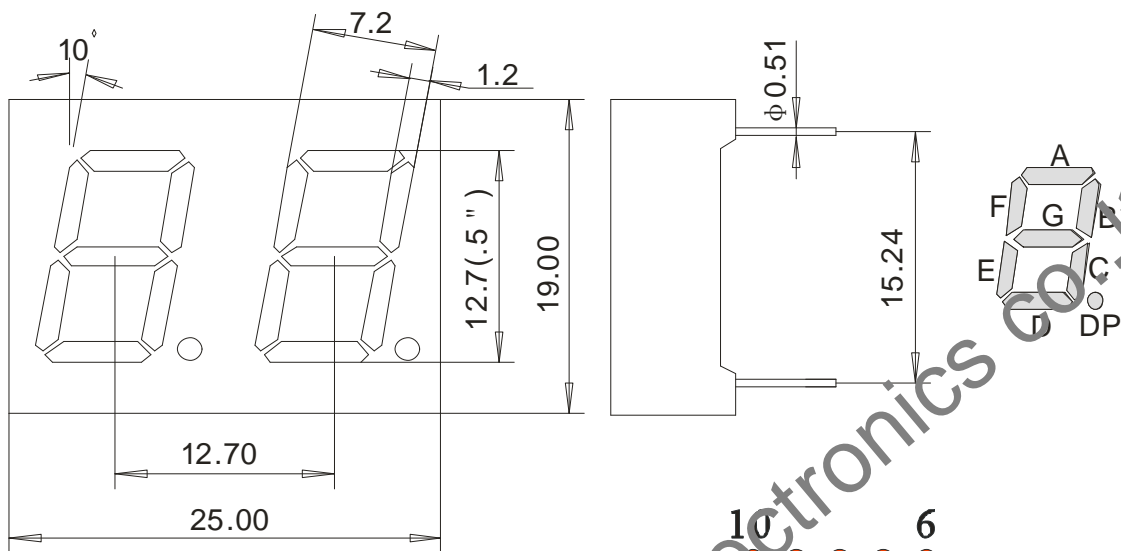
段驱动电压为：正向电压×1

Segment driver voltage: VF value x 1

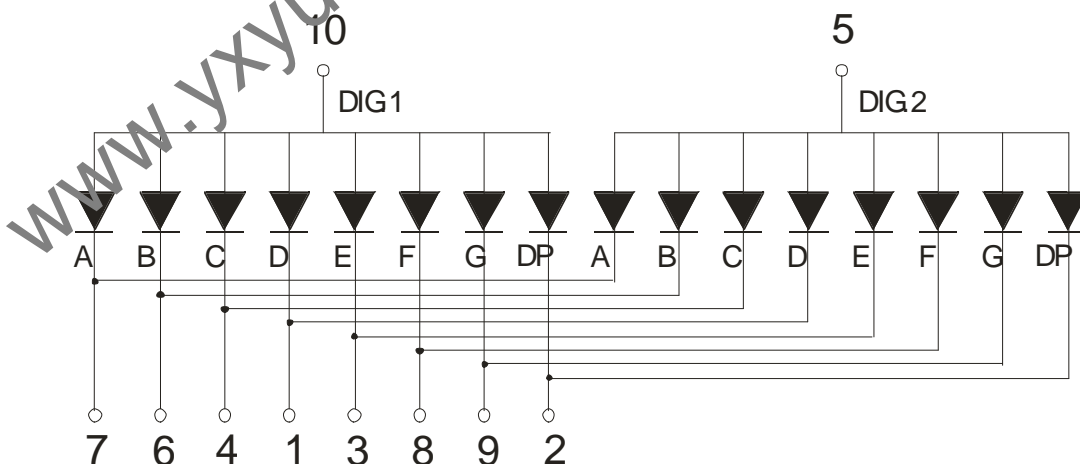
小数点驱动电压为：正向电压×1 不同颜色的正向电压值不同,详见第二页光电参数表.

Decimal driver voltage: VF value x 1, different colors with different forward voltage, please refer to Photoelectric Parameters.

5022F



数码管显示及引脚位置图



段驱动电压为：正向电压×1

Segment driver voltage: VF value x 1

小数点驱动电压为：正向电压×1 不同颜色的正向电压值不同,详见第二页光电参数表.

Decimal driver voltage: VF value x 1, different colors with different forward voltage, please refer to Photoelectric Parameters.