



厦 门 华 联 电 子 有 限 公 司

Xiamen Hualian Electronics Co., Ltd.

产品规格书

SPECIFICATION

产品名称: 数码显示器

DESCRIPTION: DIGITAL DISPLAY

产品型号: HSR8145B

PART NO: HSR8145B

Prepared 拟制	Checked 审核	Approved 批准

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1. 特性 (FEATURES)

- 高可靠性 High reliability
- 低电流驱动 Low drive current
- 低功耗 Low power requirement
- 响应快 Fast Response time
- 符合 RoHS 要求 Meet RoHS directive
- ESD 敏感器件，静电放电敏感值：1000V（人体模式）/ 500V（机器模式）

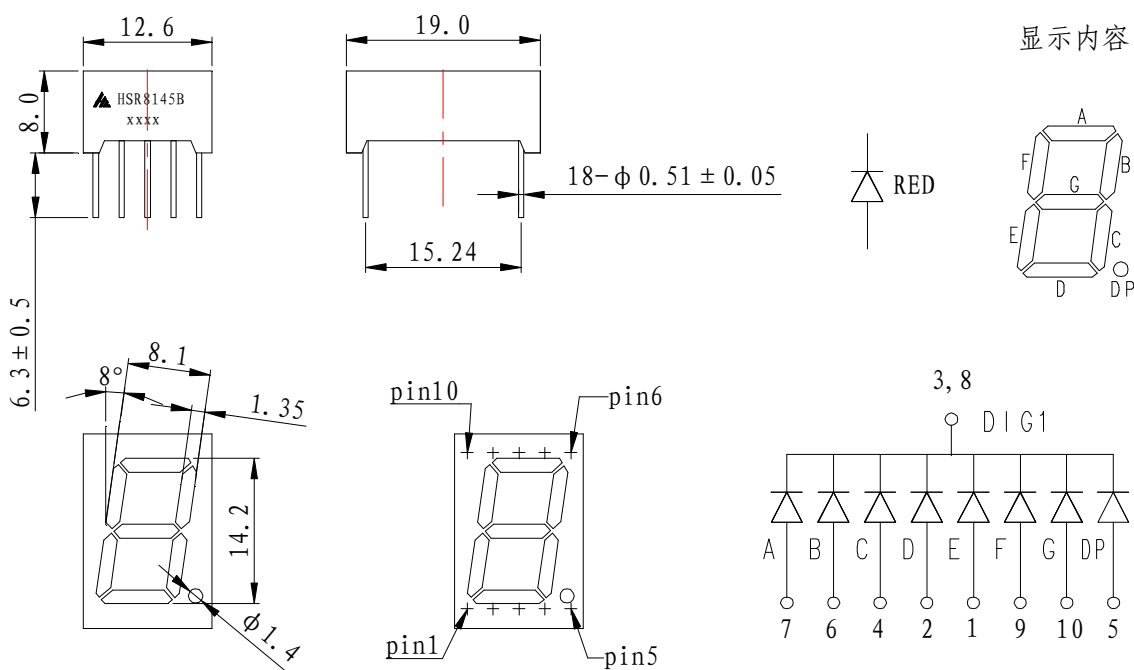
Electrostatic sensitive device, ESDS: 1000V(Human body mode) / 500V(Machine mode)

2. 特征 (DESCRIPTION)

- 外形尺寸 Package dimensions: 19mm×12.6mm×8mm
- 白色散射环氧封装，黑色表面 White diffusive epoxy with black face
- LED 芯片材料 LED chip material:
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芯片材料 Die Material	发光颜色 Emitted color
AlGaInP/GaAs	红色 Red

3. 外形尺寸和电原理图(PACKAGE DIMENSIONS and CIRCUIT DIAGRAM)



注：未注公差：±0.20mm。

Notes: All dimensions are in millimeters. Tolerances are ±0.20mm unless otherwise noted.

4. 极限参数 (ABSOLUTE MAXIMUM RATINGS) (Ta=25℃)

参 数 PARAMETER	符号 SYMBOL	额定值 MAXIMUM RATING		单位 UNIT
正向电流/LED Forward Current Per LED	I_{FM}	15		mA
脉冲电流/LED Peak Forward Current Per LED (1/10 DUTY , 0.1ms)	I_{FP}	60		mA
电流降低率 Derating Linear From 25℃		-0.21		mA/℃
反向电压/LED Reverse Voltage Per LED	V_R	5		V
耗散功率/LED Power Dissipation Per LED	P_D	37.5		mW
工作温度 Operating Temperature	T_{opr}	-25~+85		℃
贮存温度 Storage Temperature	T_{stg}	-30~+85		℃
焊接温度 (3 秒, 离器件本体 1/16 英寸以上) Soldering Heat (Up to 1/16 Inch From The Body Of The Device For 3s)	T_{sd}	波峰焊	270℃/10 秒	℃
		手工焊	350℃/3 秒/3 次 (再焊接间隔 时间 10 秒以上)	

备注：当工作环境温度超过 25℃时， I_{FM} , I_{FP} & P_d 需相应降低，分别为： I_{FM} 的降低率为-0.21mA/℃， I_{FP} 的降低率为 -0.67mA/℃， P_d 的降低率为-0.55 mW/℃；产品的推荐工作电流 I_{FM} or I_{FP} 不超过在工作温度下其极限值的 1/4；工作电流越大，产品的寿命越短；过度超出推荐电流将加速寿命的缩短。

Notes : For operation above 25℃,the I_{FM} , I_{FP} & P_d must be derated , the current derating is -0.21mA/℃ for DC drive and -0.67mA/℃ for pulse drive, the power dissipation of the blue LED is -0.55 mW/℃.The product recommended working current must not more than the 25% of the I_{FM} or I_{FP} according to the working temperature, The higher the working current, the shorter the working life of the products; A substantial increase in the recommended working current can be achieved by accelerating the loss of the working life.

5. 光电参数 (ELECTRICAL/OPTICAL CHARACTERISTICS) (Ta=25℃)

参数 PARAMETER	符号 SYMBOL	测试条件 TEST CONTION	MIN.	TYP.	MAX.	单位 UNIT
正向电压/LED Forward Voltage Per LED	V_F	$I_F=20\text{mA}$ / LED	1.7	2.1	2.6	V
反向电流/LED Reverse Current Per LED	I_R	$V_R=5\text{V}$ / LED	-	-	5	μA
发光强度/LED Luminous Intensity Per LED	I_V	$I_F=20\text{mA}$ / LED	20	30	-	mcd
主波长 Dominant Wavelength	λ_D	$I_F=20\text{mA}$ / LED	630	635	640	nm
光谱半宽度 Spectral Line Half Width	$\Delta\lambda$	$I_F=20\text{mA}$ / LED	-	10	-	nm

- 注 Notes: 1. 漏光程度 $\leq 5\%$; The case light leakage rate $\leq 5\%$;
 2. 亮度不均程度 $\leq 35\%$; Luminous intensity matching ratio $\leq 35\%$;
 3. 单个产品色差 $\leq 5\text{nm}$; color difference of single product $\leq 5\text{nm}$.
 4. 在不同的正向电流下, 对应的正向电压和光强见“正向电压~正向电流”和“相对光强~正向电流”曲线图; The forward voltage and luminous intensity at different currents are shown in figures “FORWARD CURRENT VS. FORWARD VOLTAGE” and “RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT” in characteristics curve.

6. 使用注意事项 (PRECAUTIONS FOR USE)

当使用此产品时, 请遵守规格书中给出的绝对最大额定值(极限参数值)和指示。我们不承担任何由该产品不符合规格书中绝对最大额定值和指示的使用所造成的损失负责。When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. We assume no responsibility for any damage resulting from use of the product, which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.

更改记录表

UPDATE RECORD TABLE

版次 EDITION	制定或更改日期 DATE	主要更改内容 MAIN CONTENT	拟 制 PREPARED	确 认 CHECKED
1.0	2014-11-27	新版发布	张 晗	