



worldwide

# 珠海市萬州光電科技有限公司

Zhuhai Worldwide optoelectronics technology Co., Ltd

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## 样品承认书

客户名称: \_\_\_\_\_

规格型号: \_\_\_\_\_ L5IR850B-45 \_\_\_\_\_

客户编号: \_\_\_\_\_

认定盖章 ApptCovalSignntutes		
核准	品管	工程
彭志远	黄启红	盛开

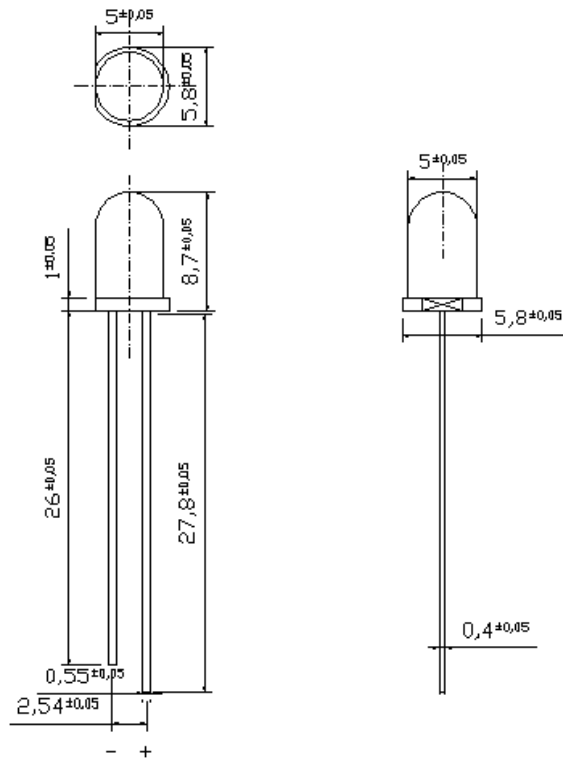
承认单位: \_\_\_\_\_

客户反馈意见: \_\_\_\_\_

\_\_\_\_\_

认定盖章 ApptCovalSignntutes			
核准	品管	工程	采购

## 一、 尺寸(size);



## 二、 描述; Description

L5IR850B-45系列发射管是采用GaAlAs技术的高功率红外发射二极管,采用透明的塑料封装。在一个相似的波长内与标准GaAs比较, GaAlAs技术的这些发射二极管达到超过100%辐射功率改善。正向电压在低电流和高脉冲电流工作条件下大致对应于标准技术。

所以这些发射二极管是理想的作为标准发射器件的高性能产品。

L5IR850B-45 is a high efficiency infrared emitting diode in GaAlAs technology, molded in clear, bluegrey tinted plastic packages

In comparison with the standard GaAs on GaAlAs technology these emitters achieve more than 100 % radiant power improvement at a similar wavelength. The forward voltages at low current and at high pulse current roughly correspond to the low values of the standard technology.

Therefore these emitters are ideally suitable as high performance replacements of standard emitters.

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### 三、 主要参数; principal character

型号 Model No.	材料 Material	波长 Wavelength $\lambda_p$ (nm)	颜色 Lens Color	发射角度 Viewing Angle $2\theta_{1/2}$
L5IR850B-45	AlGaAs	850	清胶 Water Clear	45

### 四、 极限参数; Absolute Maximum Ratings at Ta=25°C

参数 Parameter	测试条件 Test Conditions	符号 Symbol	数值 Value	单位 Unit
正向电流 Peak Forward Current		Ifm	50	mA
正向脉冲电流 Surge Forward Current	tp/T = 0.5, tp = 100 $\mu$ s	Ifsm	1.5	A
耗散功率 Power Dissipation		Pv	150	mW
结温 Junction Temperature		Tj	100	°C
工作温度范围 Operating Temperature Range		Tamb	-25 +80	°C
存储温度范围 Storage Temperature Range		Tstg	-55 +100	°C
焊接温度 Soldering Temperature	t $\leq$ 5sec, 3 mm from case	Tsd	260	°C

### 五、 光电特性; Electrical Optical Characteristics:

参数 Parameter	测试条件 Test Conditions	符号 Symbol	最小 Min	典型 Typ	最大 Max	单位 Unit
正向电压 Forward Voltage	IF = 50mA	VF	1.3		1.8	V

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反向漏电流 Reverse Current	$V_r=5V$	IR			10	$\mu A$
结电容 Junction Capacitance	$V_R = 0 V, f = 1 MHz,$ $E = 0$	Cj		25		Pf
发射强度 Radiant Intensity	IF =50 mA	Ie	50		60	mW/sr
功率衰减系数 Temp. Coefficient of $\phi_e$	IF = 50 mA	TK $\phi_e$		-0.6		%/K
发射角度 Angle of Half Intensity		$2\theta_{1/2}$		45		deg
峰值波长 Peak Wavelength	IF = 50 mA	$\lambda_p$		850		nm
光谱偏差范围 Spectral Bandwidth	IF = 50 mA	$\Delta\lambda$		50		nm
波段衰减系数 Temp. Coefficient of $\lambda_p$	IF = 50 mA	TK $\lambda_p$		0.2		nm/K
上升时间 Rise Time	IF = 50 mA	tr		25		ns
下降时间 Fall Time	IF = 50 mA	tf		13		ns

六、特性曲线; **Typical Characteristics** ( $T_{amb} = 25^\circ C$  unless otherwise specified)

Fig 1. Forward Current vs. Forward Voltage

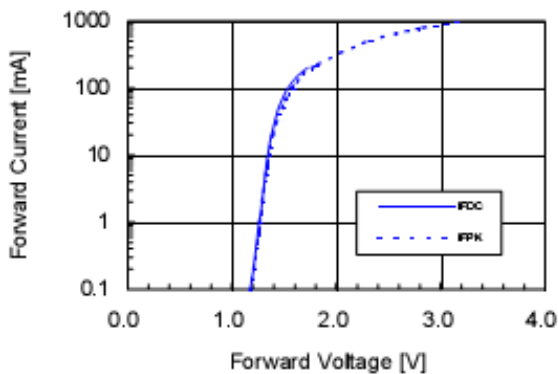


Fig 2. Relative Radiant Power vs. Wavelength

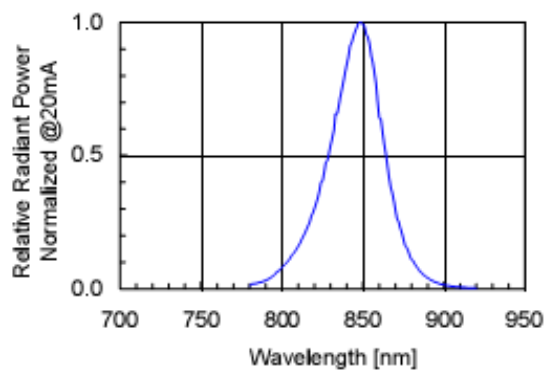


Fig 3. Relative Radiant Power vs. Forward DC Current

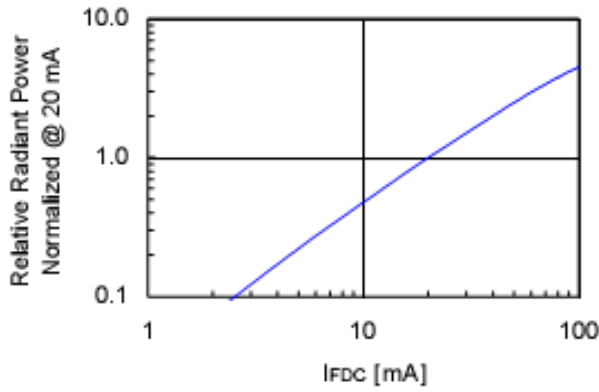


Fig 4. Relative Radiant Power vs. Forward Peak Current

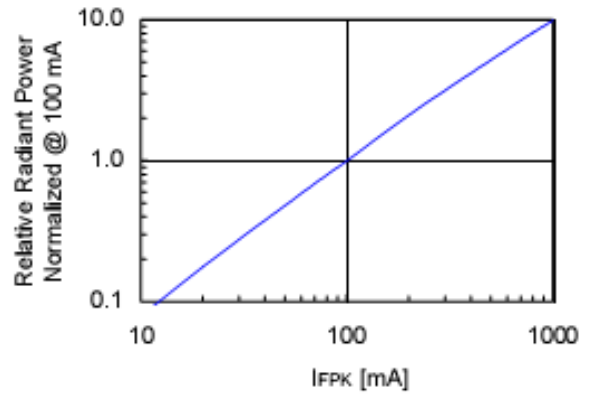


Fig 5. Forward DC Voltage vs. Temperature

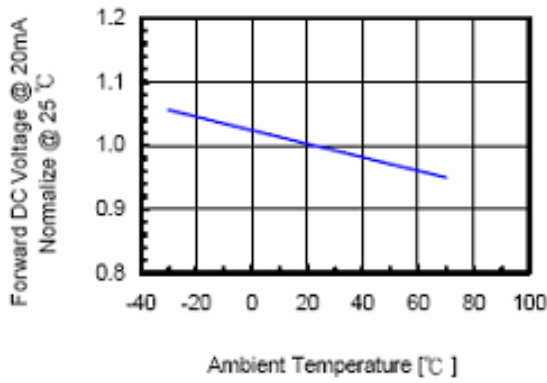
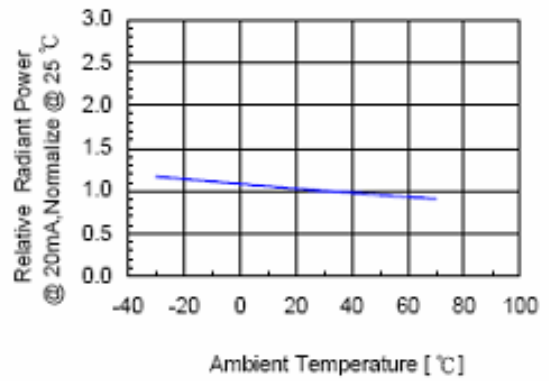
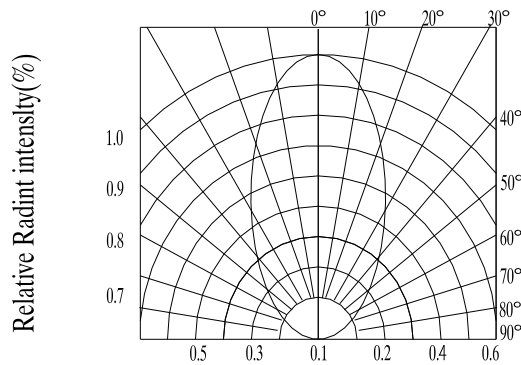


Fig 6. Relative Radiant Power vs. Temperature



Radiation Diagram Ta=25°



Radiation Diagram