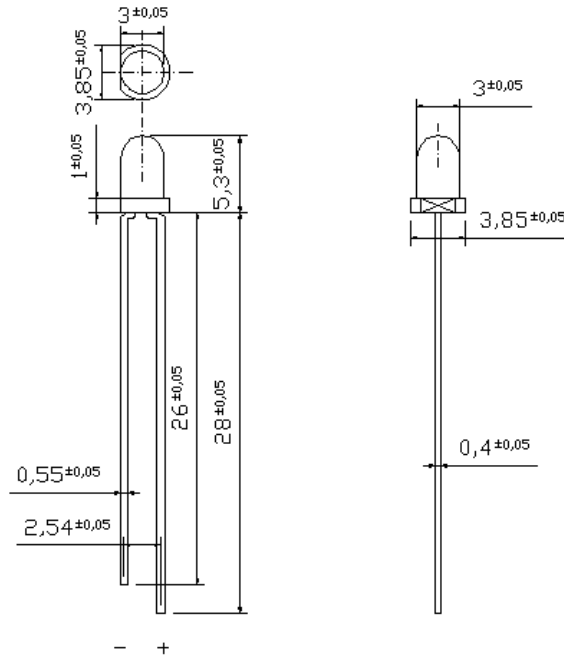


红外发射二极管

一、尺寸; Size



二、描述; Description

L3IR3-45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，采用GaAlAs技术的这些发射二极管辐射功率达到超过100%的改善。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。

L3IR3W-45 is a high efficiency infrared emitting diode in GaAlAs technology, molded in clear, blue grey 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.

三、 基本参数; Principal character

型号 Model No.	材料 Material	波长 Wavelength λ_p (nm)	颜色 Lens Color	发射角度 Viewing Angle $2\theta_{1/2}$
L3IR3-45	GaAlAs/GaAs	940	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
正向峰值电流 Peak Forward Current		Ifm	100	mA
正向脉冲电流 Surge Forward Current	tp/T = 0.5, tp = 100 μ s	Ifsm	1.5	A
耗散功率 Power Dissipation		Pv	200	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 at Ta= 25°C

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	1.25		1.5	V
正向电流 Forward Current		If		50		mA
反向电压 Reverse voltage	IR=10μA	VR	9			V
反向漏电流 Reverse Current	VR=5V	IR			10	μA
发射强度 Radiant Intensity	IF =50 mA	Ie	4		8	mW/sr
结电容 Junction Capacitance	VR = 0 V, f = 1 MHz, E = 0	Cj		25		Pf
功率衰减系数 Temp. Coefficient of ϕ_e	IF = 50 mA	TK ϕ_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	λ_p		940		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 λ_p	IF = 50 mA	TK λ_p		0.2		nm/K
上升时间 Rise Time	IF = 50 mA	tr		800		ns
下降时间 Fall Time	IF = 50 mA	tf		800		ns

六、特性曲线; Typical Characteristics (Ta= 25°C)

