XL-ITR8105

技术数据表 Technical Data Sheet

特点（Characteristic）：

*

High Hi radiant intensity Low forward voltage

*

Fast response time High photo sensitivity

* 940nm

Cut-off visible wavelength λp=940nm

* Rohs

Pb.Free RoHS compliant version

* MSL :2

Moisture sensitivity level MSL : 2 levels

应用领域（Product application）：

*

Slot machines

*

Small home appliances

*

Automatic Sensors

*

Fax machine

*

Scanner

目录

Catalog

电性参数

Electrical Characteristics

✧极限参数 ：Absolute Maximum Ratings (Temperature=25ÁC):

Parameter		Symbol	Ratings	Unit
Input Emitter	Power Dissipation*1	PD	75	mW
	Continuous Forward Current	IF	50	mA
	Peak Forward Current*2	IFP	1	A
	Reverse Voltage	VR	5	V
Output Detector	Power Dissipation*1	PD	75	mW
	- Collector-Emitter Voltage	VCEO	30	V
	- Emitter-Collector Voltage	VECO	5	V
	Collector Current	IC(on)	20	mA
Operating Temperature		Topr	-20 ~ +85	
Storage Temperature		Tstg	-40 ~ +85	
Lead Soldering Temperature*3		Tsol	260	

=25℃）：

Electro-Optical Charasteristics (Temperature=25ÁC):

Parameter		Symbol	Test conditions	Min	Typ	Max	Unit
Input	Forward Voltage	VF	IF=20mA	--	1.2	1.6	V
			IF=100mA*2	--	1.4	1.85	
			IF=1A *2	--	2.6	4.0	
	Perk Wavelength	∂P	IF=20mA	--	940	--	nm
	Reverse Current	IR	VR=5V	--	--	10	εA
Output	Dark Current	ICEO	Ee=0mW/cm2 VCE=20V	--	--	100	nA
	- C-E Saturation Voltage	VCE(SAT)	IC=2mA Ee= 1mW/cm2	--	--	0.4	V
Transfer Characteristics	Rise Time	tr	VCE=5V IC= 1mA RL= 1000q	--	15	--	εS
	Fall Time	tf		--	15	--	
	Collector Current	IC(ON)	IF=20mA VCE=5V	8.0	15	--	mA

(Note)

* 25 below 25 Free Air Temperature
* 100us 1% Pulse width 100εs,Duty cycle= 1%
* 2mm 5s 2mm form body for 5 seconds

电压分档

Voltage grading:

代码 Code	最小值 Min	最大值 Max	单位 Unit	测试条件 Test conditions
R2-4	1.2	1.6	V	IF=20mA

光电流分档:

Collector Current grading:

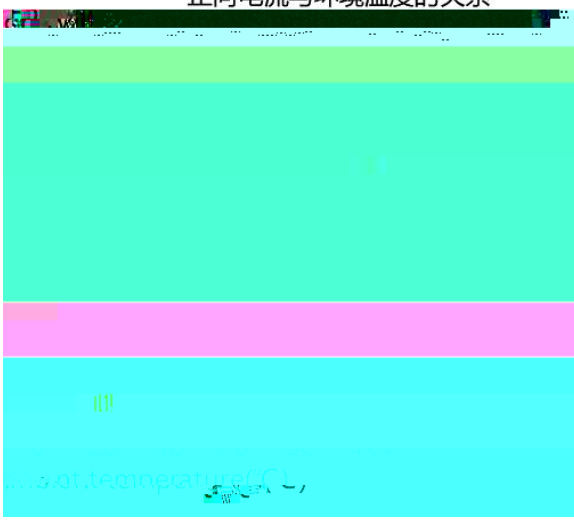
代码 Code	最小值 Min	最大值 Max	单位 Unit	测试条件 Test conditions
IC27-39	8	20	mA	IF=20mA VCE=5V

典型特性曲线

Typical Characteristics Curves

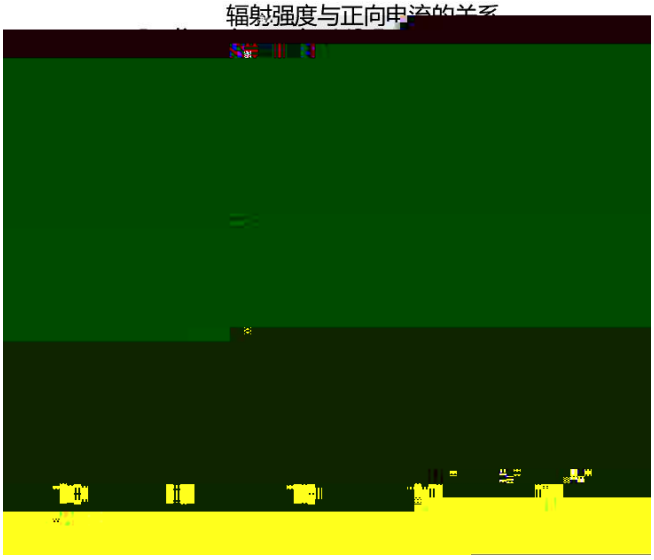
发射管特性曲线图 Typical Electro-Optical Characteristics Curves-IR

正向电流与环境温度的关系

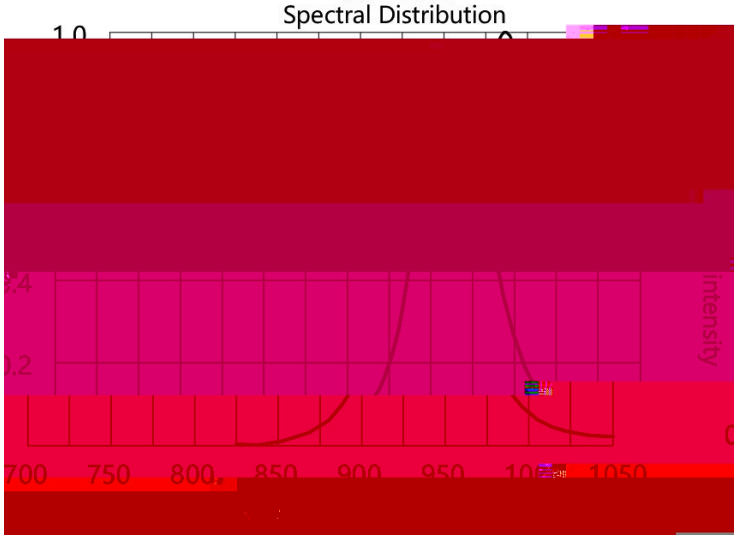


正向电流与正向电压的关系

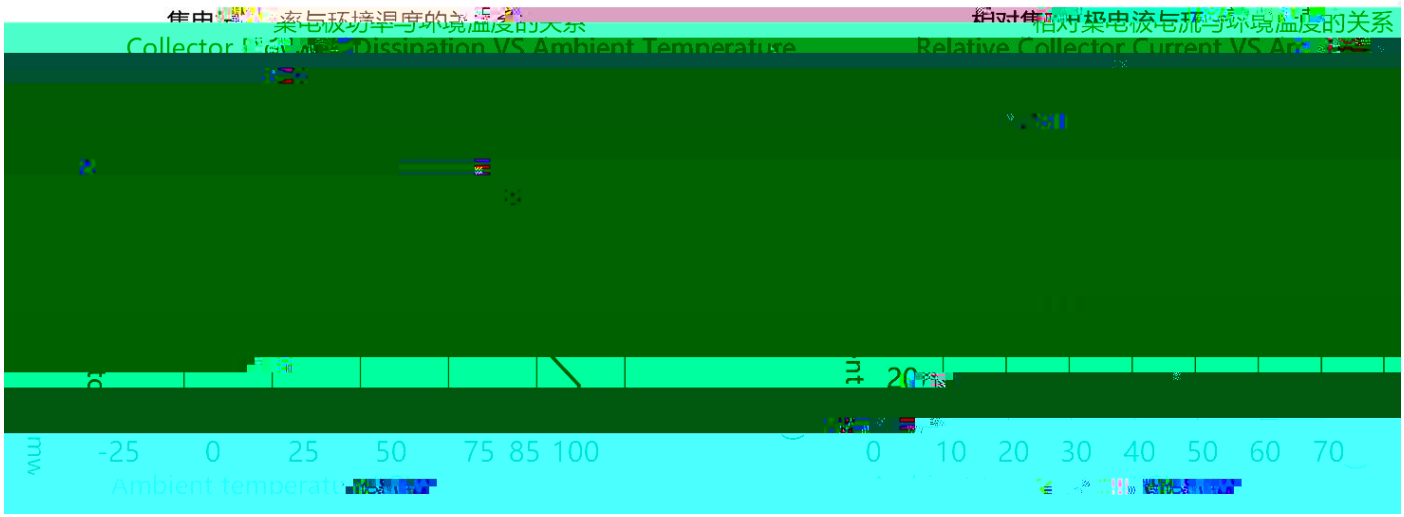
辐射强度与正向电流的关系

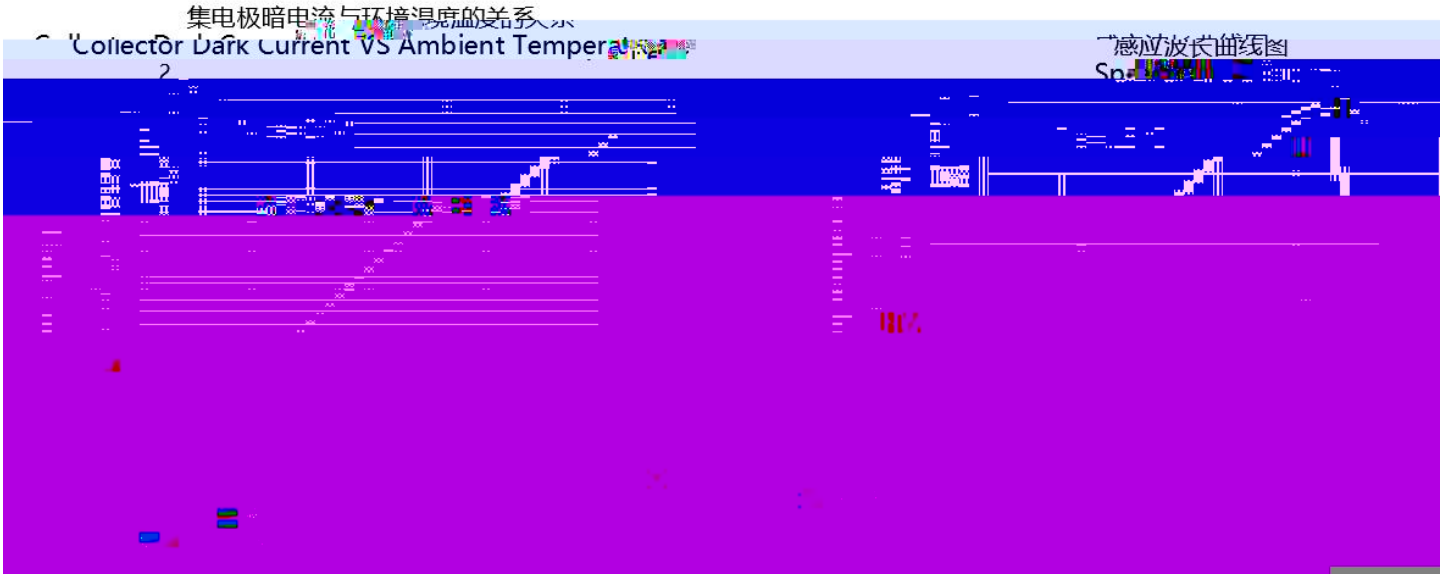


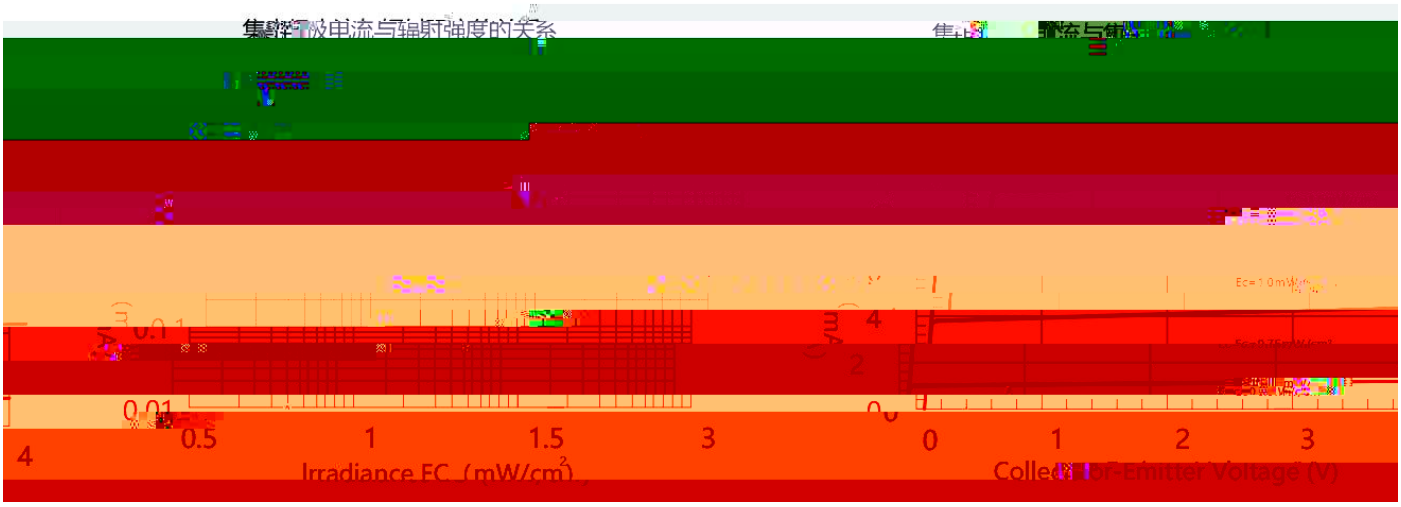
波长曲线图
Spectral Distribution



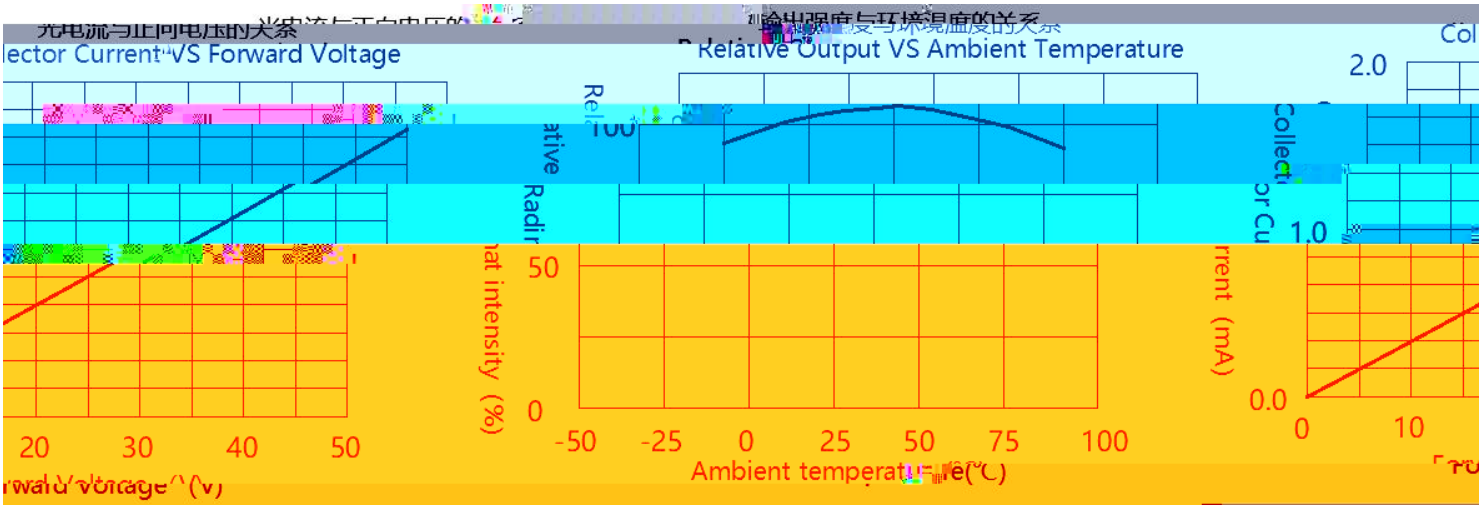
接收管特性曲线图

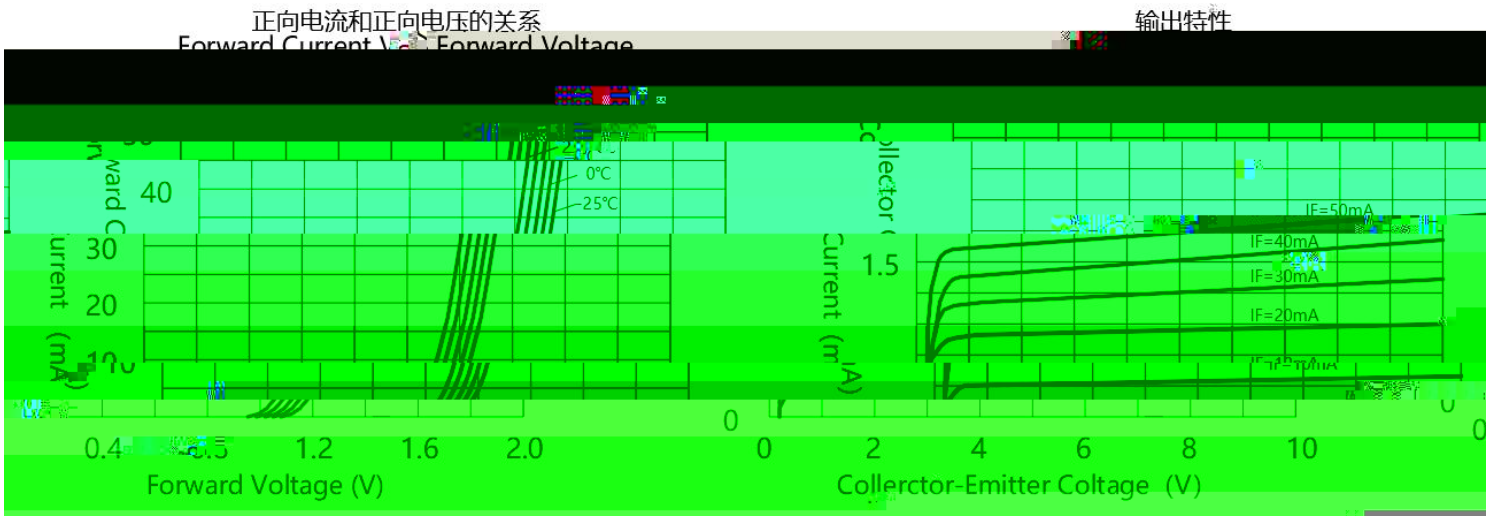

Collector Dissipation VS Ambient Temperature
Relative Collector Current VS Ambient Temperature
-25 0 25 50 75 85 100
0 10 20 30 40 50 60 70


Collector Dark Current VS Ambient Temperature


0.01
0.1
0.5
1
1.5
3
4
0
1
2
3
Irradiance EC (mW/cm²)

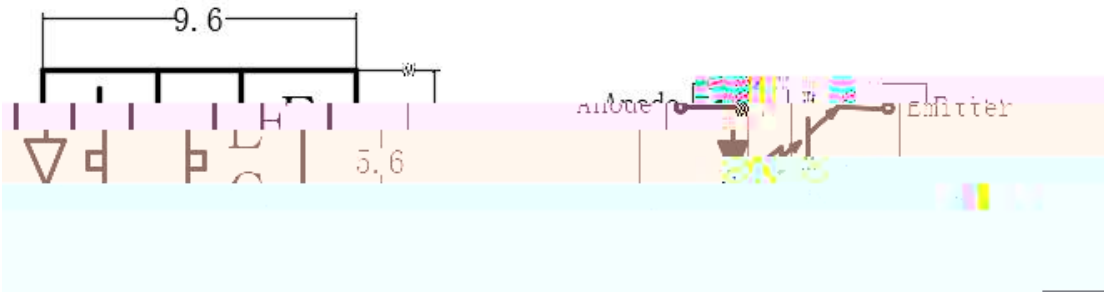
光电开关特性曲线图

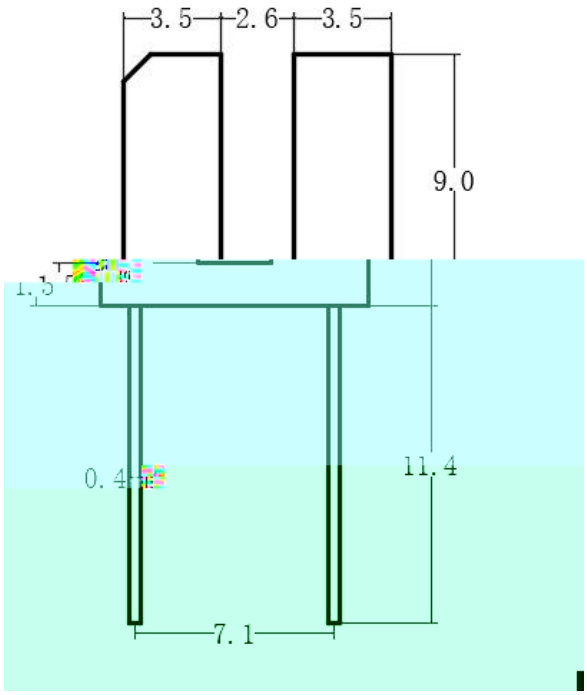

lector Current VS Forward Voltage
Relative Output VS Ambient Temperature
Ambient temperature (℃)
20
30
40
50
-50
-25
0
25
50
75
100
0
50
2.0
1.0
0.0
10

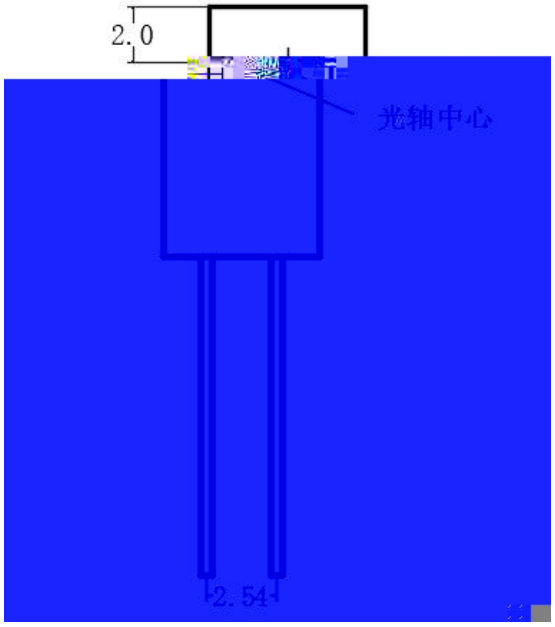

正向电流和正向电压的关系
输出特性
0℃
25℃
IF=50mA
IF=40mA
IF=30mA
IF=20mA
40
30
20
1.5
0.4
1.2
1.6
2.0
0
2
4
6
8
10
Forward Voltage (V)
Collerctor-Emitter Coltage (V)

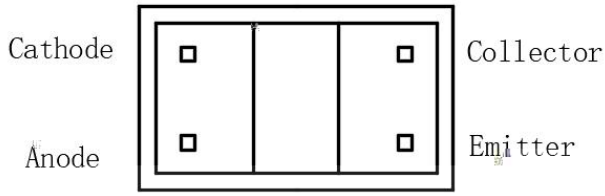
外形尺寸

Outline Dimension









1. mm

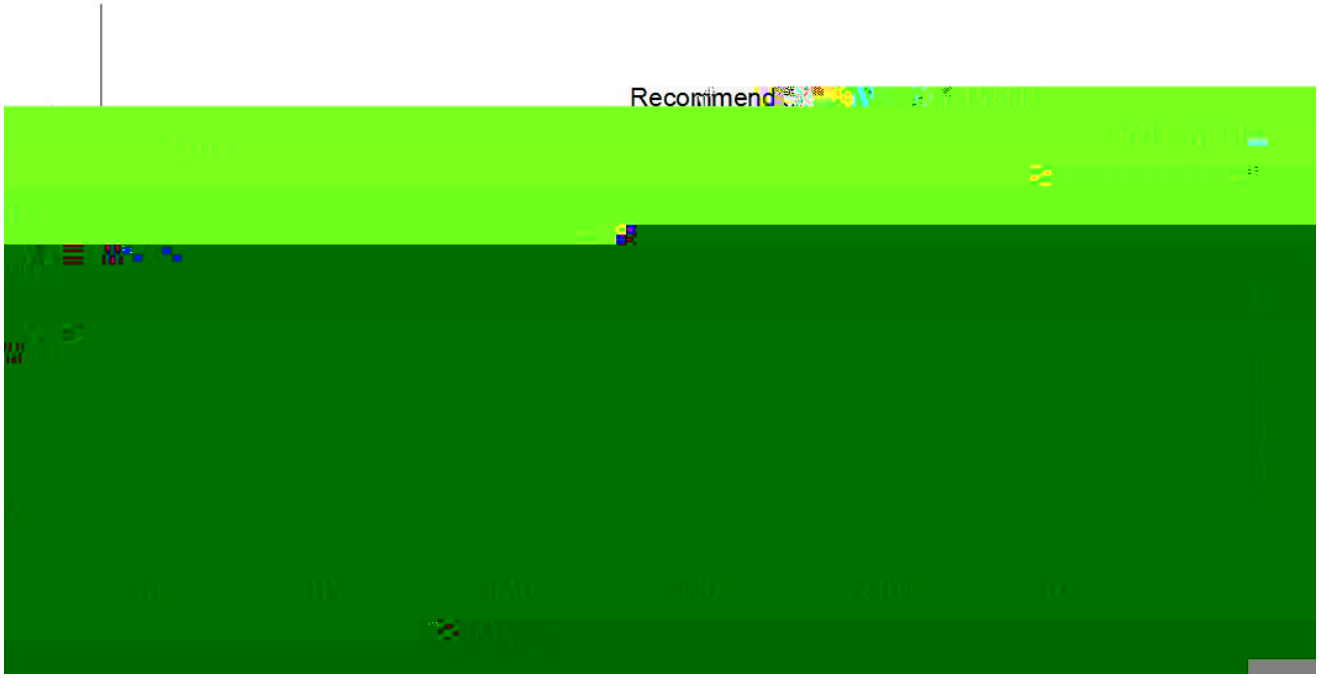
Remarks: 1 Unit: mm

2. Ñ0.3mm

2. Tolerance: Ñ 0.3mm unless otherwise specified

焊接指导

The wave peak welding curve is recommended :



Note

1
Lead solder temperature profile

2
Pe

烙铁条件 Soldering Iron

300 3 25W

Each terminal is to go to the tip of soldering iron temperature less than 300 for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.

手工补数 Repairing

LED ( )

LED

Repair should not be done after the LED have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of the LED will or will not be damaged by repairing.

使用注意事项

Precautions

NPN

IR

IR PT

This product It is composed of infrared emission diode and NPN silicon photo transistor, which are packaged side by side in black On the converging optical axis in the thermoplastic shell. Photo transistor only receives radiation from IR. This is normal Condition. But when the object is in the middle, the photo transistor cannot receive radiation. For more component information, please Refer to IR and PT.