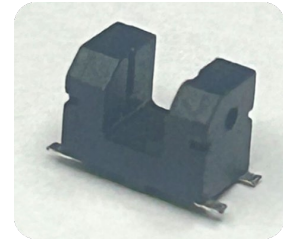


ITR523S

8ITR523S02FB0002

Datasheet(Draft)

光遮断器 (光电开关)



Features 产品特性

- Gap : 2 mm 间距 2 毫米
- Slit : 0.4 mm 狭缝:0.4 毫米
- Compact SMD Package 紧凑 SMD 包装
- Pb/Halogens free Pb /无卤素
- The product itself will remain within RoHS complian version
产品本身将保持在 RoHS 合规版本内
- Compliance with EU REACH 符合欧盟 REACH 规定

Description 产品描述

- ITR523S is an ultra small outline photo-interrupter, integrating both infrared emitter and silicon phototransistor detector with plastic molding housing.
ITR523S 是一种超小轮廓光中断器，集成了红外发射器和硅光电晶体管检测器与塑料成型外壳。

Product Application 产品应用

- Printer 打印机
- Digital Camera 数码相机
- Optical switch 光开关

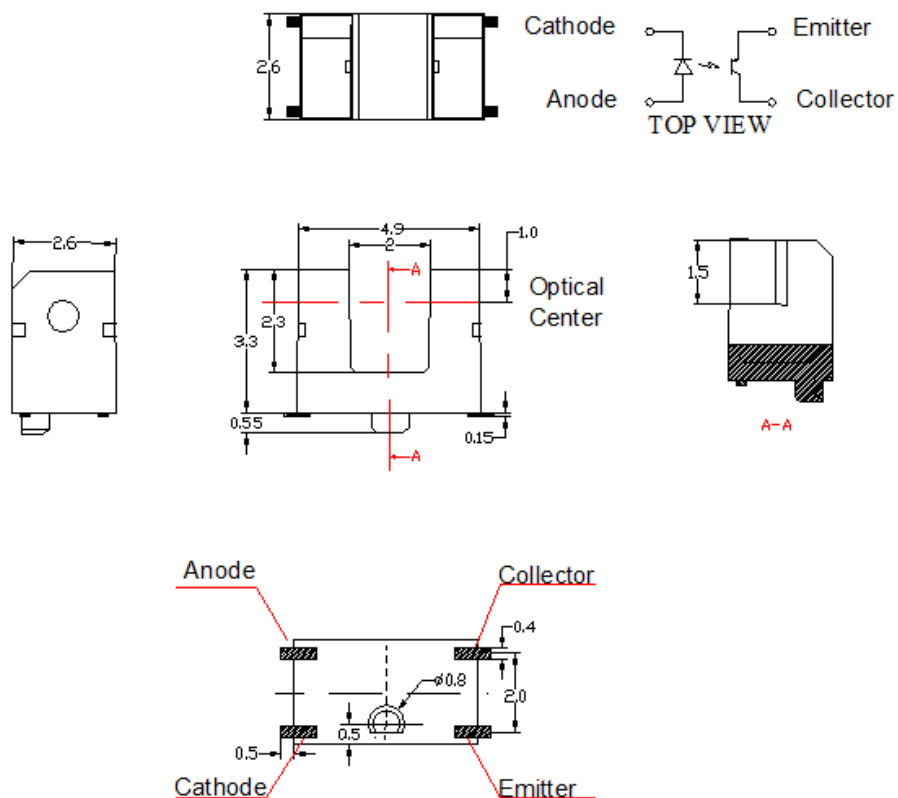
Device Selection Guide 设备选择指南

Device No.设备编号	Chip Material 芯片材料
IR	AlGaAs

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Package Dimensions 外形尺寸



Notes:

1. All dimensions are in millimeters. 所有尺寸都以毫米为单位
2. Tolerances: $\pm 0.2\text{mm}$. 公差: $\pm 0.2\text{毫米}$

Absolute Maximum Ratings (Ta=25°C) 绝对最大额定值(Ta=25°C)

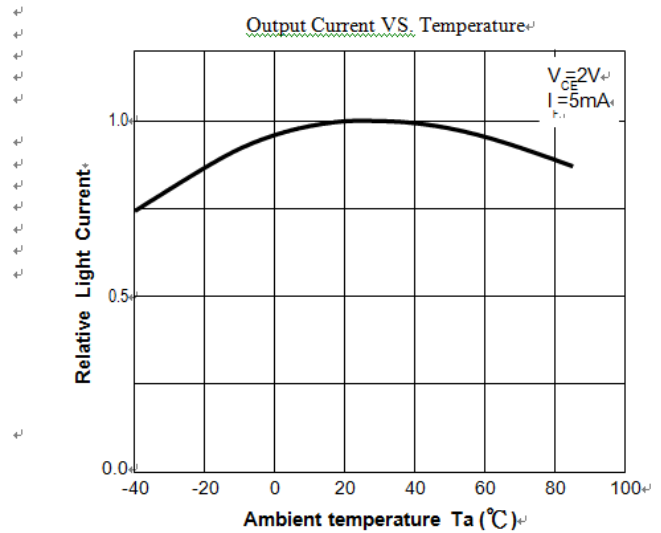
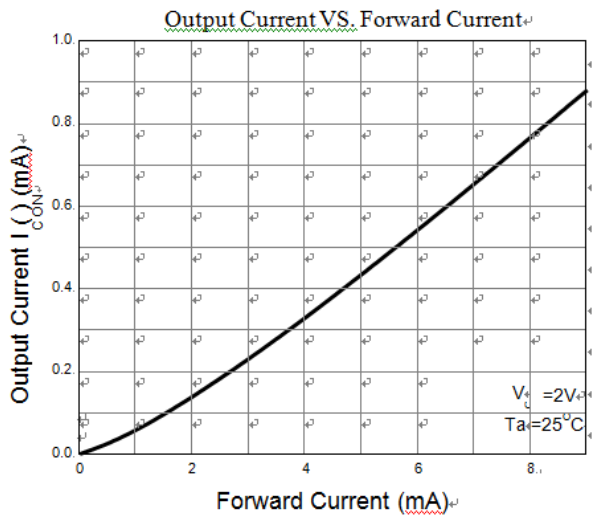
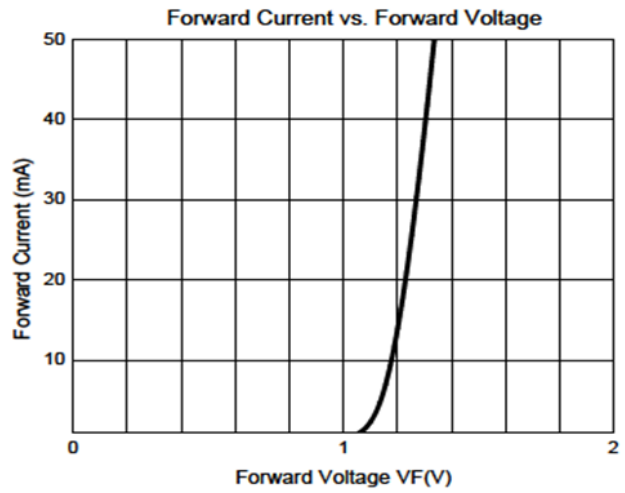
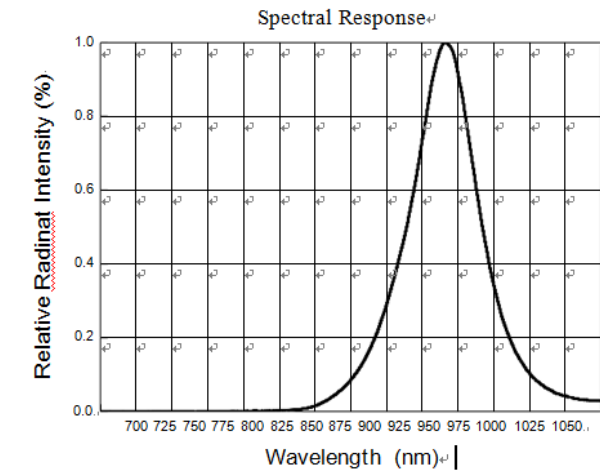
Parameter		Symbol	Rating	Unit
Input	Power Dissipation at(or below) 25°C Free Air Temperature	Pd	65	mW
	Reverse Voltage	VR	5	V
	Forward Current	IF	50	mA
	Peak Forward Current (*1)	IFP	1	A
	Collector Power Dissipation	PC	75	mW
Output	Collector Current	IC	20	mA
	Collector-Emitter Voltage	B VCEO	30	V
	Emitter-Collector Voltage	B VECO	5	V
	Operating Temperature	Topr	-25~+85	°C
Storage Temperature		Tstg	-30~+100	°C
Lead Soldering Temperature (*2)		Tsol	260	°C

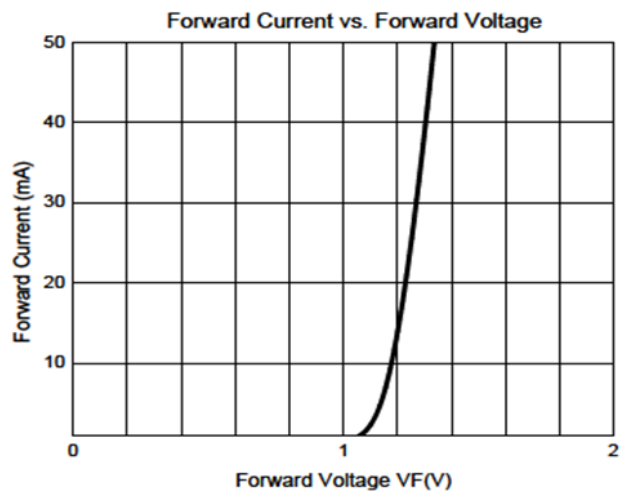
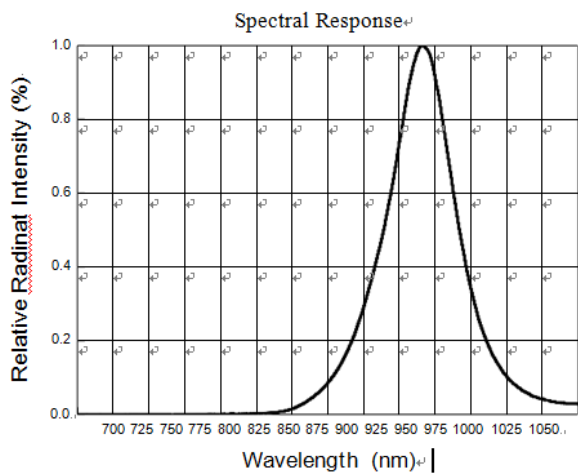
Notes: (* 1) Pulse width $t_w=100 \mu\text{sec.}$,Period $T=10 \text{ msec.}$ (* 2) $2t \leq 5 \text{ Sec}$

Electro-Optical Characteristics (Ta=25°C) 光电特性(Ta = 25°C)

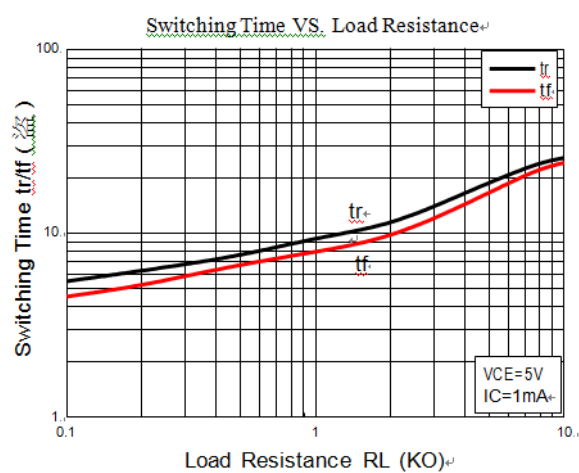
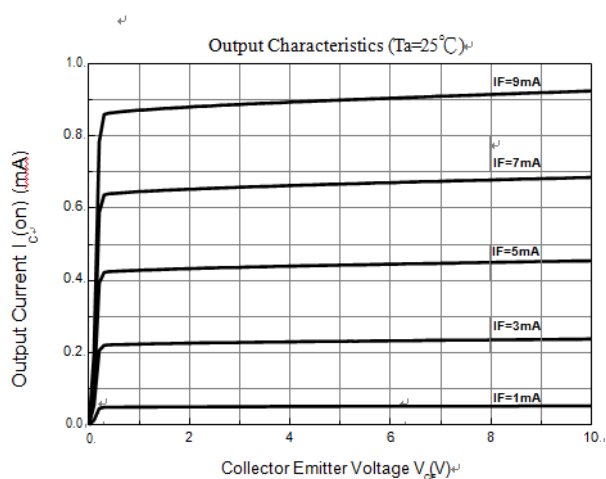
Parameter		Symbol	Min.	Typ.	Max.	Unit	Condition
Input	Forward Voltage	V _F	---	1.2	1.4	V	I _F =20mA
	Reverse Current	I _R	---	---	10	μA	V _R =5V
	Peak Wavelength	λ _P	---	940	---	nm	I _F =20mA
Output	Dark Current	I _{CEO}	---	---	100	nA	V _{CE} =20V
	C-E Saturation voltage	V _{CE(sat)}	---	---	0.4	V	I _C =0.05mA I _F =20mA
Transfer Characteristics	Collector Current	I _{C(ON)}	0.2	1.0	---	mA	V _{CE} =5V I _F =20mA
	Rise time	t _r	---	10	---	μs	V _{CE} =5V I _C =1mA
	Fall time	t _f	---	10	---	μs	RL=1K □

Typical Electrical/Optical/Characteristics Curves 典型的电/光/特性曲线

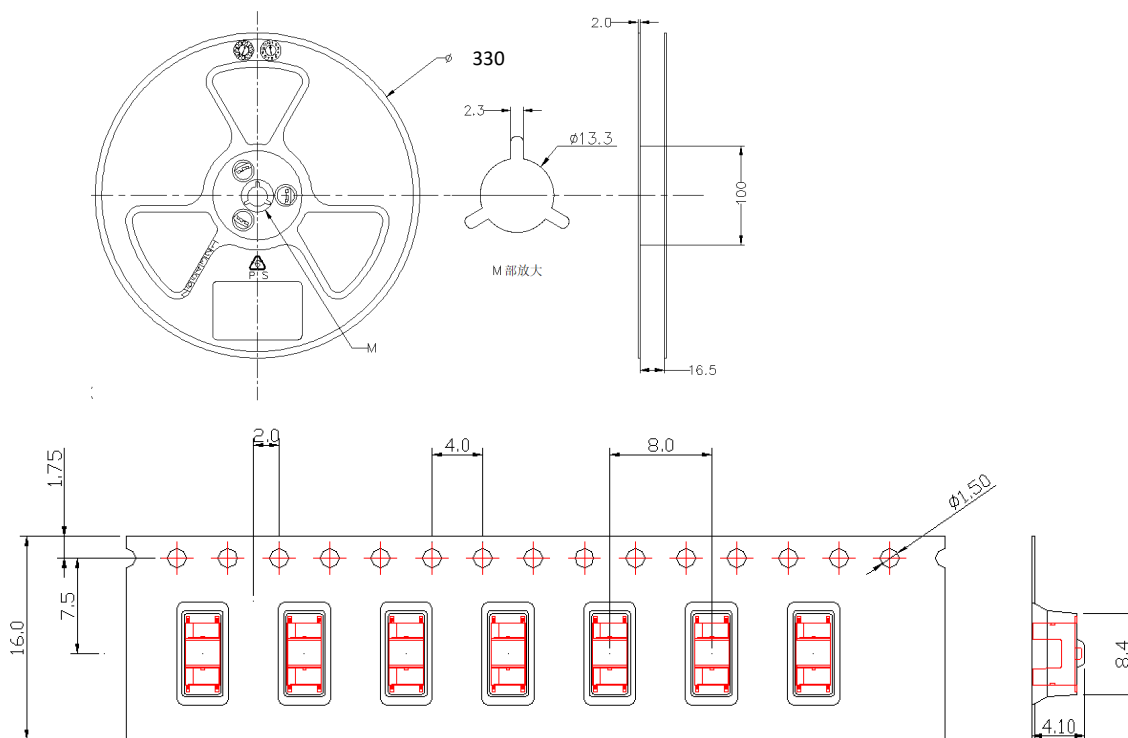




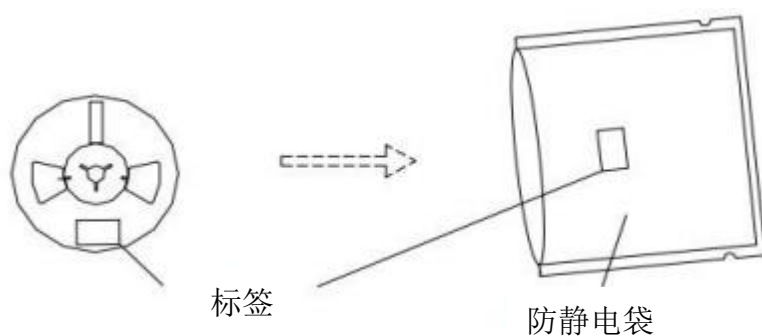
Typical Electro-Optical Characteristics Curves 典型光电特性曲线



Tray structure and packaging 料盘结构与包装

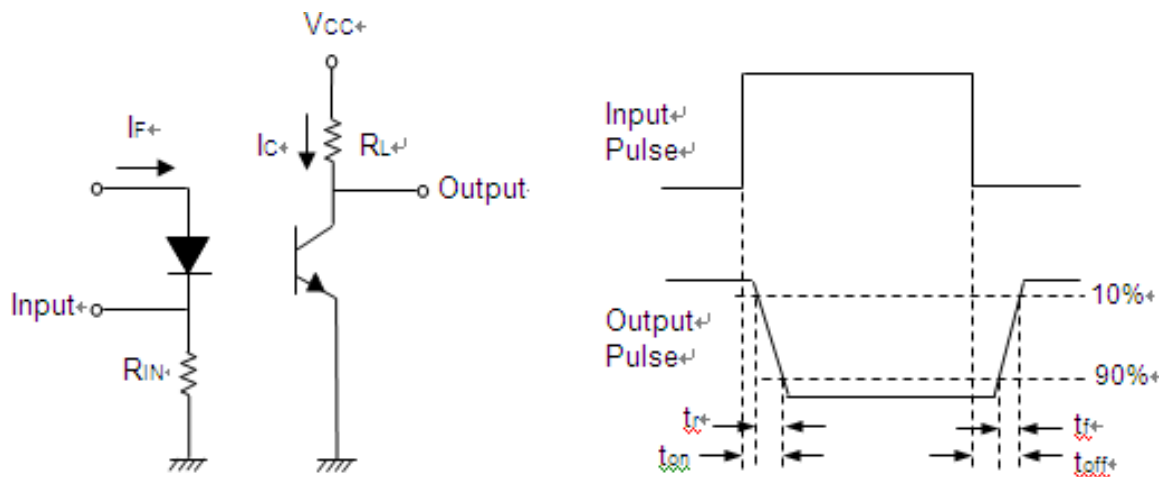


标签及标识/ Label Explanation:



Item项目	Quantity数量	Total总数量	Size尺寸(mm)
reel 盘	2000pcs	2000pcs	直径=330
case 箱	15 reels	30,000pcs	350*350*325

Measuring Circuit For Response Time 响应时间测量电路



Precautions For Use 预防措施

1. Storage 存储

Do not open moisture proof bag before the products are ready to use. 在产品准备使用之前，不要打开防潮袋。

Before opening the package, the device should be kept at 30°C or less and 90% RH or less. 打开包装前，设备应保持在30°C及90%RH以下。

The device should be used within a year. 该设备应在一年内使用。

After opening the package, the device should be kept at 30°C or less and 70% RH or less. 打开包装后，设备应保存在30°C及70%RH以下。

The device should be used within 168 hours (7 days) after opening the package. 设备应在打开包装后的168小时(7天)内使用。

If the moisture absorbent material (silica gel) has faded away or the device have exceeded the storage time, baking treatment should be performed using the following conditions. 如果吸湿材料(硅胶)已经褪色或设备已经超过储存时间，应在以下条件下进行烘烤处理。

Baking treatment : 60±5°C for 24 hours. 烘烤处理:60±5°C 烘烤 24 小时。

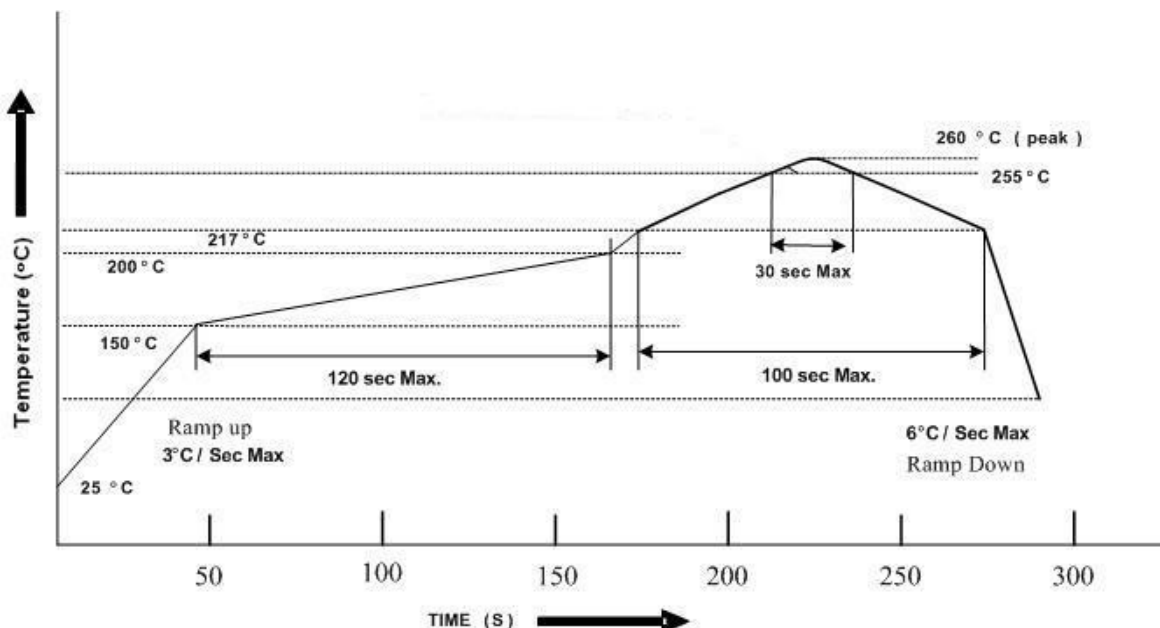
2. Soldering Condition 焊接条件

Pb-free solder temperature profile 无铅焊锡温度剖面

Reflow soldering should not be done more than two times. 回流焊不应进行超过两次。

When soldering, do not put stress on the device during heating. 焊接时，加热时不要对设备施加压力。

After soldering, do not warp the circuit board. 焊接后，电路板不得翘曲。



3.Soldering Iron 烙铁

Each terminal is to go to the tip of soldering iron temperature less than 350°C 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. 每个端子去烙铁的尖端温度小于 350°C 3 秒内一次在小于烙铁容量 25W。留出两秒以上的间隔，对每个端子进行焊接。要小心，因为产品的损坏往往是从手工焊接的时候开始的。

4.Repairing 修复

Repair should not be done after the device 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 device will or will not be damaged by repairing.

设备焊接后不应进行修理。不可避免的修理时，应使用双头烙铁。应事先确认设备的特性是否会因修理而受损。

Revision history 修订历史

Versions 版本	Description	Release Date
0.1	Preliminary 初定	2021/09/01
0.2	Modify the overall dimension drawing 修改外形尺寸圖	2022/11/01
0.3	Modify packaging method and quantity 修改包裝方式、數量	2024/12/13

About Edison Opto 关于艾笛森

Edison Opto is a leading manufacturer of high power LED and a solution provider experienced in LDMS. LDMS is an integrated program derived from the four essential technologies in LED lighting applications- Thermal Management, Electrical Scheme, Mechanical Refinement, Optical Optimization, to provide customer with various LED components and modules. More Information about the company and our products can be found at www.edison-opto.com

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