

Specification

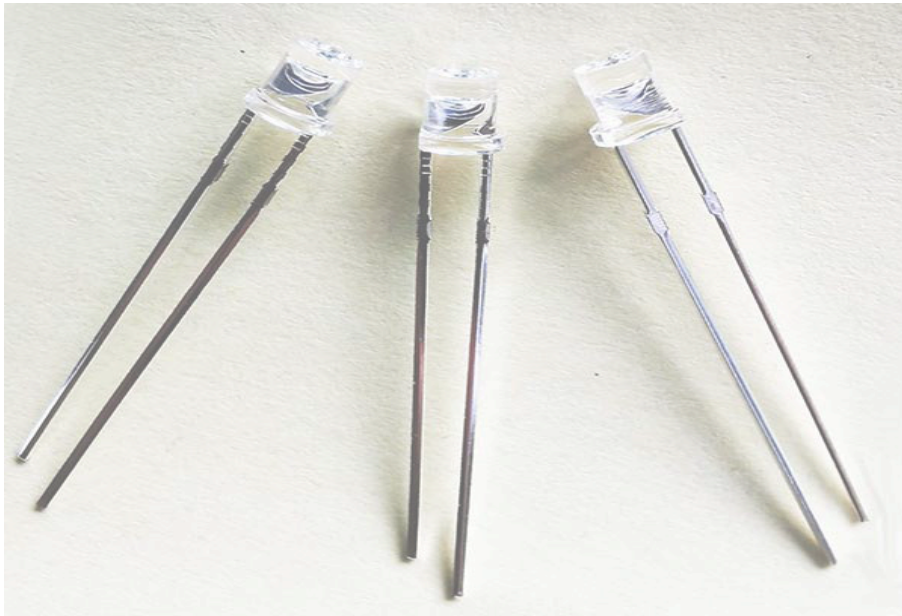
产品规格书

样品名称

(DESCRIPTION): 3mm 环保型可见光传感器

型号

(Part No): PT550F3

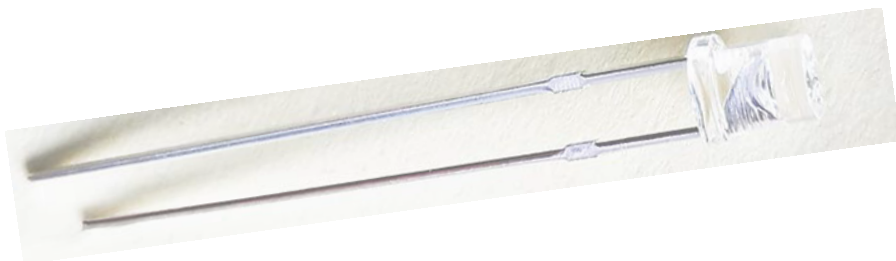


■特征 (Features)

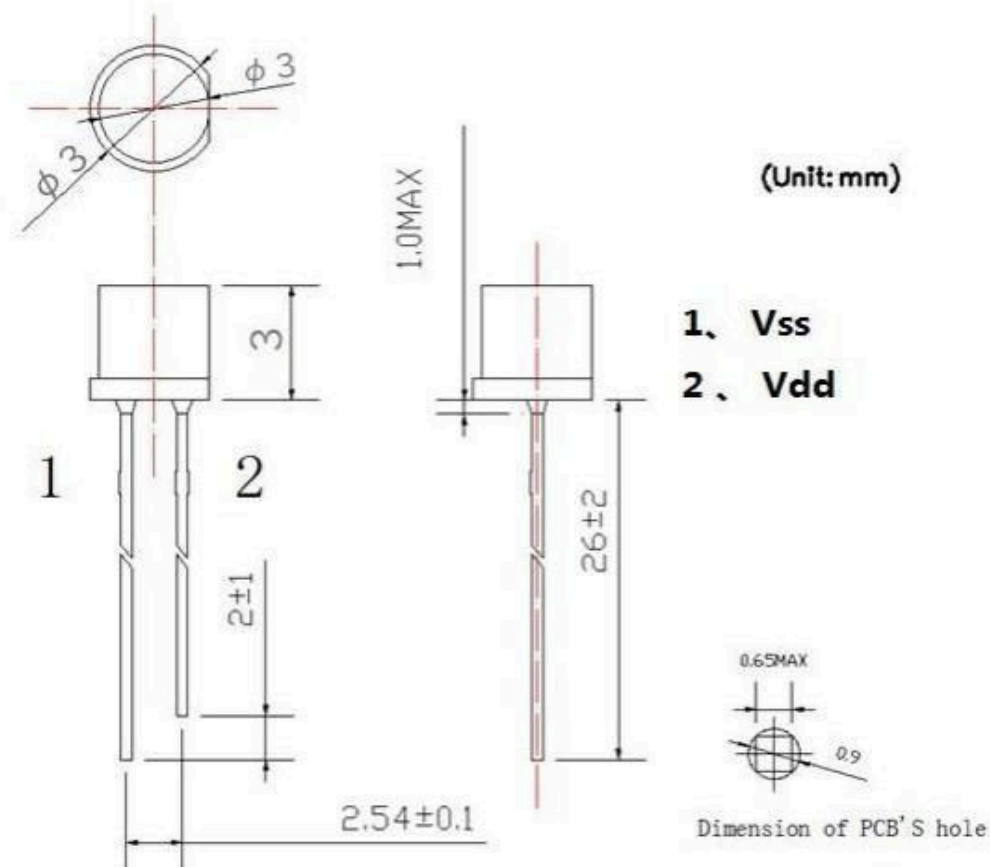
- 接近人眼特点的光谱响应特性; (Near human eye photopic response)。
- 对红外具有高抑制特性; (High IR rejection)。
- 输出电流对光通量的高线性度; (Current output highly linear Vs light level)。
- 温度特性稳定; (Temperature stable)。
- 内部集成高增益光电流放大器; (Integrated high gain photo-current amplifier)。
- 内置暗电流消除电路, 暗电流极小; (Dark-current cancellation)。
- 替代传统 CDS 光敏电阻, 不含镉、铅等有害物质, 符合欧盟 ROHS 标准 (Instead of the traditional CDS photosensitive resistance, contain cadmium, lead and hazardous substances, ROHS compliant)。
- 用于抗红外干扰类产品, 控制昼夜切换, 无需加套管、滤光片 (Dedicated to the anti-IR interference products, controls the switching of day and night, without adding casing, filters)。

■说明 (Descriptions)

该产品是一款低成本可见光传感器,它提供一个与光照强度成比例的输出电流。芯片内置一个光学滤波器和一个电流放大器,对可视光谱具有响应特性,这个响应特性近似人眼特点。(The product is a low cost visible light sensor, with a current output which is directly proportional to the light level. It has a built in optical filter to provide a response which is close to the human eye)。



■产品外型尺寸 product Dimensions:



注 Notes:

1. 所有尺寸都以毫米为单位 (All dimensions are in millimeters) .
2. 公差为±0.20 毫米除非另有说明 (Tolerance is ±0.20mm unless otherwise noted) .
3. 下凸缘突出树脂最大为 1.0mm (Protruded resin under flange is 1.0mm max) .
4. 引脚间距是衡量使用之产品插孔间距 (Pitch is a measure of goods and use of jack pitch) .
5. 胶体在高温条件下会变软，IC 引脚要成型或弯曲必须再冷却条件下进行，否则容易损坏 IC 内部导致开路 (Colloid at high temperatures become soft, IC pin to be formed or bent must be carried out under cooling, or easily cause damage to the internal IC Open) .
6. 注意防静电 Caution in ESD:
静电和浪涌电流会损坏晶体管，推荐使用时带静电环和防静电手套，设备机械必须正确接地 (Static electricity and surge current will damage the transistors must be properly grounded with a wrist strap and a recommended anti-static gloves, equipment and machinery) .

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

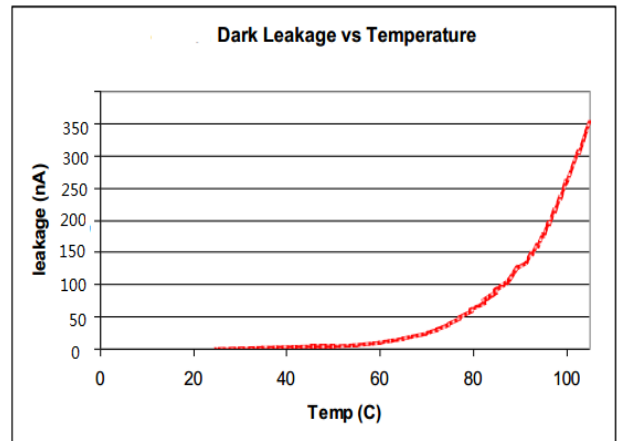
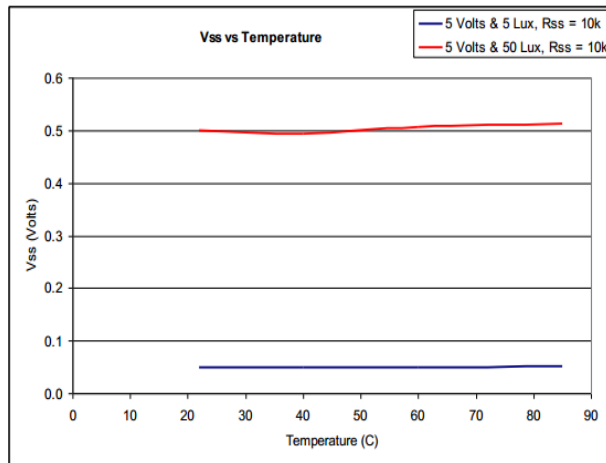
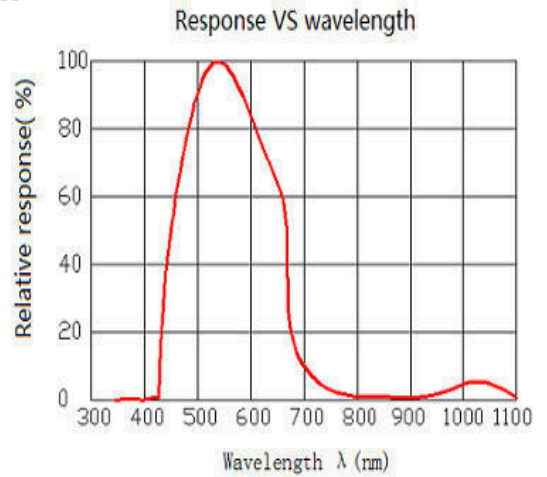
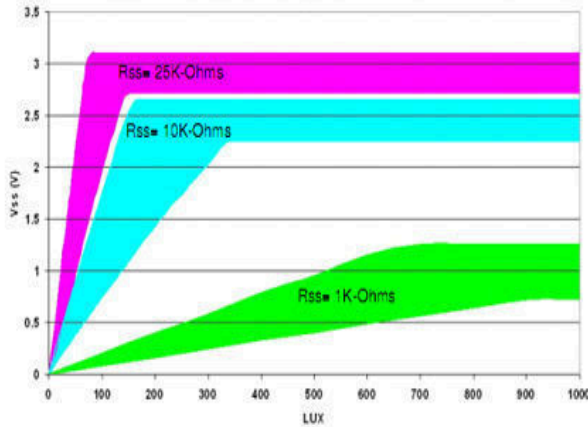
参数 Parameter	符号 Symbol	最大额定值 Rating	单位 Units
工作电压 Supply input Voltage	Vcc	12	V
工作环境温度 Operating Temperature	Topr	-25~+85	°C
储存环境温度 Storage Temperature	Tstg	-40~+100	°C
焊接温度 Lead Soldering Temperature	Tsol	260	°C
25°C或低于25°C环境下功耗 Power Dissipation at(or below)25°C Free Air Temperature	PC	70	mW

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

参数 Parameter	符号 Symbol	条件 Condition	最小值 Min.	中间值 Typ.	最大值 Max.	单位 Unit
感光峰值波长 Peak Spectral Response	λ_p		---	550	---	nm
感光波宽范围 Rang of Spectral Bandwidth	λ		400	---	700	nm
工作电压 Supply Voltage	Vcc		---	5	---	V
启动延时 Rise time	T_r	V _{CE} =5V R _L =1000Ω E _v =0Lux	---	4.5	---	ms
关闭延时 Fall Time	T_f		---	4.5	---	ms
暗电流 Dark Current	I _d	E _v =0Lux V _{CC} =5V T=85° C	---	0.05	0.3	uA
亮电流 Output Current	I _l (1)	E _v =10Lux V _{CC} =5v	3.0	4.0	5.0	uA
	I _l (2)	E _v =30Lux V _{CC} =5v	9.0	12.0	15.0	uA
	I _l (3)	E _v =100Lux V _{CC} =5v	30.0	40.0	50.0	uA

红外接收电流 Infra red response	Ii(4)	VCC=5v IR led: 850nm Ee=1mW/cm2	---	---	0.1	uA
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Vdd=5V, Vss vs. Lux level --with worst case headroom and +/-40% response



■ 注意事项 Precautions:

因为半导体温漂特性，本产品建议适用于在环境温度 85℃ 以下场合应用。
客户需全面考量本光敏产品在不同环境下及不同应用产品时的适用性，我司不承担由于客户在不同应用情形下而产生的风险及损失。

Because of the temperature drift of the semiconductor, this product is suitable for use in the environment temperature 85 degrees celsius. Customers need to fully consider the application of this photosensitive products in different environments and different applications, I do not assume the company due to the customer in different applications and the risk of.

引脚成型 Pin molding

※引脚成型需要在焊接前完成 (Pin molding needs to be done before soldering.)。

※不能以靠近环氧体的支架根部为支点成型 (Not to the bracket near the roots epoxy molding body as a fulcrum.)。

※成型引脚位置应离胶体 5mm 以上，特殊情况需在 5mm 以下 (但应 ≥ 2 mm) 成型的，应制作特制的夹具，成型时固定住靠近环氧体的管脚部位，尽量减少对环氧体的作用应力，防止因应力过大造成产品开路及其环氧体裂损 (Shaped pin position should more than 5mm from the gel, special circumstances need to 5mm or less (but should ≥ 2 mm) forming, should make a special fixture, fixed pin body parts near an epoxy molding minimize epoxy body the role of stress, prevent stress caused by too much product and epoxy body open crack on.)。

储存

※该产品出厂后贮存的条件应为 0~+30℃、相对湿度小于 70%，密封贮存期限为 3 个月。若贮存超过 3 个月，则应放在带有氮气和干燥剂的密闭容器内，贮存时间可达一年 (The product storage conditions of the factory should be 0 ~ + 30 °C, relative humidity less than 70%, sealed and stored for a period of three months. If you store more than three months, they should be placed with a nitrogen and desiccant sealed container, storage time of up to one year.)。

※拆袋使用，应尽可能短时间内用完。若用不完，应满足贮存条件应为 0~+30℃、相对湿度不小于 60%，并在 2 天内安装完。产品支架是铁合金表面上镀银，银表面会受到腐蚀性气体等环境的影响，这将会导致产品焊接困难。

(Demolition bags use, should be used as far as possible in a short time. If you ever use, shall meet the storage conditions should be 0 ~ + 30 °C, relative humidity of not less than 60%, and in two days after installing. Ferroalloy product scaffold is on the surface of silver, silver surface may be affected by corrosive gas environment, which will lead to difficult welding products.)

安装

※产品安装在 PCB 上，不能对引脚有压力施加。(Product is installed in the PCB, can not exert pressure on the pin.)。

焊接

※胶体不可浸入锡槽内 (Tin colloid can not be immersed in bath)。

※加热过程中不能对引脚有施加压力 (Heating process can not exert pressure on the pins have.)。

※推荐焊接条件：波峰焊：120℃<60s、260℃ <5s；手工焊：260℃ <5s、340℃ <3s (Recommended soldering conditions: wave soldering: 120 °C <60s, 260 °C <5s; hand soldering: 260 °C <5s, 340 °C <3s)

清洗

※在任何情况下，清洗时间应在常温 1 分钟之内进行 (In any case, the washing time should be within the normal 1 minute.)。

※清洗产品时推荐使用酒精作为清洗剂。如使用其他清洗剂，需先确认清洗剂是否会腐蚀环氧体。氟利昂不能作为清洗剂 (Use of alcohol as a cleaning agent recommended cleaning products. Such as the use of other cleaning agents, it must first confirm whether the cleaners will corrode epoxy body. Freon can not be used as a cleaning agent.)。

※不可用水清洗，以免腐蚀引线，建议使用酒精 (Can not use water to clean, to avoid corrosion leads, we recommend the use of alcohol.)。

※用超声波清洗产品时，超声功率和时间应分别小于 300W 和 30 秒；PCB 和产品不能接触振荡器；不能使 PCB 上的产品产生共振 (When using ultrasonic cleaning products, ultrasonic power and time should be less than 300W and 30 seconds, respectively; PCB and products can not touch the oscillator; you can not make the products on the PCB resonance.)。

※本型号为静电敏感器件，所以静电和电涌会损坏产品。要求使用时佩带防静电腕带，所有的装

置、设备、机器、桌子、地面都必须防静电接地 (This model is static sensitive devices, so static electricity and surge damage the product. An antistatic wrist strap when required, all devices, equipment, machines, tables, floors must be anti-static grounding.)。