

ST-SY1205T

微型光电传感器 Photomicrosensor

产品介绍/Product Introduction

- ST-SY1205T是一种小型高性能反射式光电传感器，由红外发光二极管和高灵敏度光电三极管组成。The ST-SY1205T is a small size high performance reflective photo sensor,is optically composed of IRED with a high sensitivity phototransistor.

特性 Features

- 高可靠性 High sensitivity
- 截止可见光波长 Cut-Off visible wavelength
- 合规性无卤素 (Br<900ppm, Cl<900ppm, Br+Cl<1500ppm)
Compliance Halogen Free(Br < 900ppm, Cl < 900ppm, Br+Cl < 1500ppm)



典型应用 Application

- 照相机、非接触开关、宠物喂食器 Camera, Non-contact Switching, Pet dispenser.
- 办公设备 OA machines

■ 极限值/Maximum Ratings(Ta=25°C)

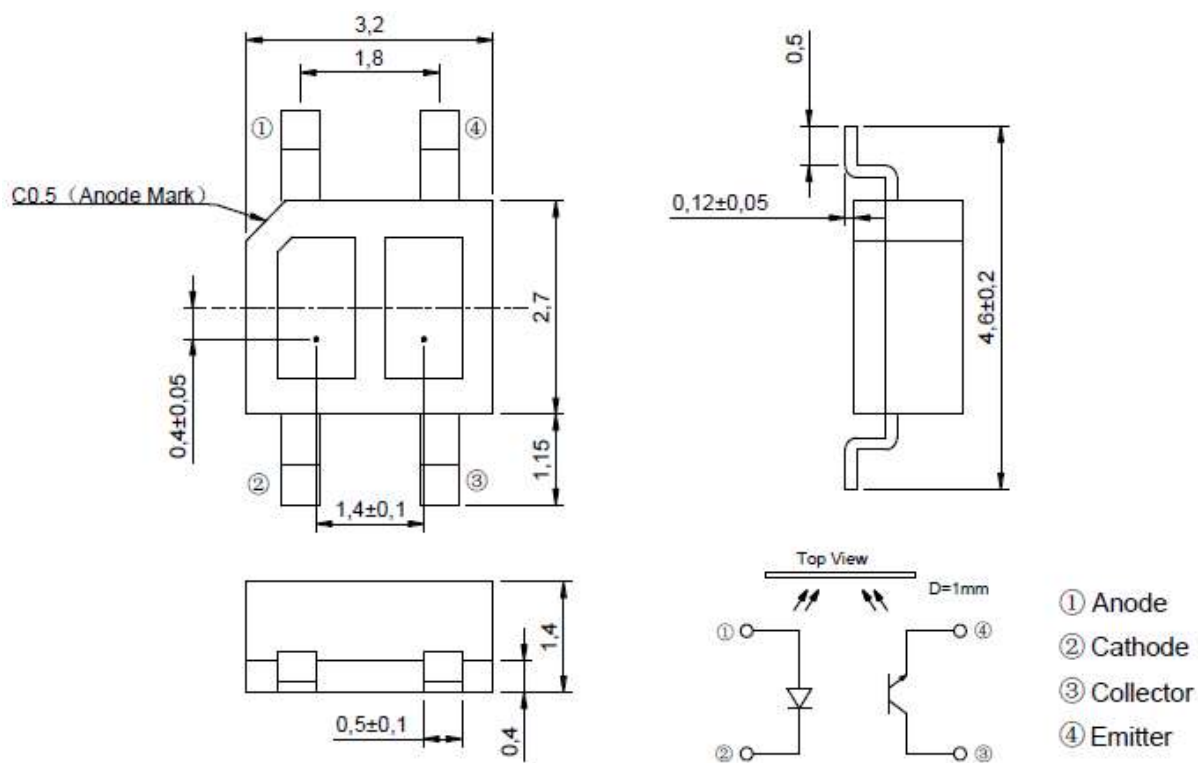
项目 Item		符号 Symbol	额定值 Rating	单位 Unit
输入端 Input	功耗 Power Dissipation	P_D	75	mW
	正向电流 Forward Current	I_F	50	mA
	反向电压 Reverse Voltage	V_R	5	V
输出端 Output	集电极功耗 Collector Power Dissipation	P_C	75	mW
	集电极电流 Collector Current	I_C	50	mA
	集电极-发射极电压 Collector-Emitter Voltage	V_{CEO}	30	V
	发射极-集电极电压 Emitter-Collector Voltage	V_{ECO}	5	V
工作温度 Operating Temp.		$T_{opr.}$	-30 ~ +85	°C
存储温度 Storage Temp.		$T_{stg.}$	-30 ~ +90	°C
焊接温度 ^{*1} Soldering Temp.		$T_{sol.}$	260	°C

Note: *1、离外壳2mm以上，焊接时间小于等于5s
For max. 5seconds at the position of 2mm from the resin edge

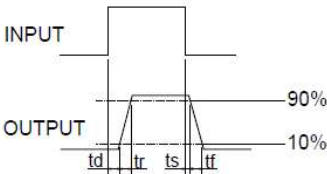
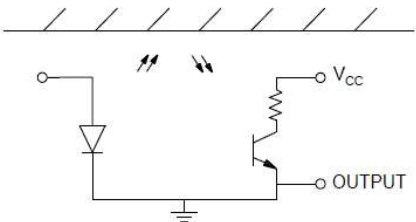
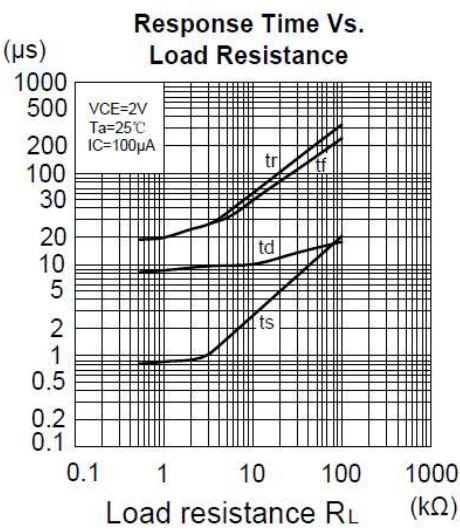
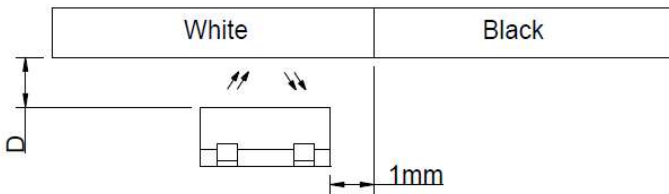
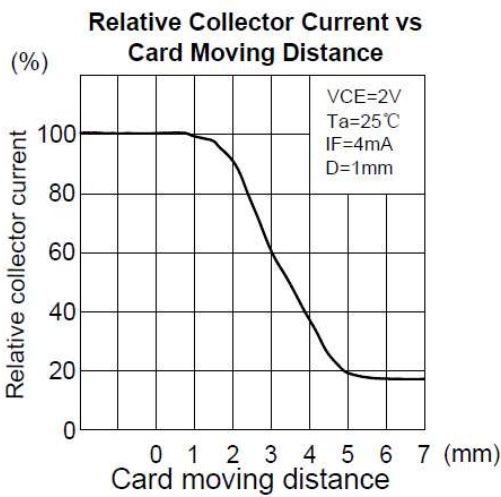
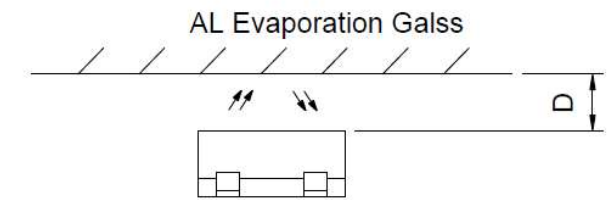
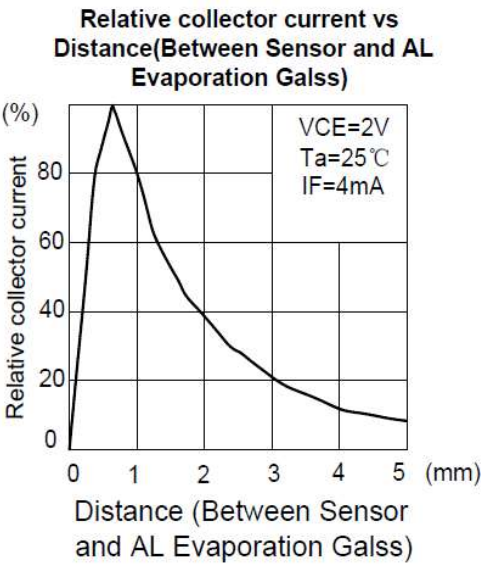
■ 光电特性/Electro-Optical Characteristics(Ta=25°C)

项目 Item		符号 Symbol	条件 Condition	最小 Min.	典型 Typ.	最大 Max.	单位 Unit
输入端 Input	正向压降 Forward Voltage	V_F	$I_F=20mA$	-	1.2	1.6	V
	反向电流 Reverse Current	I_R	$V_R=-5V$	-	-	10	μA
	峰值波长 Peak Wavelrngth	λ_p	$I_F=20mA$	-	940	-	nm
输出端 Output	暗电流 Collector Dark Current	I_{CEO}	$V_{CE}=10V$	-	-	100	nA
	集电极-发射极工作电压 C-E Saturation Voltage	$V_{CE(SAT)}$	$I_C=2mA$ $E_e=1mW/cm^2$	-	-	0.4	V
转换特性 Transmisson	光电流 Light Current	$I_{C(ON)}$	$I_F=10mA$ $V_{CE}=5V$	180	-	440	μA
	漏电流 Leakage Current	I_{CEOD}	$I_F=20mA$ $V_{CE}=2V$	-	-	1	μA
	上升时间 Rise Time	tr	$V_{CE}=2V$ $I_C=0.1mA$	-	20	-	μs
	下降时间 Fall Time	tf	$R_L=1K\Omega$ $d=1mm$	-	20	-	μs

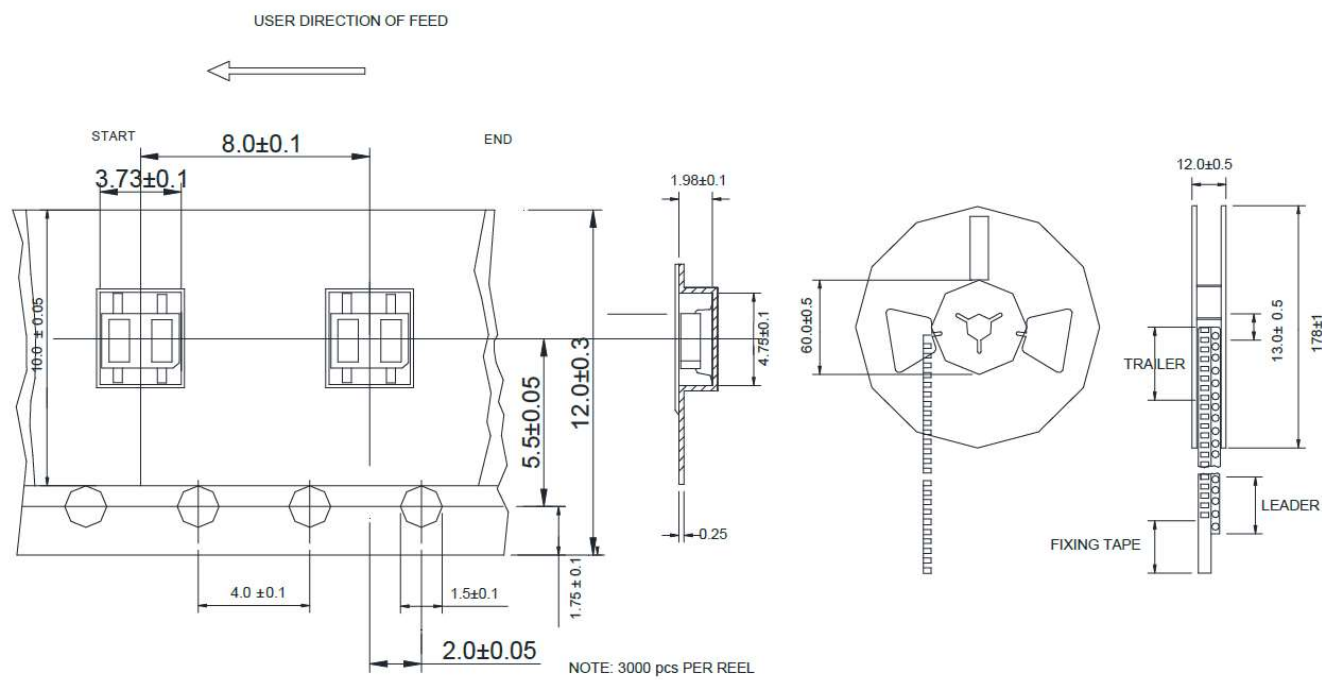
■ 外形尺寸、接线图 Outline Dimensions, Wiring Diagram (mm)



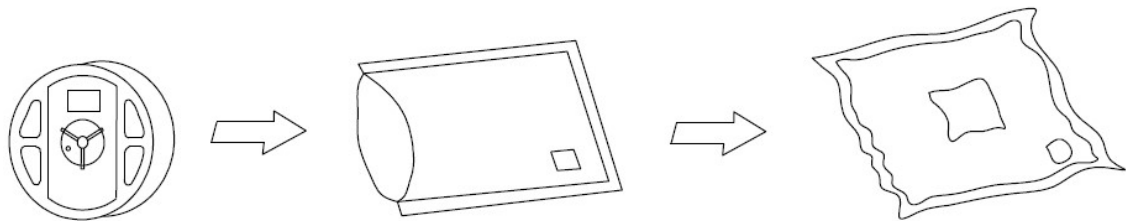
■ 特性曲线 Characteristics Curves



■ 卷轴尺寸 Carrier Tape Dimensions



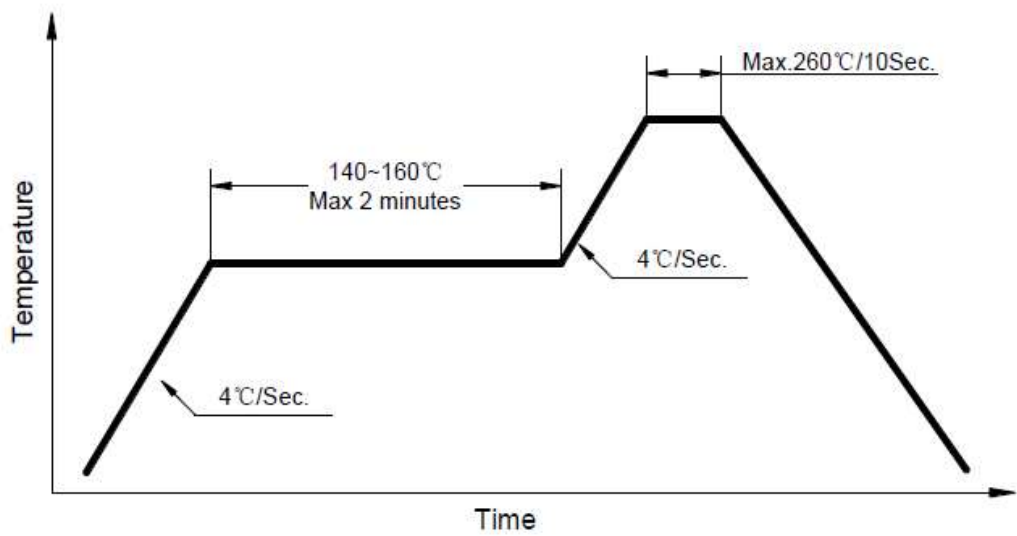
■ 防潮包装 Moisture Resistant Packaging



请注意:

1. 所有尺寸除非另有说明，否则单位均为毫米，公差为±0.2毫米All Dimensions are in millimeters, Tolerance is ±0.2mm unless otherwise noted .
2. 规格如有变更，恕不另行通知Specifications are subject to change without notice.
3. 1,000pcs/盘1Tape: 1000pcs.
4. 采用真空、防潮、防静电袋包装Packing with vacuum moisture-proof and anti-static bags.
5. 每个袋内都配有干燥剂Desiccant are put into the each bag.

■ 回流焊参考曲线/Reflow Soldering Temp:



请注意:

- 开启包装前, 请按如下条件保存: Before the bag is opened, please keep the following storage condition:
温度 T=5°C ~ 30°C, 湿度 RH<60%, 时间 t<12个月。
Temperature: 5°C-30 °C,Humidity:RH 60% Max ,Time:12 Months.
- 开启包装后, 如果器件要进行红外、气相回流焊或其它相似工艺焊接, 请按如下方式保存: After this bag is opened , The device that will be applied to infrared reflow,vapor-phase reflow,or equivalent soldering process must be :
 - 保存湿度 RH<20%;
Stored at less than 20% RH;
 - 在168小时内可以完成焊接时, 保存条件: 温度 T<30°C, 湿度 RH<60%;
Mounted within 168hours: Temperature: 30°C Max, Humidity:RH 60% Max;
 - 在包装开启时, 如果湿度指示卡显示超过30%, 请烘烤后再进行回流焊接。
When opened the Bag,the value of Humidity card is exceed 30%,Baking is required before mounting.
- 如果没有满足上述条件, 则再次焊接前需要进行烘烤。If above conditions are not met , baking is required before mounting.
烘烤条件: t=12小时, T=60°C±3°C, RH<5%
Baking condition :12 hours at 60±3°C and <5% RH.