产品介绍/Product Introduction:

NIR1601T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管组成。
The NIR1601T is a small size high performance reflective photo sensor,is optically composed of IRED with a high sensitivity phototransistor.

特点/Features:

·高灵敏度
High sensitivity

·最佳感应距离：4毫米
Optimal Sensing Distance: 4 mm

·封装尺寸：4.0*3.0*2.0毫米
Package size : 4.0*3.0*2.0 mm

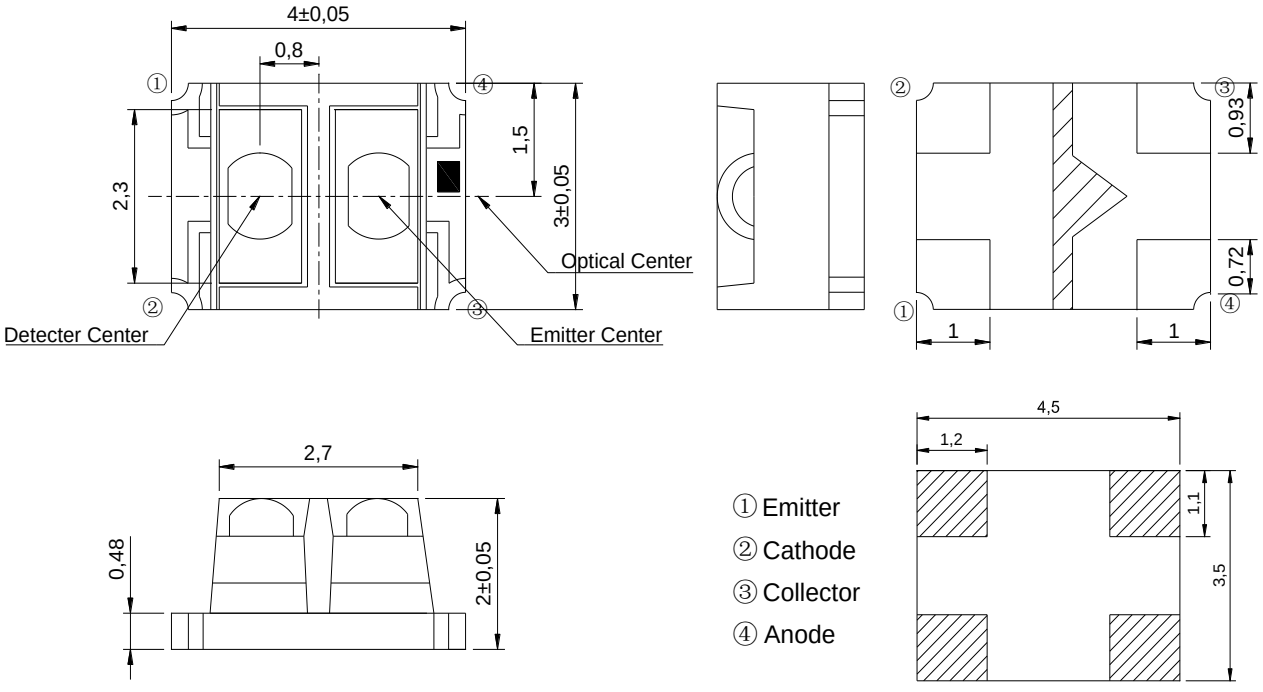


用途/Application:

·物体存在或运动的检测
Detection of object presence or motion.

·示例：打印机、光存储、投影仪
Example : printer, optical storage, Projector

尺寸图/Device Dimensions (mm):



Recommend Layer

注：器件底部非焊盘区域应避免有多余焊锡残留影响器件性能

最大极限值/Absolute Maximum Ratings

(Ta= 25℃)

参数 Parameter		符号 Symbo	额定值 Ratings	单位 Unit
	反向电压 Reverse Voltage	V_R	5	V
	正向电流 Forward Current	I_F	50	mA
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	25	mA
	集电极-发射极工作电压 Collector-Emitter Voltage	V_{CEO}	30	V
	发射极-集电极工作电压 Emitter-Collector Voltage	V_{ECO}	5	V
工作温度 Operating Temperature		T_{opr}	-25~+85	℃
储存温度 Storage Temperature		T_{stg}	-40~+85	℃
焊接温度（距离封装体2mm，时间小于5秒） Lead Soldering Temperature (2mm form body for 5 seconds)		T_{sol}	260	℃

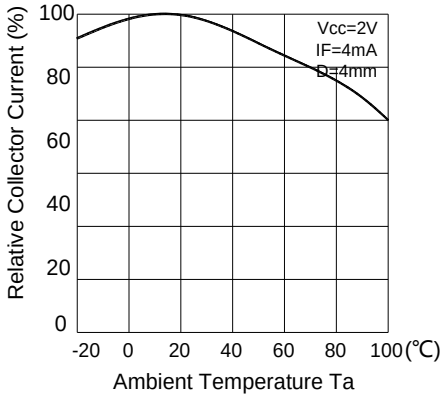
光电特性/Electro-optical characteristics

(Ta= 25℃)

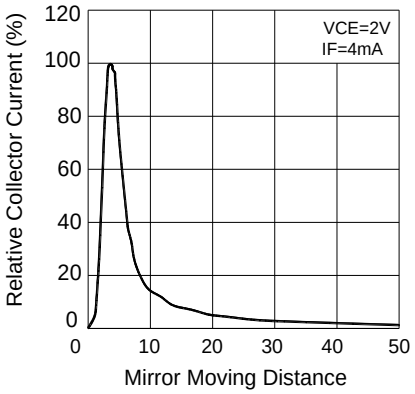
项目 Item		符号 Symbol	条件 Condition	最小 Min.	典型 Typ.	最大 Max.	单位 Unit
输入端 Input	正向压降 Forward Voltage	V_F	I_F=20mA	-	1.2	1.4	V
	反向电流 Reverse Current	I_R	V_R=6V	-	-	10	μA
	视角 View Angle	2θ1/2	I_F=20mA	-	30	-	deg
	峰值波长 Peak Wavelength	λ_P	I_F=10mA	-	940	-	nm
输出端 Output	暗电流 Dack Current	I_{CEO}	Ee=0mW/cm2 V_{CE}=20V	-	-	100	nA
	集电极-发射极工作电压 C-E Saturation Voltage	$V_{CE(SAT)}$	I_C=2mA Ee=1mW/cm2	-	-	0.4	V
转换特性 Transfer Characteristics	上升时间 Rise Time	t_r	V_{CE}=2V,I_C=100μA R_L=1kΩ,d=4mm	-	20	100	μS
	下降时间 Fall Time	t_f		-	20	100	μS
	光电流 Collector Current	$I_{C(OFF)}$	V_{CE}=2V I_F=20mA	-	-	600	nA
	光电流 Collector Current	$I_{C(ON)}$	I_F=4mA，V_{CE}=2V D=4mm	60	-	450	μA

光电特性曲线/Characteristics Curves:

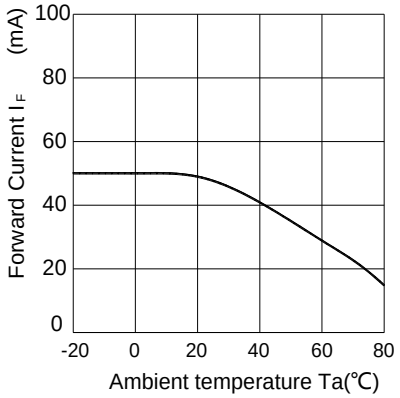
Relative Collector Current Vs. Ambient temperature



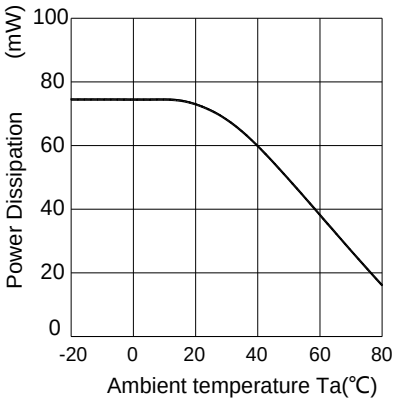
Relative Collector Current Vs. Mirror Moving Distance



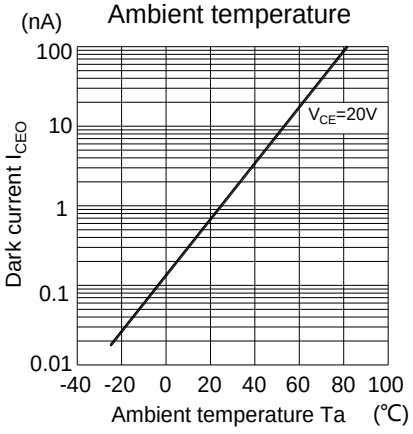
Forward Current Vs. Ambient temperature



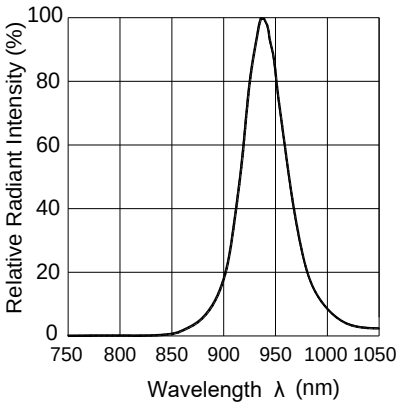
Power Dissipation Vs. Ambient temperature



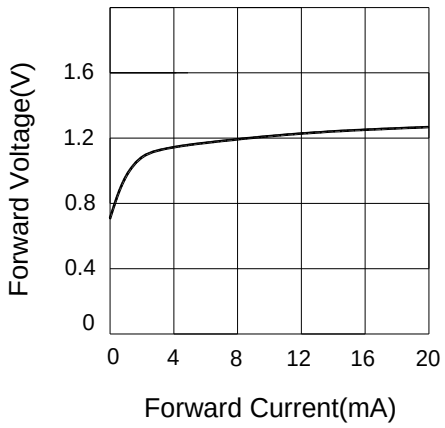
Dark current Vs. Ambient temperature



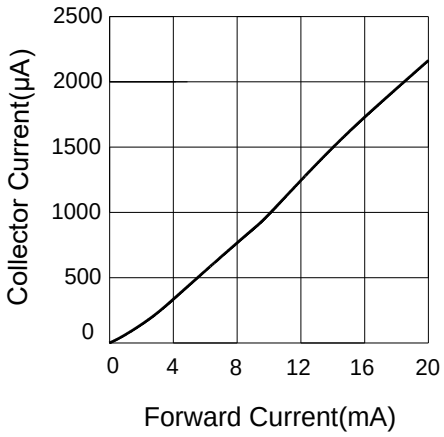
Relative Radiant Intensity Vs. Wavelength



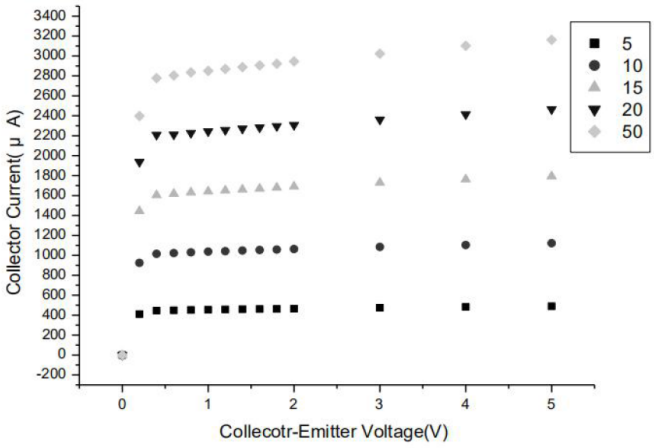
Forward Voltage Vs.
Forward Current



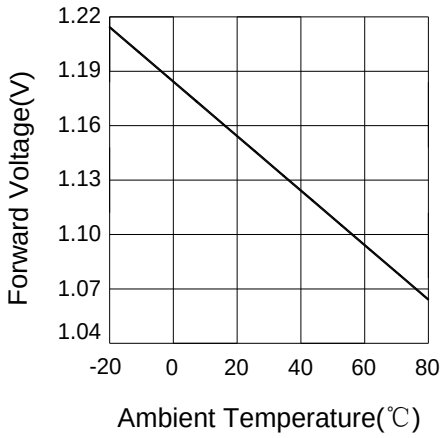
Forward Voltage Vs.
Forward Current



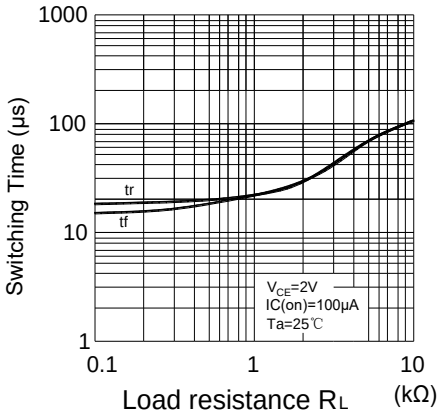
Collector Current Vs.
Collector-Emitter Voltage

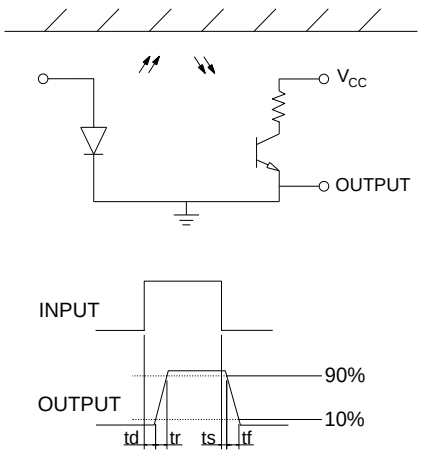


Forward Voltage Vs.
Ambient Temperature

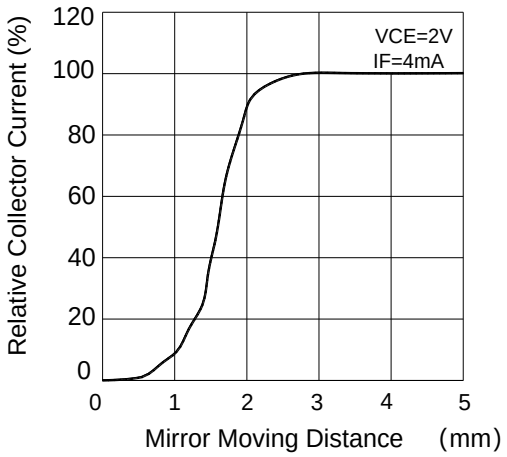


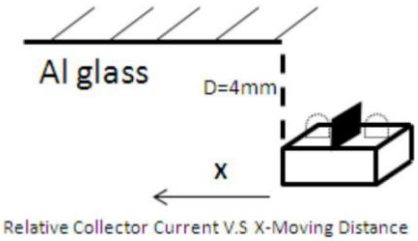
Switching Time Vs.
Load Resistance





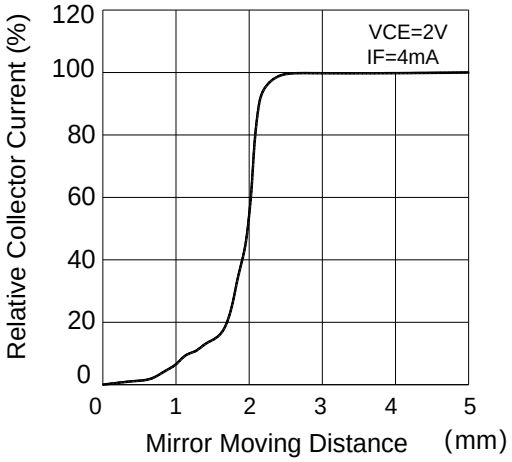
Relative Collector Current Vs.
Mirror Moving Distance

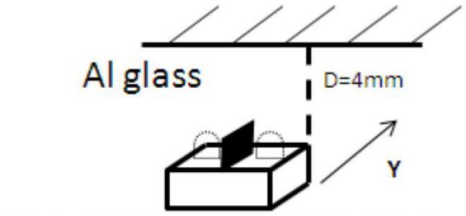




Relative Collector Current V.S X-Moving Distance

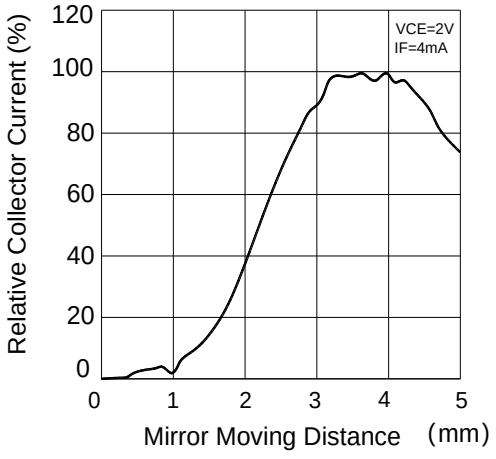
Relative Collector Current Vs.
Mirror Moving Distance

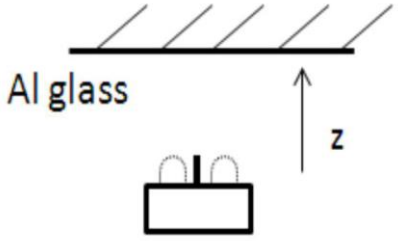




Relative Collector Current V.S Y-Moving Distance

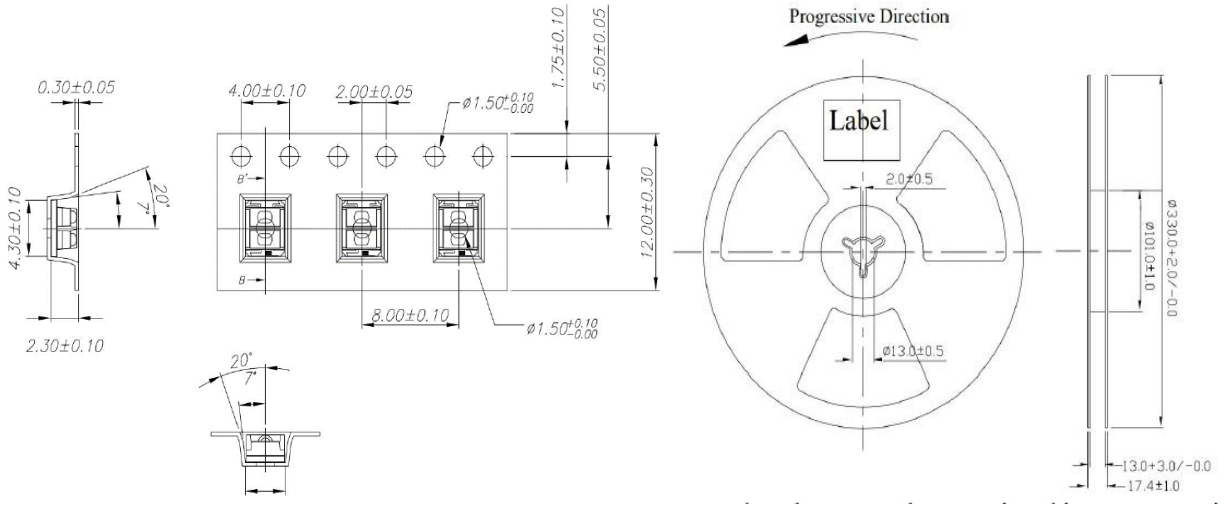
Relative Collector Current Vs.
Mirror Moving Distance





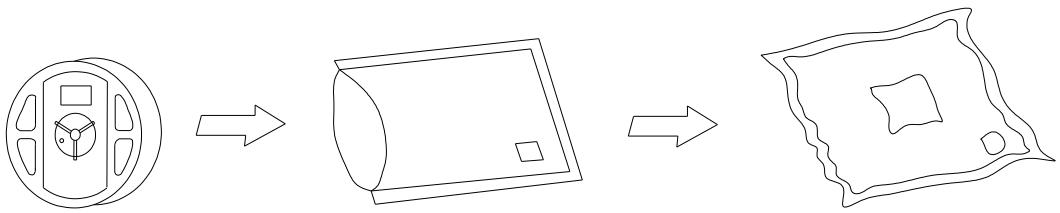
Relative Collector Current V.S z-Moving Distance

卷轴尺寸 Carrier Tape Dimensions



注意：未标注尺寸公差为±1.0mm
Note: The tolerances unless mentioned is ±1.0mm

防潮包装 Moisture Resistant Packaging



注意：
Note:

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. 800pcs/盘
1Tape：800pcs.

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.