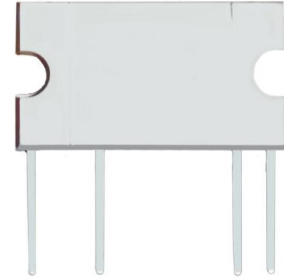


## YDS2/7050——0.7A 500V Opto-MOS

### 概述 Features

- 厚度3.0mm SSR Thickness 3.0mm SSR
- 负载电流最大为0.7A Max. load current 0.7A
- 击穿电压500V Breakdown voltage 500V
- 介质耐压3000V Dielectric strength 3000V
- 符合RoHS RoHS compliant

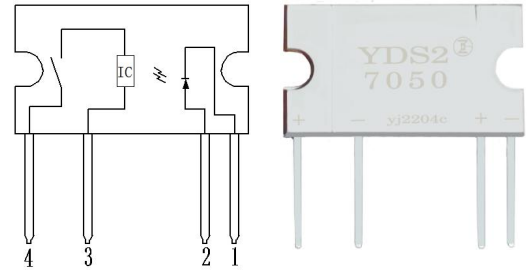


### 应用 Applications

- 测试设备 Measuring instruments
- 工业控制 Industrial control

### 打印标志 Marking information

Part number	Package	Marking
YDS2/7050	SIP4	YDS2 7050



### 极限值 Absolute maximum ratings

(Ta=25°C)

特性参数/Parameter		符号/Symbol	测试条件/Test condition	最小值/Min.	典型值/Typ.	最大值/Max.	单位/Unit
输入端/Input	LED 反向电压/LED reverse voltage	$V_R$		6			V
	LED 正向电流/LED forward current	$I_F$				50	mA
	功耗/Power dissipation	$P_{in}$				75	mW
输出端/Output	击穿电压/ Breakdown voltage	$BV_{DSS}$		500			V
	功耗/Power dissipation	$P_{out}$				2	W
	额定电流/On-state current	$I_L$	$I_{in}=10mA$			0.7	A
	峰值电流/Peak current	$I_{peak}$	10 ms (1shot), VL = DC		1.5		A
介质耐压/Dielectric strength *		$V_{ISO}$	$I_{ISO} \leq 0.3mA$	3000			$V_{rms}$
工作温度/Operating temperature		$T_{opr}$		-30		85	°C
储存温度/Storage temperature		$T_{stg}$		-40		125	°C

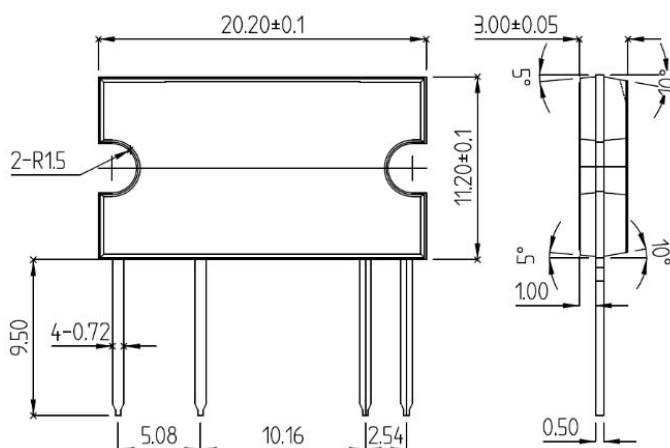
\* : RH =40 to 60%, T=20~30°C, AC for 1minute.

## 电参数 Electrical parameters

特性参数/Parameter		符号 /Symbol	测试条件 /Test condition	最小值 /Min.	典型值 /Typ.	最大值 /Max.	单位 /Unit
输入端/Input	LED 正向电压/LED forward voltage	$V_F$	$I_F=10mA$		1.2	1.3	V
	LED 反向电流/LED reverse current	$I_R$	$V_R=5V$			10	$\mu A$
输出端/Output	断态泄漏电流/Output off-state leakage current	$I_{Leak}$	$V_0=500V$			5	$\mu A$
耦合特性 /Transfer characteristics	LED 触发电流/LED trigger current	$I_{FT}$			3	8	mA
	推荐的工作电流 /Recommend operating current	$I_{in}$		10		18	mA
	导通电阻/Output on-state resistance	$R_{on}$	$I_{in}=10mA,$ $I_b=0.6A$			2.5	$\Omega$
	导通时间/Turn on time	$t_{on}$	$I_{in}=10mA,$ $I_b=100mA$			3	ms
	关断时间/Turn off time	$t_{off}$	$I_{in}=10mA,$ $I_b=100mA$			0.5	ms
	电容/I/O capacitance	C					10

## 外形尺寸 Outline dimension :mm

### SIP4

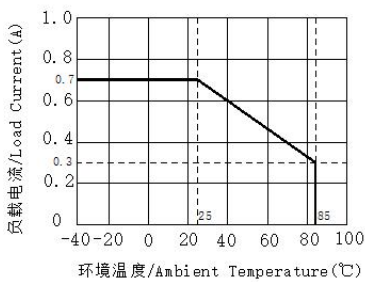


## 订货信息 Ordering information

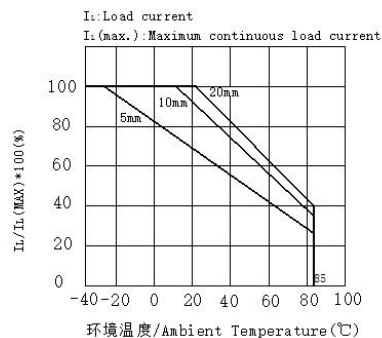
订货信息/Ordering information					
	Y	DS	2/	70	50
公司商标代号 Company symbol					
光 MOS SSR: Opto- MOS SSR					
封装 Package: 2: SIP4					
负载电流 Load current: 0.7A					
击穿电压 $BV_{DSS}$ : 500V					

## 特性曲线 Characteristic data

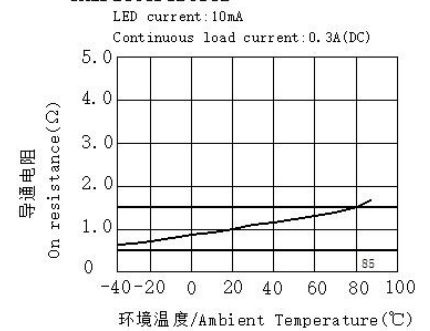
1、  
负载电流与环境温度关系曲线  
Load current VS. ambient temperature characteristics  
Allowable ambient temperature: -40°C to +85°C



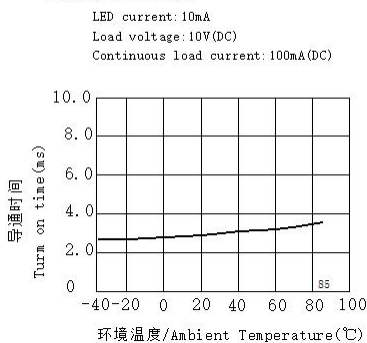
2、  
负载电流与环境温度特性曲线  
Load current VS. ambient temperature characteristics in adjacent mounting



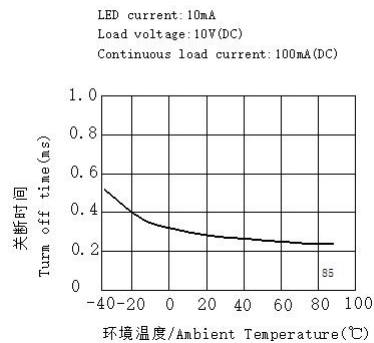
3、  
导通电阻与环境温度特性曲线  
On resistance VS. ambient temperature characteristics



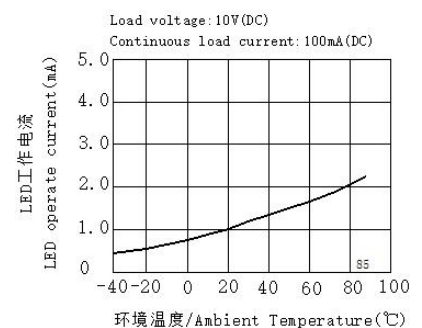
4、  
导通时间与环境温度特性曲线  
Turn on time VS. ambient temperature characteristics



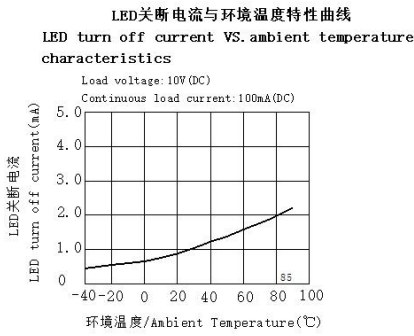
5、  
关断时间与环境温度特性曲线  
Turn off time VS. ambient temperature characteristics



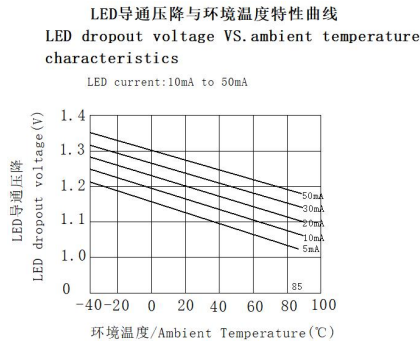
6、  
LED工作电流与环境温度特性曲线  
LED operate VS. ambient temperature characteristics



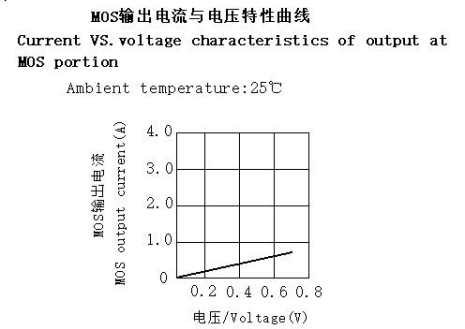
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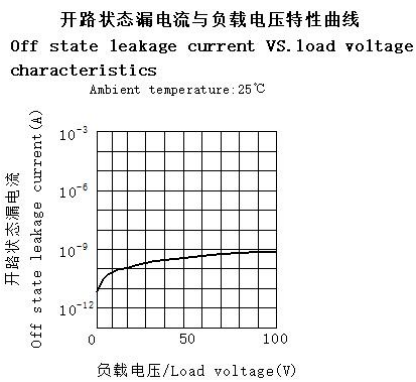
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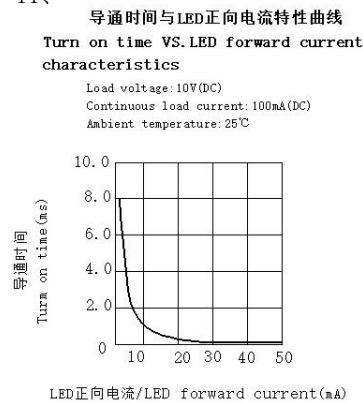
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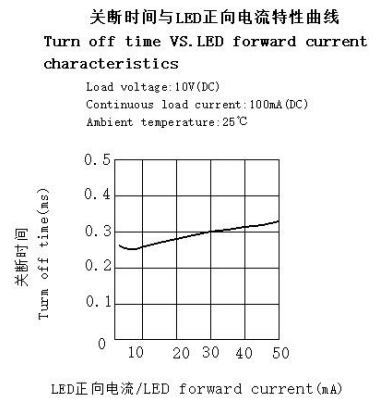
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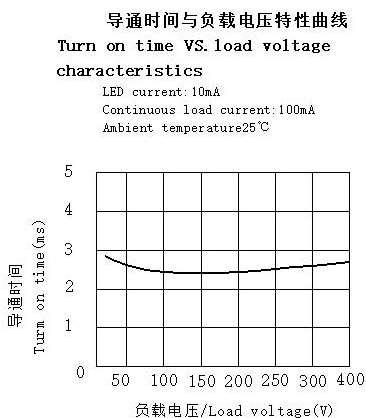
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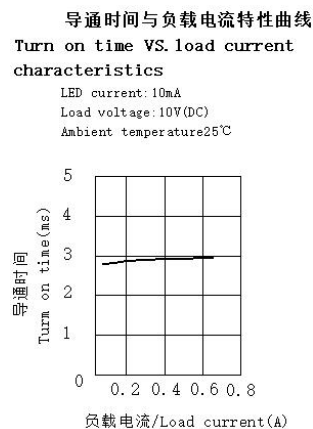
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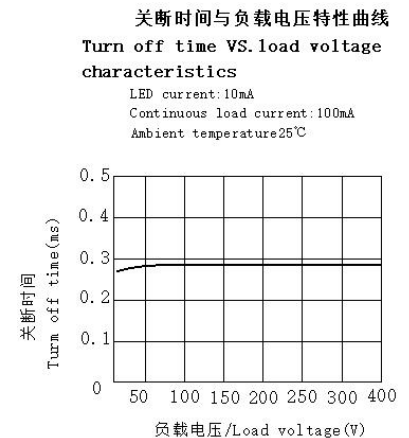
13、



14、



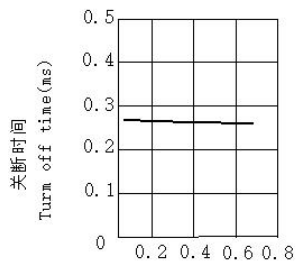
15、



16、

关断时间与负载电流特性曲线  
Turn off time VS. load current characteristics

LED current: 10mA  
Load voltage: 10V(DC)  
Ambient temperature 25°C

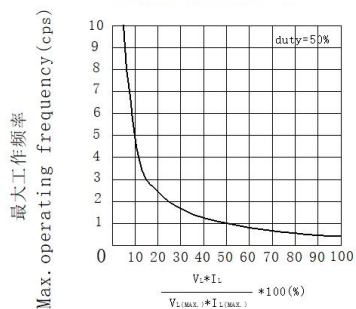


负载电流/Load current(A)

17、

最大工作频率与负载电压电流特性曲线  
Max. operating frequency VS. load voltage and load current characteristics

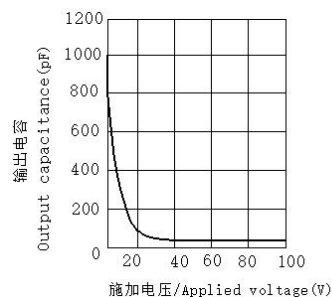
LED current: 10mA  
Ambient temperature 25°C



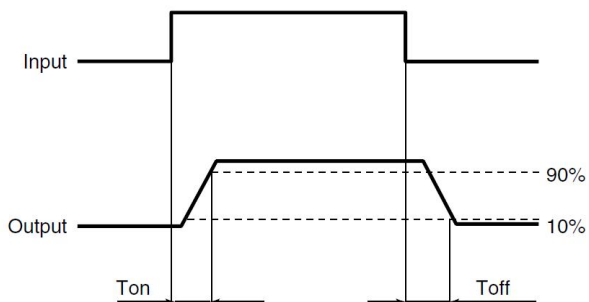
18、

输出电容与施加电压特性曲线  
Output capacitance VS. applied voltage characteristics

Frequency: 1MHz  
Ambient temperature 25°C

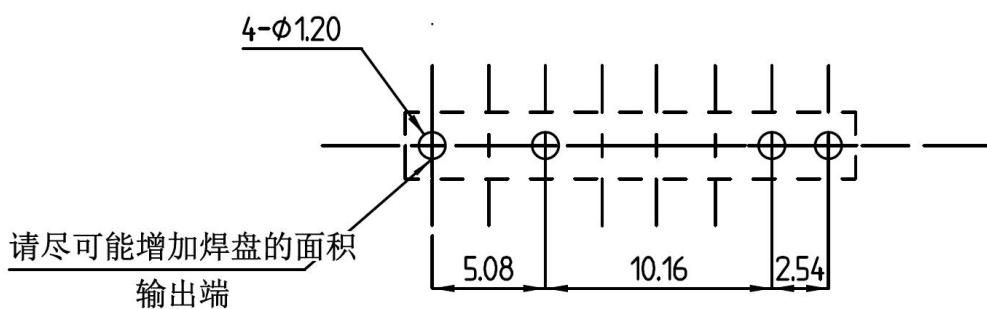


### 接通和关断时间关系 Turn on and turn off time



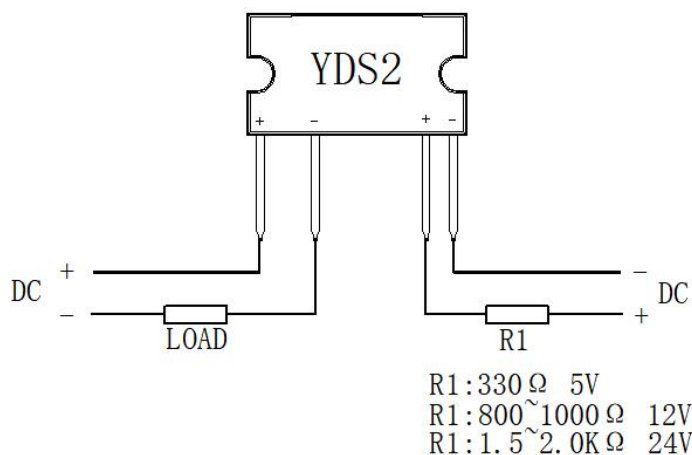
### 安装孔尺寸图 Fixing layout

Unit:mm



Please enlarge the solder pads of output.

### 接线图 Wiring diagram



## 注意事项 Notes

- a) 工作环境温度超过 25℃时请降额使用。参见特性曲线 1。  
When ambient temperature is above 25℃, the load current must be reduced. (see characteristic data)
- b) 继电器接线时，务必保证输入端极性的正确，以免损坏继电器。  
Ensuring the polarity is correct when connecting the input lines, otherwise the wrong connection will damage the relay.

## 关于防静电对策 Cautions for static electricity

- a. 操作 MOS 输出继电器的作业人员，请穿戴制电性作业服，通过 500kΩ~1MΩ 左右的保护电阻，实施人体接地。Employees handling relays should wear anti-static clothing and should be grounded through protective resistance of 500kΩ to 1MΩ.
- b. 请在作业台上装有带导电性的金属板或具有防静电的专用板，并对测量仪器和治具等实施接地。A conductive metal sheet should be placed over the work table. Measuring instruments and jigs should be grounded.
- c. 使用电烙铁时，对电烙铁前端进行接地。（建议使用低电压用的电烙铁。）When using soldering irons, either use irons with low leakage current, or ground the tip of the soldering iron. (Use of low-voltage soldering irons is also recommended.)
- d. 组装时使用的设备等也应正确的接地。Devices and equipment used in assembly should also be grounded.
- e. 对印刷电路板和机器进行包装时，请避免使用发泡苯乙烯、聚乙烯等带电性的高分子材料。When packing printed circuit boards and equipment, avoid using high-polymer materials such as foam styrene, plastic, and other materials which carry an electrostatic charge.
- f. 对MOS输出继电器进行储存和搬运时，请在不易产生静电的环境(例如湿度45~60%)中通过导电性包装材料进行保护。When storing or transporting relays, the environment should not be conducive to generating static electricity (for instance, the humidity should be between 45 and 60%), and relays should be protected using conductive packing materials.