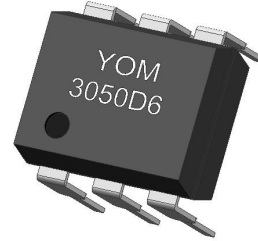


## YOM3050D/S6——500V 300mA Opto-MOS

### 概述/General Features

- 光电隔离/ optoelectronic isolation
- 负载电流最大为300mA/Max load current 300mA
- 高负载耐压500V/High load voltage 500V
- 介质耐压5000V / Dielectric Strength 5000V
- 符合RoHS/RoHS compliant

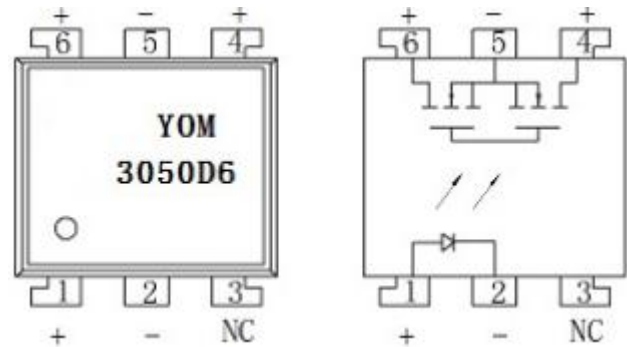


### 应用/Applications

- 高速检测设备/high-speed inspection machines
- 程控交换设备/telephone equipment
- 计算机/computer

### 订货信息/Ordering Information

| Part Number      | Package | Marking       |
|------------------|---------|---------------|
| <b>YOM3050D6</b> | DIP6    | <b>3050D6</b> |
| <b>YOM3050S6</b> | SMD6    | <b>3050S6</b> |



### 极限值/Absolute Maximum

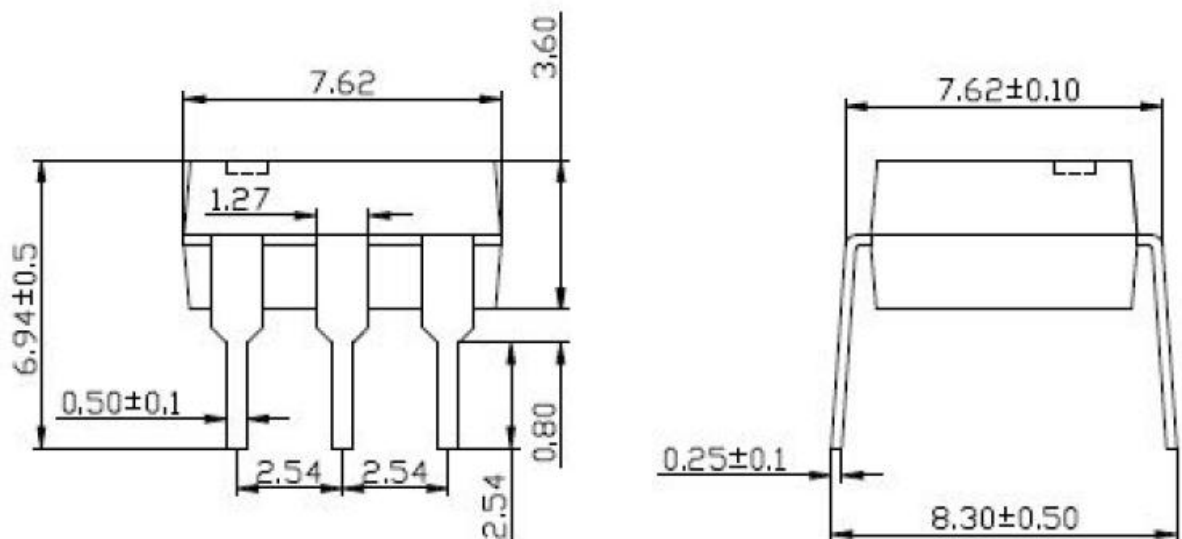
| 特性参数/Parameter |   | 符号/Symbol | 测试条件/Test condition                       | 最小值/Min. | 典型值/Typ. | 最大值/Max. | 单位/Unit |
|----------------|---|-----------|---|----------|----------|----------|---------|
| 输入端/Input      | 正向电压/LED forward current                | $V_F$     | $I_F=10mA$                                |          | 1.2      | 1.3      | V       |
|                | 反向电流/LED reverse voltage                | $I_R$     | $V_R=5V$                                  |          |          | 1        | $\mu A$ |
|                | 功耗/Power dissipation                    | $P_{in}$  |   |          | 75       |          | mW      |
| 输出端/Output     | 断态泄漏电流/Output off-state leakage current | $I_R$     | $V_b=500V$                                |          |          | 100      | nA      |
|                | 功耗/Power dissipation                    | $P_{out}$ |   |          | 800      |          | mW      |
|                | 额定连续电流/ Continuous rating current       | $I$       |   |          |          | 300      | mA      |
|                | 浪涌电流/Peak current                       | $I$       | A connection: 100 ms (1 shot), $V_L = DC$ |          | 900      |          | mA      |

### 电参数/Electrical parameter

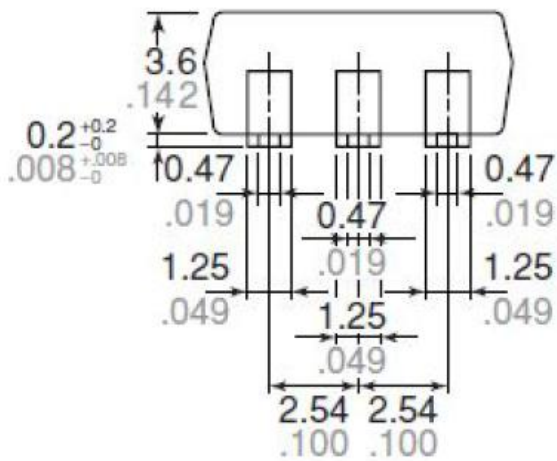
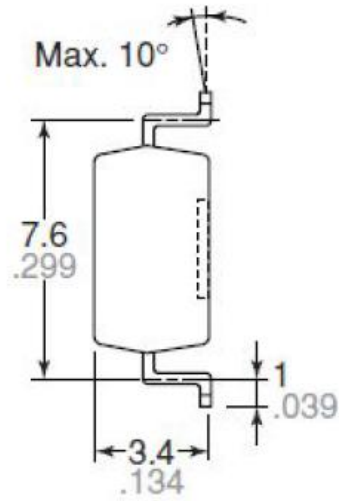
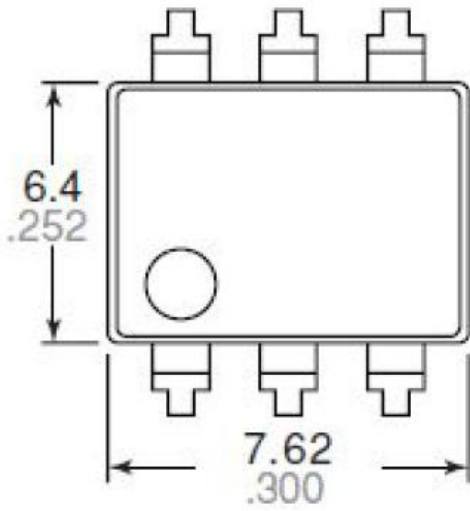
| 特性参数/Parameter                       |                                    | 符号<br>/Symbol | 测试条件<br>/Test<br>condition | 最小值<br>/Min. | 典型值<br>/Typ. | 最大值<br>/Max. | 单位<br>/Unit |
|--------------------------------------|------------------------------------|---------------|----------------------------|--------------|--------------|--------------|-------------|
| 耦合特性<br>/Transfer<br>characteristics | LED 触发电流/trigger<br>current        | $I_{FT}$      | $V=\pm 5V$                 |              | 3            | 5            | mA          |
|                                      | 导通电阻/Output<br>on-state resistance | $R_{ON}$      | $I_F=5mA, I_D=400mA$       |              | 8            |              | $\Omega$    |
|                                      | 导通时间/Turn on time                  | $t_{on}$      | $I_F=5mA, I_D=400mA$       |              |              | 2            | ms          |
|                                      | 关断时间/Turn off time                 | $t_{off}$     | $I_F=5mA, I_D=400mA$       |              |              | 1            |             |
|                                      | 介质电压/ I/O<br>Dielectric Strength   | $V_{ISO}$     | $I_{off}\leq 0.3mA$        | 5000         |              |              | $V_{rms}$   |
|                                      | 电容/ I/Ocapacitance                 | $C$           |                            |              | 1.5          |              | pF          |
| 储存温度/Store<br>temperature            | 工作温度/Operating<br>temperature      | $T$           |                            | -40          |              | 100          | $^{\circ}C$ |
|                                      |                                    |               |                            | -40          |              | 100          |             |

### 外形尺寸/Outline dimension :

DIP6



SMD



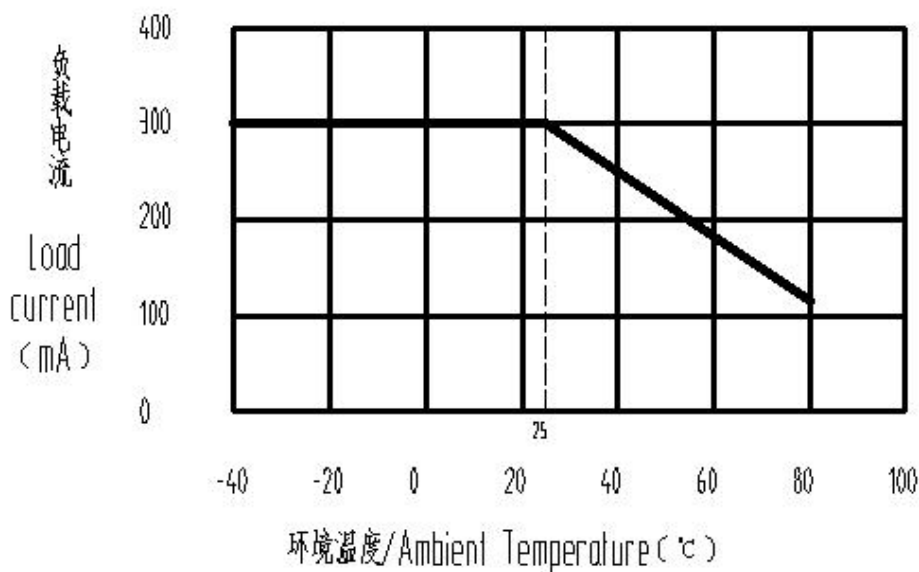
Not indicated tolerance: ± 0.2

### 命名方法/ Naming rule :

| 订货标记示例/Order information  |   |         |    |         |    |   |   |   |
|---|---|---------|----|---------|----|---|---|---|
|   | Y | OM      | B/ | 30      | 50 | D | 6 | A |
| 公司商标代号<br>Company symbol  |   |         |    |         |    |   |   |   |
| MOS 输出型 SSR   |   |         |    |         |    |   |   |   |
| 常开型 normal open: 默认 nil<br>常闭型 normal close: B                        |   |         |    |         |    |   |   |   |
| 负载电流 load current: 10—100mA; 16—160mA; 30—300mA; 40—400mA; 100—1000mA |   |         |    |         |    |   |   |   |
| 击穿电压 BVDSS: 6—60V; 10—100V; 20—200V; 35—350V; 50—500V                 |   |         |    |         |    |   |   |   |
| D: DIP  |   | S: SMD  |    |         |    |   |   |   |
| 4: PIN  |   | 6: 6PIN |    | 8: 8PIN |    |   |   |   |
| A: AC   |   | D: DC   |    |         |    |   |   |   |

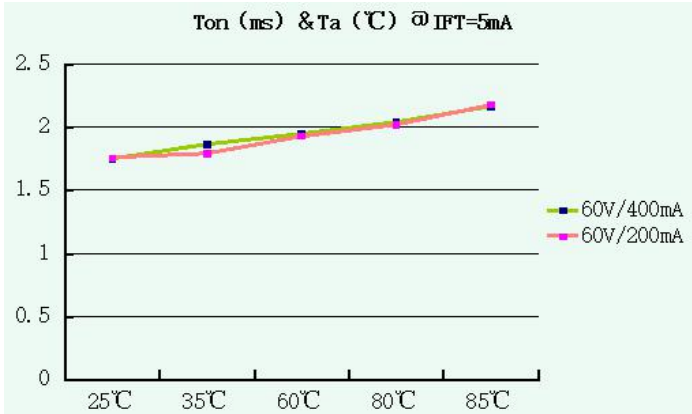
### 特性曲线/Characteristic Data:

Load current vs. ambient temperature characteristics  
Allowable ambient temperature: -40° C to +85° C



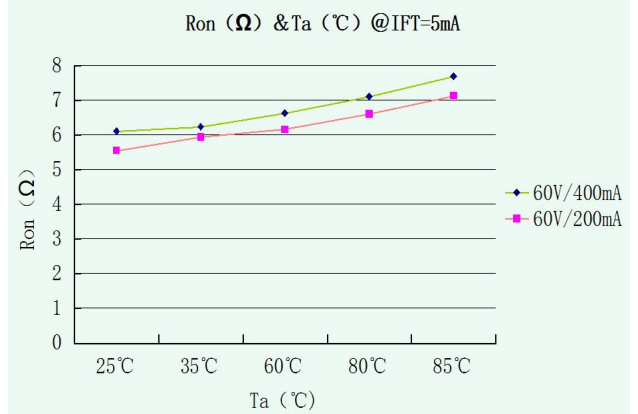
2. Turn on time vs. ambient temperature characteristics:

LED current: 5 mA; Load voltage: 60V. (DC);  
Continuous load current: 200mA and 400mA (DC)



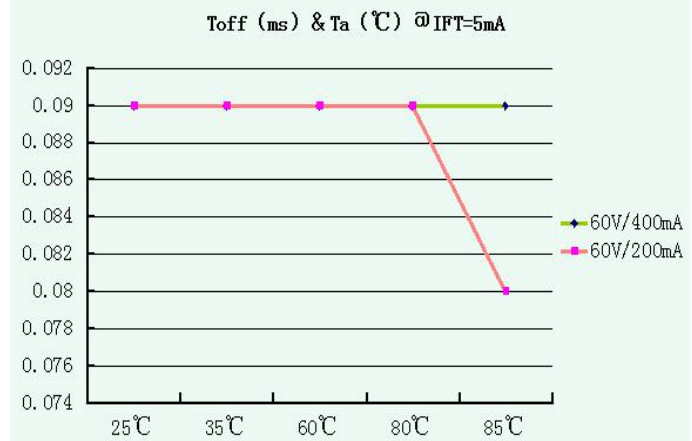
3. On resistance vs. ambient temperature characteristics

Measured pin between terminals 4 and 5, 5 and 6;  
LED current: 5 mA; Load voltage: 60V. (DC);  
Continuous load current: 200mA and 400mA (DC)



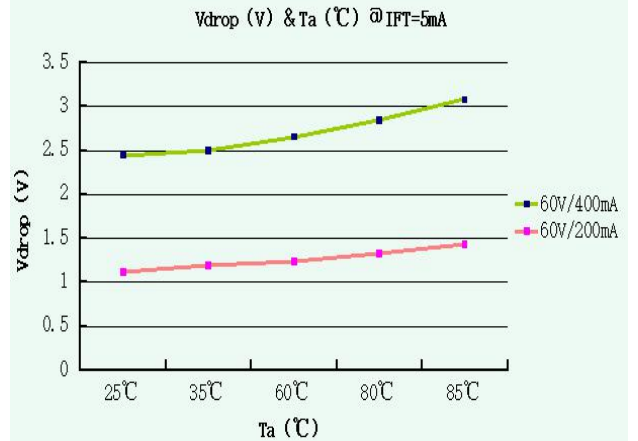
4. Turn off time vs. ambient temperature characteristics

LED current: 5 mA; Load voltage: 60V. (DC);  
Continuous load current: 200mA and 400mA (DC)



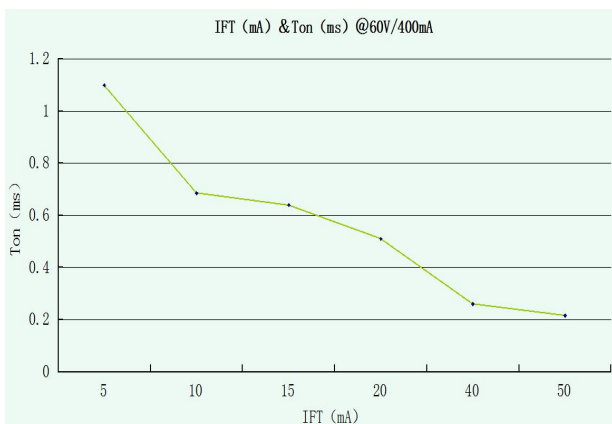
5. Vout Drop. ambient temperature characteristics

LED current: 5 mA; Load voltage: 60V. (DC);  
Continuous load current: 200mA and 400mA (DC)



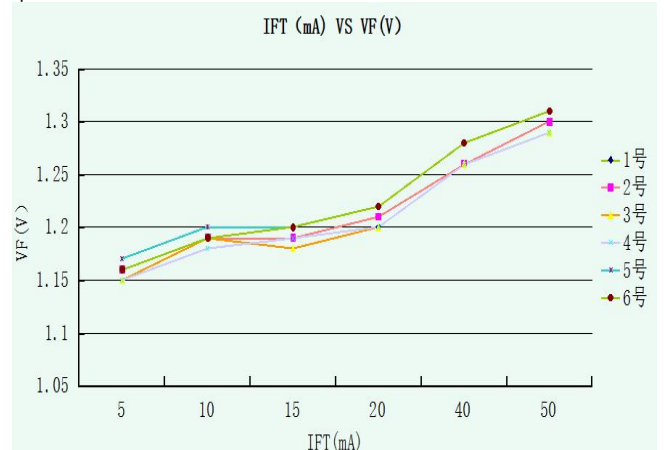
6. Turn on time vs. LED forward current characteristics

Load voltage: 60V. (DC); Continuous load current:  
400mA. (DC); Ambient temperature: 25°C

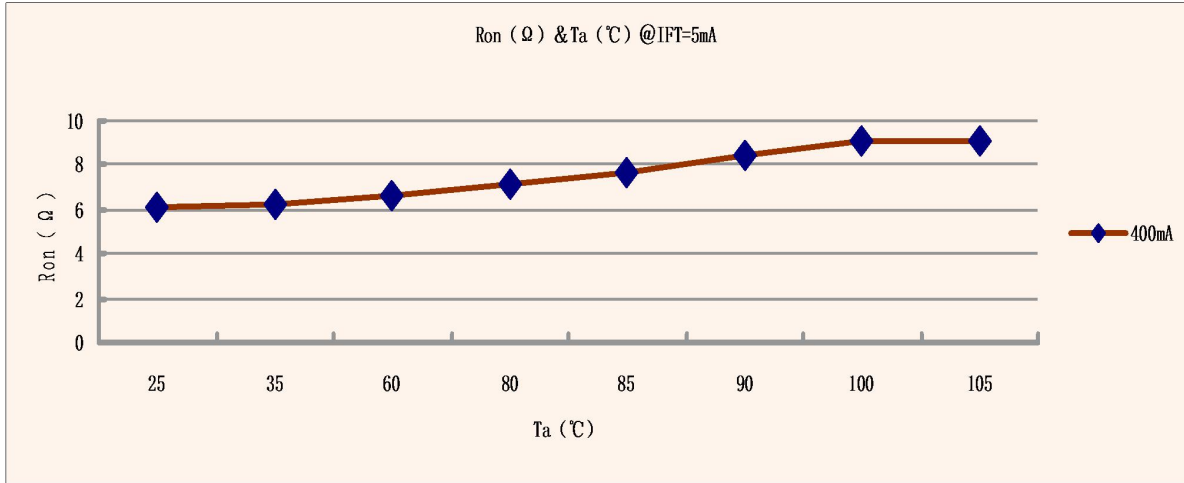


7. LED dropout voltage vs. LED forward current characteristics

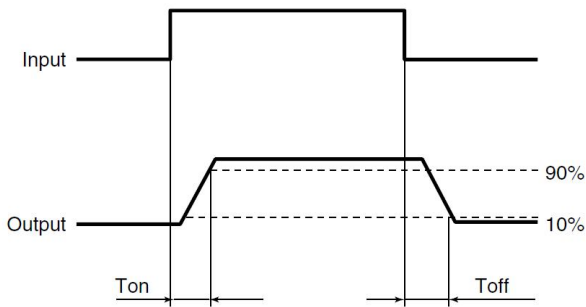
Load voltage: 60V. (DC); Continuous load current: 400mA. (DC); Ambient  
temperature: 25°C



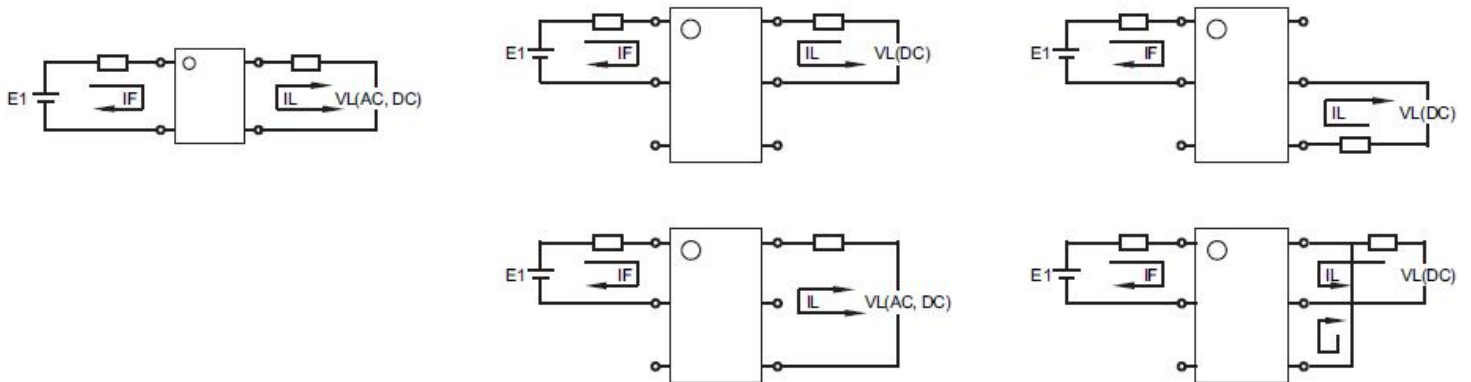
8. On resistance vs. ambient temperature characteristics: Measured pin between terminals 4 and 5, 5 and 6;  
LED current: 5 mA; Load voltage: 60V. (DC); Continuous load current: 400mA (DC)



\* Turn on/Turn off time



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，降额曲线参考附件。When ambient temperature is above 25℃, the load current must be reduced. (see Annexes, fig.1)
- 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. 请在作业台上粘贴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地接地。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.