

Hi-A Grade  $\geq 1A$

# AP70 Series

60V  $\circ$  1b



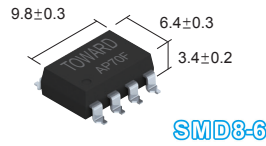
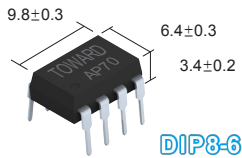
RoHS Compliance

### Features

- Contact Form 1b
- Load Voltage 60V
- Operation LED Current 5.0mA
- Load Current 2.0A
- On-Resistance 0.25 $\Omega$
- Output Capacitance 1350pF
- Low Off-State Leakage Current 10 $\mu$ A

### Application

- Modem
- Telephone Equipment
- Security Equipment
- Sensing Equipment
- Automatic Test Equipment
- I/O Modules
- Electric Vehicle

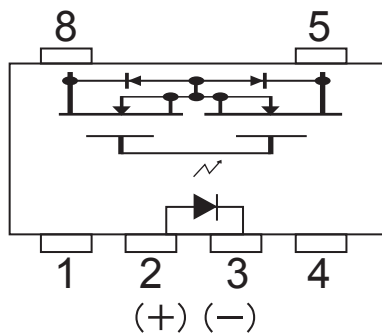


PART NO	PACKAGE	PACKING
AP70	DIP8-6	Tube 45pcs
AP70F	SMD8-6	Tube 45pcs
AP70F-R1	SMD8-6	Reel 1000pcs

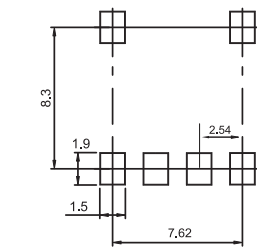
\* Package & PCB Layout Design, See Page 134

### Terminal Identification

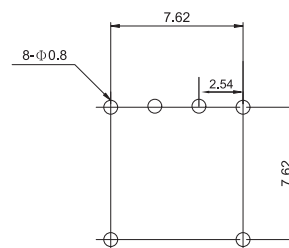
#### AP70(F)



- 1: NC
- 2: Anode (LED)
- 3: Cathode (LED)
- 4: NC
- 5: Drain (MOSFET)
- 8: Drain (MOSFET)



AP70F  
(Top View)



AP70  
(Bottom View)

### Absolute Maximum Ratings 絕對最大定格 (Ambient Temperature 周圍溫度 : 25°C )

Item		Symbol	Value
Input 輸入	Continuous LED Current 連續 LED 電流	I <sub>F</sub>	50mA
	Peak LED Current LED 峰值電流 (f=100 Hz,Duty=1%)	I <sub>FP</sub>	500mA
	LED Reverse Voltage 逆向 LED 電壓	V <sub>R</sub>	5V
	Input Power Dissipation 輸入損耗	P <sub>IN</sub>	75mW
output 輸出	Load Voltage 負荷電壓	V <sub>L</sub>	60V (AC peak or DC)
	Load Current 負荷電流 (A)	I <sub>L</sub>	2.0
	Peak Load Current 峰值負荷電流 (10 ms,1 shot) (A)	I <sub>PEAK</sub>	6.0
	Output Power Dissipation 輸出損耗 (mW)	P <sub>OUT</sub>	1400
Total Power Dissipation 全損耗 (mW)		P <sub>T</sub>	1450
I/O Breakdown Voltage 入 / 出力間絕緣電壓 (VAC)		V <sub>I/O</sub>	3750
Operating Temperature 使用時溫度		T <sub>OPR</sub>	-40°C ~ +85°C
Storage Temperature 保存溫度		T <sub>STG</sub>	-40°C ~ +100°C

### Electrical Specifications 電性規格 (Ambient Temperature 周圍溫度 : 25°C )

Item		Symbol	MIN.	TYP.	MAX.	Units	Conditions
Input 輸入	LED Forward Voltage LED 順向電壓	V <sub>F</sub>	1.0	1.37	1.5	V	I <sub>F</sub> =10mA
	Operation LED Current LED 動作電流	I <sub>F OFF</sub>		1.0	5.0	mA	
	Recovery LED Voltage LED 復位電壓	V <sub>F ON</sub>	0.5	1.2		V	
Output 輸出	On-Resistance 導通電阻 Drain to Drain	R <sub>ON</sub>		0.25	0.35	Ω	I <sub>F</sub> =0mA, I <sub>L</sub> =Rating Time to flow is within 1sec.
	Off-State Leakage Current 開路狀態漏電流	I <sub>LEAK</sub>			10	μA	I <sub>F</sub> =10mA, V <sub>L</sub> =60V
	Output Capacitance 輸出端容量	C <sub>OUT</sub>		1350		pF	I <sub>F</sub> =10mA V <sub>L</sub> =0V, f=1MHz
Transmission 傳達	Operate Time 動作時間	T <sub>OFF</sub>		0.6	3.0	ms	I <sub>F</sub> =10mA, I <sub>L</sub> =Rating
	Release Time 復位時間	T <sub>ON</sub>		0.25	3.0	ms	
Coupled 結合	I/O Insulation Resistance 輸入 / 出間絕緣阻抗	R <sub>I/O</sub>	10 <sup>10</sup>			Ω	
	I/O Capacitance 輸入 / 力端靜電容量	C <sub>I/O</sub>		1.3		pF	f=1MHz

PhotomOS-FET Relays  
General Purpose

PhotomOS-FET Relays  
Hi-A Grade ≥ 1A

PhotomOS-FET Relays  
Hi-V Grade ≥ 600V

PhotomOS-FET Relays  
Low Leakage Current


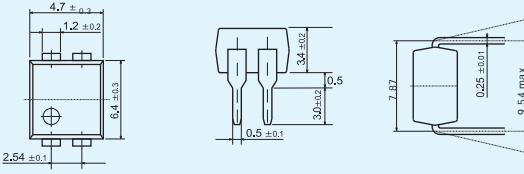
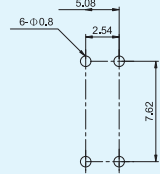

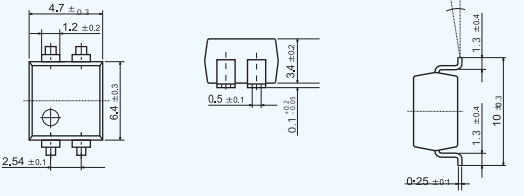
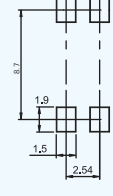

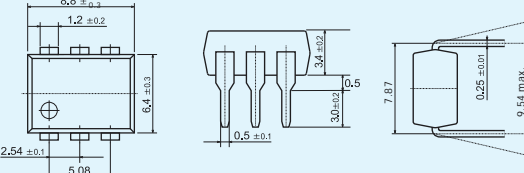
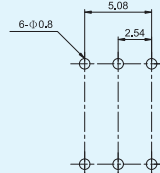

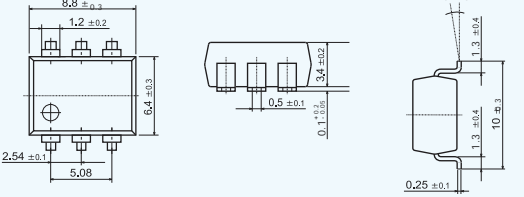
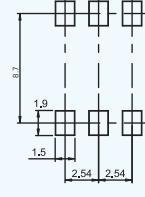

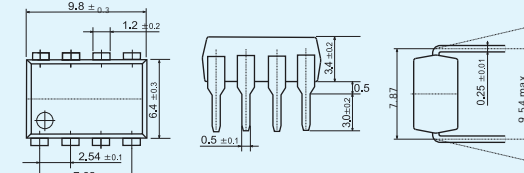
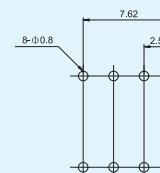

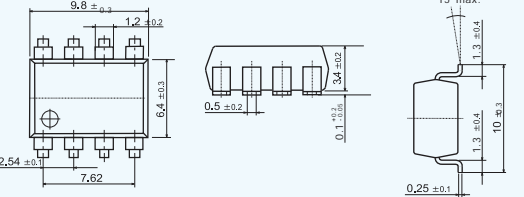
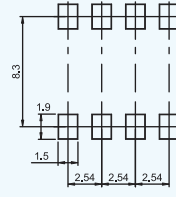
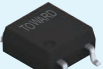
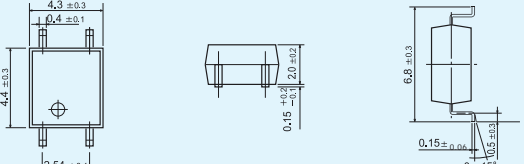
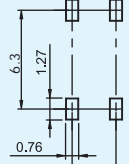

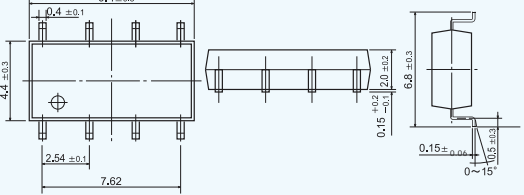
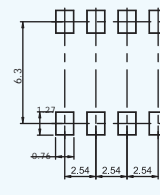
PhotomOS-FET Relays  
RF

PhotomOS-FET Relays  
Photo Coupler

PhotomOS-FET Relays  
Mos Driver

PhotomOS-FET Relays  
Solid State Relays

Package & PC Board Pattern

Package 包裝	Dimensions 外型尺寸圖	PC Board pattern PC 板加工圖
 <p>DIP4</p>		 <p>(Bottom View)</p>
 <p>SMD4</p>		 <p>(Top View)</p>
 <p>DIP6</p>		 <p>(Bottom View)</p>
 <p>SMD6</p>		 <p>(Top View)</p>
 <p>DIP8</p>		 <p>(Bottom View)</p>
 <p>SMD8</p>		 <p>(Top View)</p>
 <p>SOP4</p>		 <p>(Top View)</p>
 <p>SOP8</p>		 <p>(Top View)</p>

為了持續的改進，敝司有權在不影響規格範圍的情況下修改設計。  
In the interest of continuous development, our companies reserve the right to alter designs within specification range.

Package Type 包裝類型	Tape shape & dimensions 形狀和尺寸	Reel shape & dimensions 圈帶形狀和尺寸	Quantity 數量
4 Pin SOP			1000 pcs
8 Pin SOP			1000 pcs
4 Pin SMD			1000 pcs
6 Pin SMD			1000 pcs
8 Pin SMD			1000 pcs

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Type 類型	Load 負荷	Connection 接續方法	Feature 特長	
4 pin	AC or DC		Control bi-directional signal 可控制雙向信號	
6 pin	A		Control bi-directional signal 可控制雙向信號	
	B	DC		On-Resistance is 1/2 of A-connection 導通電阻值是 A 接法的 1/2 2-Make-contacts (Source Common)
		DC		
C	DC		On-Resistance is 1/2 of B-connection 導通電阻值是 B 接法的 1/2	
8 pin	AC or DC		2 input and 2 output 2 入力和 2 出力回路	
			1 input and 2 output 1 入力和 2 出力回路	

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