



600V · 1a/2a

Features

- Contact Form
 - Load Voltage
 - Operation LED Current
 - Load Current
 - On-Resistance
 - Output Capacitance
 - Low Off-State Leakage Current
 - Suffix -H for DIP/SMD I/O Breakdown Voltage
 - Suffix -H for SOP I/O Breakdown Voltage
- 1a / 2a

600 V Max.

3.0mA Max.

80mA Max.

53Ω Typ.

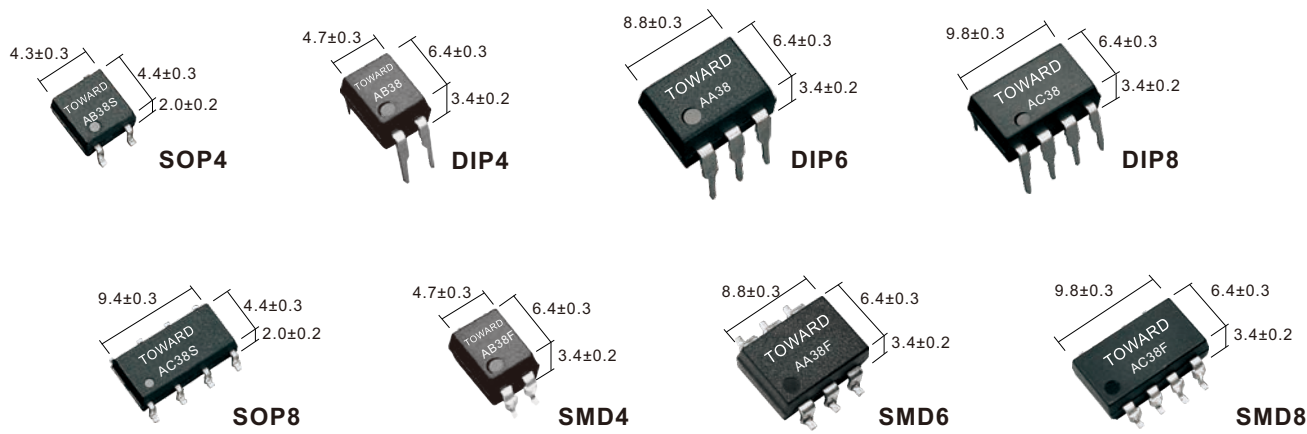
95 pF Typ.

1.0μ A Max.

5000Vrms Min.

3750Vrms Min.

Outline:(Unit:mm) pitch:2.54 mm



Terminal Identification 電路結構圖

Terminal Identification		
AB38(F)(S)	AA38(F)	AC38(F)(S)
1: Anode (LED) 2: Cathode (LED) 3,4: Drain (MOS FET)	1: Anode (LED) 2: Cathode (LED) 3: NC 4,6: Drain (MOS FET) 5: Source (MOS FET)	1,3: Anode (LED) 2,4: Cathode (LED) 5,6,7,8: Drain (MOS FET)

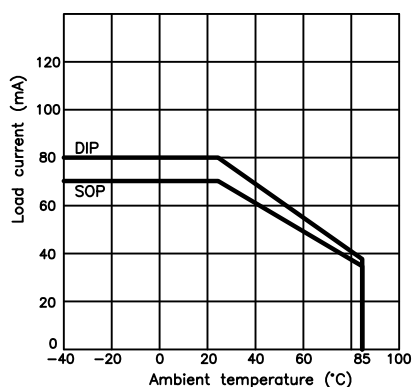
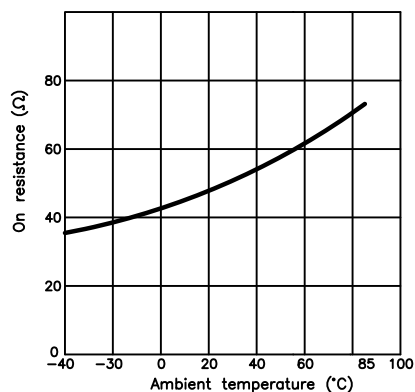
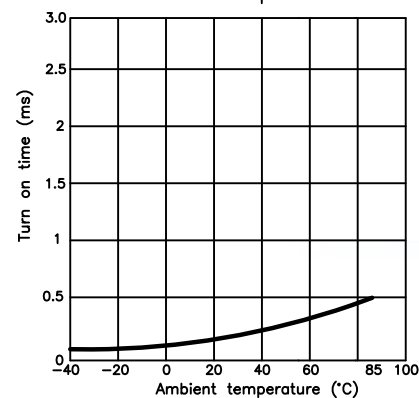
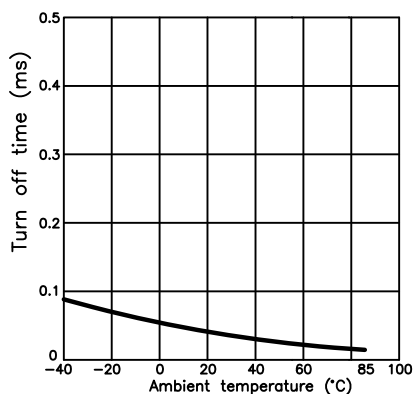
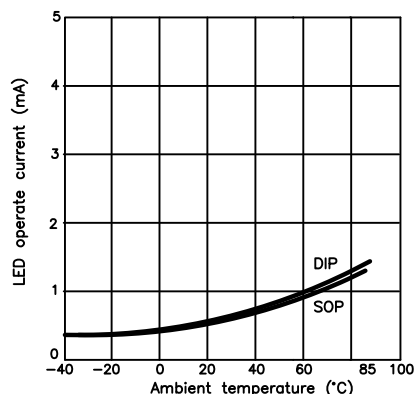
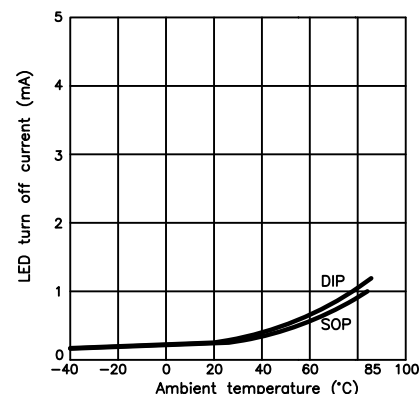
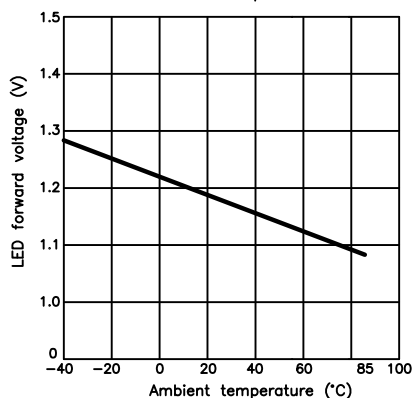
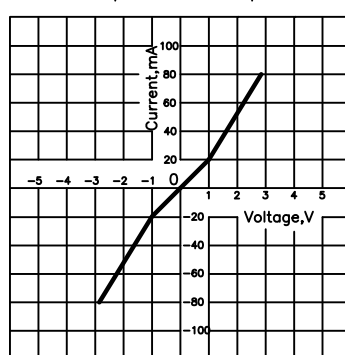
PhotoDMOS-FET Relay
Hi-Voltage

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

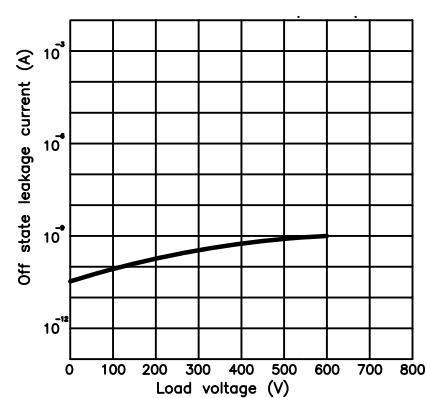
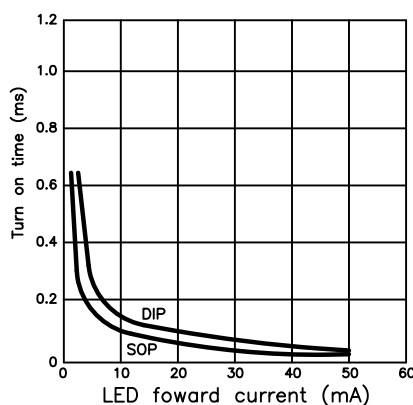
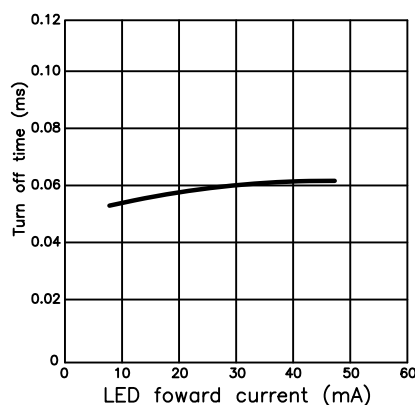
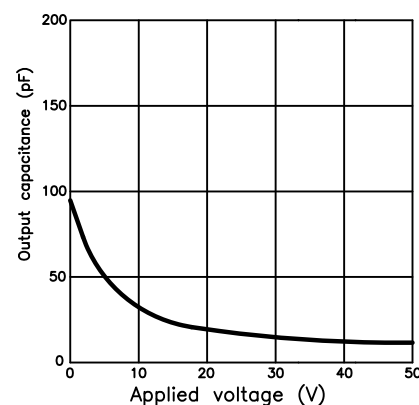
Item		Symbol	Value				
Outline Package			SOP 4/8		DIP 4/8 SMD 4/8		DIP 6 SMD 6
			1CH	2CH	1CH	2CH	1CH
Input 輸入	Continuous LED Current 連續的LED電流	I _F	50mA				
	Peak LED Current LED的峰值電流(f=100 Hz, duty=1%)	I _{FP}	500mA				
	LED Reverse Voltage 逆向的LED電壓	V _R	5V				
	Input Power Dissipation 容許損失	P _{In}	75mW				
Output 輸出	Load Voltage 負荷電壓	V _L	600V (AC peak or DC)				
	Load Current 負荷電流 (mA)	I _L	70	60	80	70	80
	Peak Load Current 峰值負荷電流 (1 ms, 1 shot) (mA)	I _{Peak}	200	200	200	200	200
	Output Power Dissipation 電流損耗 (mW)	P _{Out}	300	450	450	600	450
Total Power Dissipation 全損耗 (mW)		P _T	350	500	500	650	500
I/O Breakdown Voltage 入/出力間絕緣電壓 (V _{rms})		V _{I/O}	1500	1500	3750	3750	3750
Operating Temperature 使用時周圍溫度		T _{Opr}	-40°C ~ +85°C				
Storage Temperature 周圍保存溫度		T _{Stg}	-40°C ~ +100°C				

Electrical Specifications LED順向電壓(Ambient Temperature 周圍溫度 : 25°C)

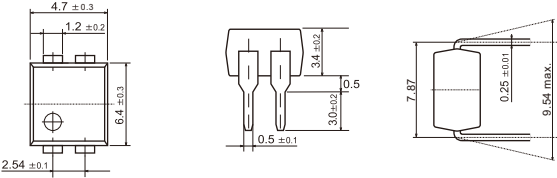
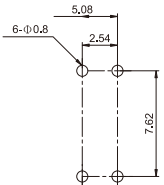
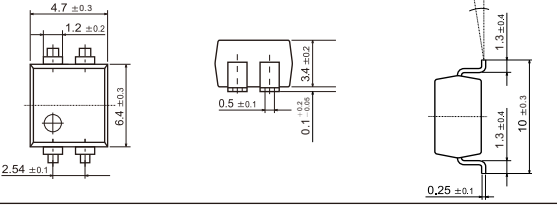
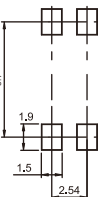
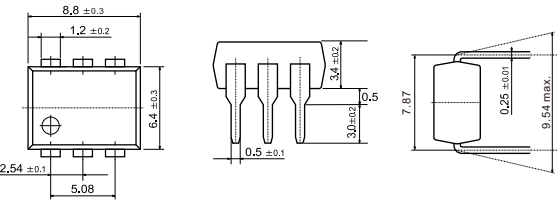
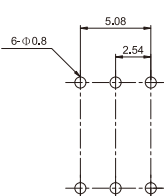
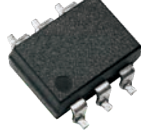
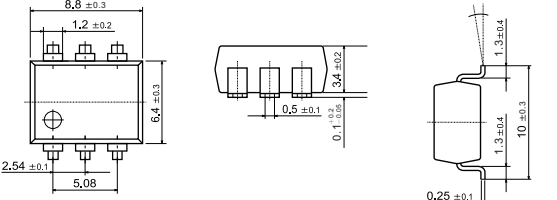
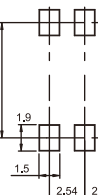
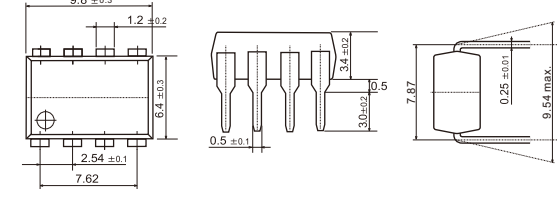
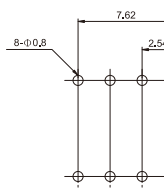
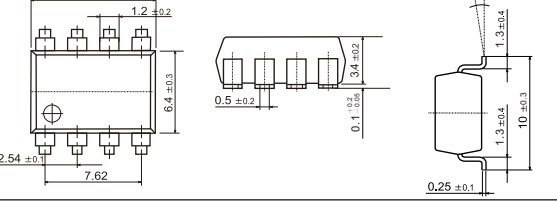
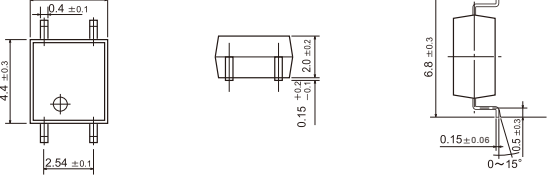
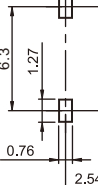
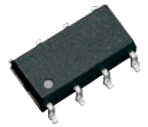
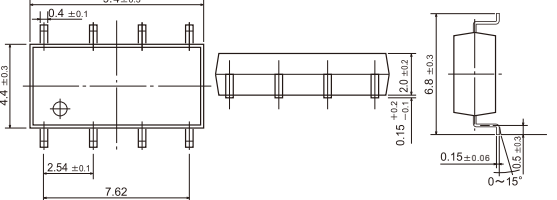
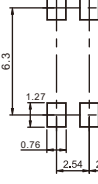
Item		Symbol	MIN.	TYP.	MAX.	Units	Conditions
Input 輸入	LED Forward Voltage LED順向電壓	V _F	1.0	1.17	1.5	V	I _F =10mA
	Operation LED Current LED的動作電流	I _{F On}		0.8	3.0	mA	
	Recovery LED Voltage LED的恢復電壓	V _{F Off}	0.5	1		V	
Output 輸出	On-Resistance 導通電阻 Drain to Drain	R _{On}		53	60	Ω	I _F =5mA, I _L =Rating Time to flow is within 1sec.
	Off-State Leakage Current 開路狀態時的電流	I _{Leak}			1.0	μA	V _L =600V
	Output Capacitance 輸出端容量	C _{Out}		95		pF	V _L =0V, f=1MHz
Transmission 傳達	Turn-On Time 動作時間	T _{On}		0.2	0.5	ms	I _F =5mA I _L =Rating (for SOP type)
	Turn-Off Time 復位時間	T _{Off}		0.05	0.2	ms	
	Turn-On Time 動作時間	T _{On}		0.1	1.0	ms	I _F =10mA, I _L =Rating (for DIP/SMD type)
	Turn-Off Time 復位時間	T _{Off}		0.05	0.5	ms	
Coupled 結合	I/O Insulation Resistance 輸入/出間的絕緣阻抗	R _{I/O}	10 ⁹			Ω	
	I/O Capacitance 輸入/力端的靜電容量	C _{I/O}		1.3		pF	f=1MHz

Load current Vs.
Ambient temperatureOn resistance Vs.
Ambient temperatureTurn on time Vs.
Ambient temperatureTurn off time Vs.
Ambient temperatureLED operate current Vs.
Ambient temperatureLED Turn off current Vs.
Ambient temperatureLED forward voltage Vs.
Ambient temperatureVoltage Vs. current characteristics
of output at MOS portion

Off state leakage current

LED foward current Vs.
turn on time characteristicsLED foward current Vs.
turn off time characteristicsApplied voltage Vs.
output capacitance characteristics

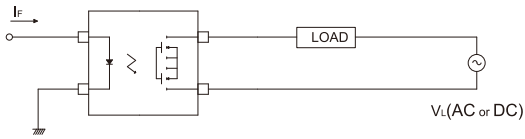
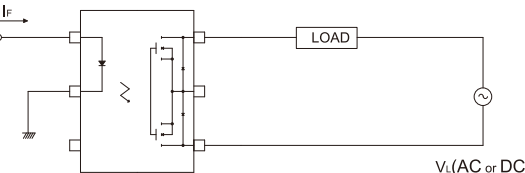
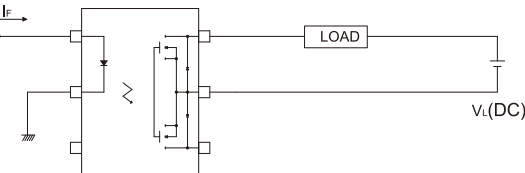
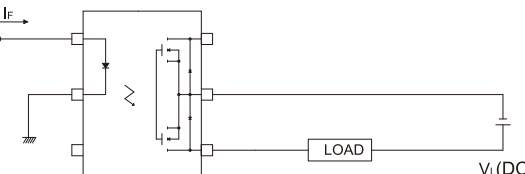
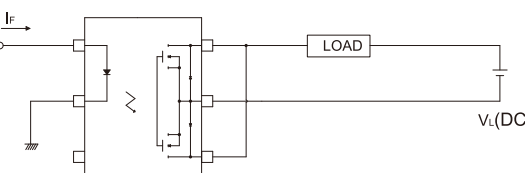
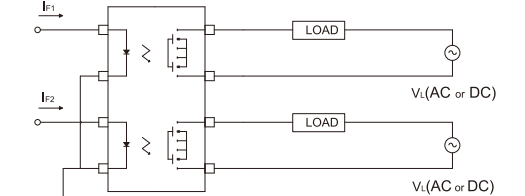
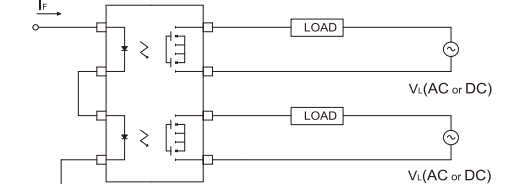
Package & PC Board Pattern

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

Packing Specifications

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	Technical drawing of 4 Pin SOP package. Dimensions include: Pin pitch: 1.5mm, Pin width: 0.3mm, Pin spacing: 2.3mm, Package width: 12mm, Package height: 4.6mm. Carrier tape dimensions: R1, R2, Feed Direction, Index Mark.	Technical drawing of 4 Pin SOP reel. Dimensions include: Reel diameter: 21mm, Central hole: 13mm, Pin pitch: 1.5mm, Reel width: 13mm, Pin width: 2.0mm.	1000 pcs
8 Pin SOP	Technical drawing of 8 Pin SOP package. Dimensions include: Pin pitch: 1.5mm, Pin width: 0.3mm, Pin spacing: 2.3mm, Package width: 16mm, Package height: 10.4mm. Carrier tape dimensions: R1, R2, Feed Direction, Index Mark.	Technical drawing of 8 Pin SOP reel. Dimensions include: Reel diameter: 21mm, Central hole: 13mm, Pin pitch: 1.5mm, Reel width: 17mm, Pin width: 2.0mm.	1000 pcs
4 Pin SMD	Technical drawing of 4 Pin SMD package. Dimensions include: Pin pitch: 1.5mm, Pin width: 0.3mm, Pin spacing: 4.0mm, Package width: 16mm, Package height: 5.3mm. Carrier tape dimensions: R1, R2, Feed Direction, Index Mark.	Technical drawing of 4 Pin SMD reel. Dimensions include: Reel diameter: 21mm, Central hole: 13mm, Pin pitch: 1.5mm, Reel width: 17mm, Pin width: 2.2mm.	1000 pcs
6 Pin SMD	Technical drawing of 6 Pin SMD package. Dimensions include: Pin pitch: 1.5mm, Pin width: 0.3mm, Pin spacing: 4.45mm, Package width: 16mm, Package height: 9.15mm. Carrier tape dimensions: R1, R2, Feed Direction, Index Mark.	Technical drawing of 6 Pin SMD reel. Dimensions include: Reel diameter: 21mm, Central hole: 13mm, Pin pitch: 1.5mm, Reel width: 17mm, Pin width: 2.2mm.	1000 pcs
8 Pin SMD	Technical drawing of 8 Pin SMD package. Dimensions include: Pin pitch: 1.5mm, Pin width: 0.3mm, Pin spacing: 4.0mm, Package width: 16mm, Package height: 9.9mm. Carrier tape dimensions: R1, R2, Feed Direction, Index Mark.	Technical drawing of 8 Pin SMD reel. Dimensions include: Reel diameter: 21mm, Central hole: 13mm, Pin pitch: 1.5mm, Reel width: 17mm, Pin width: 2.2mm.	1000 pcs

Load Connecting Method

Type 類 型	Load 負 荷	Connection 接 續 方 法	Feature 特 長
4pin	AC or DC		Control bi-directional signal 可控制雙向信號
6pin	A AC or DC		Control bi-directional signal 可控制雙向信號
			On-Resistance is 1/2 of A-connection 導通電阻值是A接法的1/2
	B DC		2-Make-contacts (Source Common)
	C DC		On-Resistance is 1/2 of B-connection 導通電阻值是B接法的1/2
8pin	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