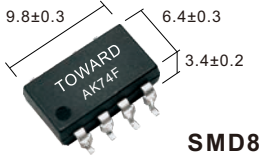
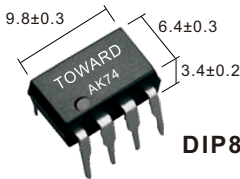
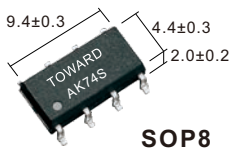


400V · 1a+1b

Features

• Contact Form	1a+1b
• Load Voltage	400 V Max.
• Operation LED Current	3.0mA Max.
• Load Current	100mA Max.
• On-Resistance	24Ω /28Ω Typ.
• Output Capacitance	100/165 pF Typ.
• Low Off-State Leakage Current	10 μA Max.

Outline:(Unit:mm) pitch:2.54 mm



PhotoDMOS-FET Relay
General-Purpose

Terminal Identification 電路結構圖

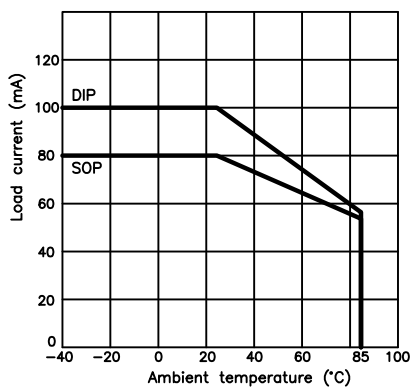
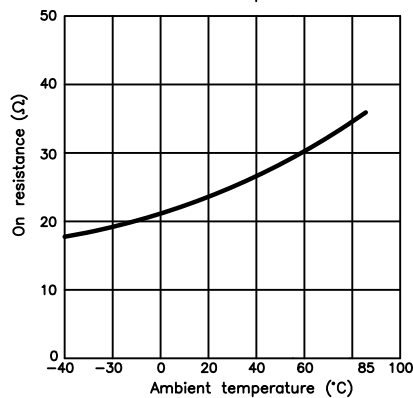
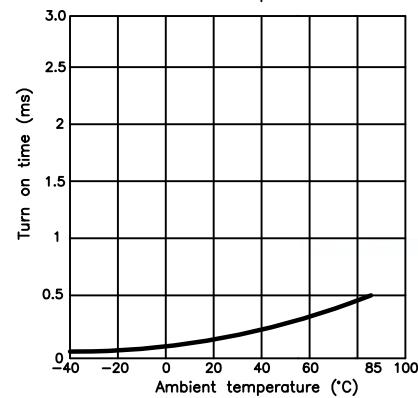
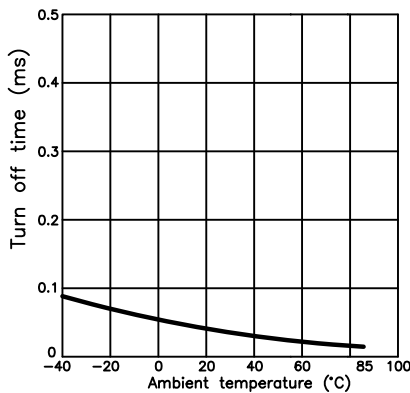
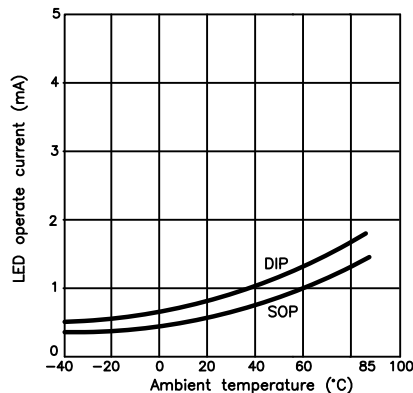
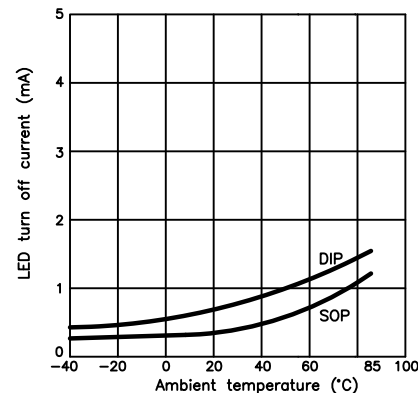
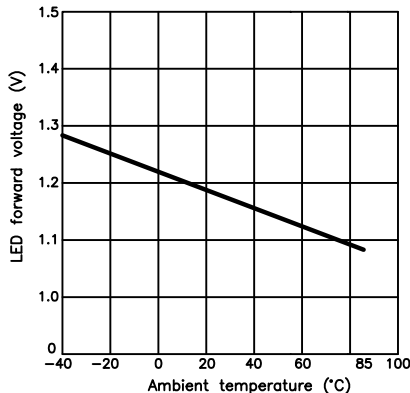
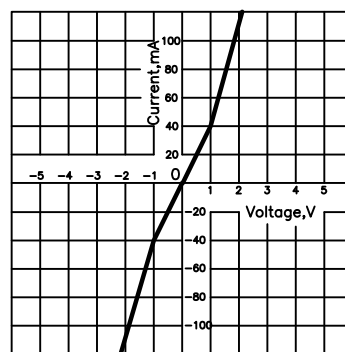
Terminal Identification	
AK74(F)(S)	
	1,3: Anode (LED) 2,4: Cathode (LED) 5,6,7,8: Drain (MOS FET)

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

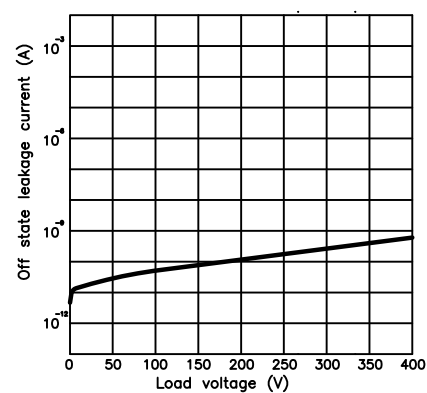
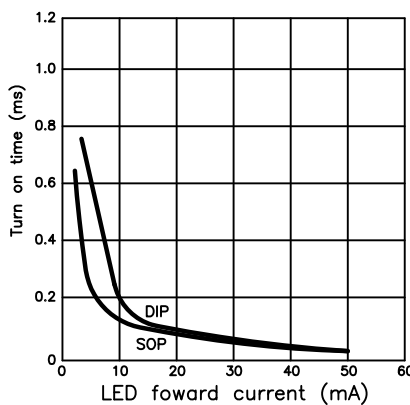
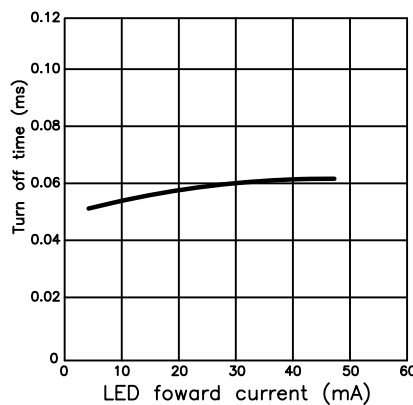
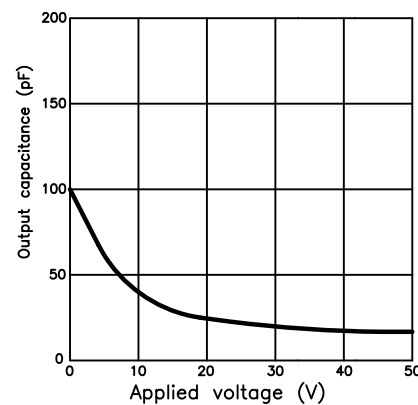
Item		Symbol	Value	
Outline Package			SOP 8	DIP 8 ,SMD 8
			1a+1b Type	1a+1b Type
Input 輸入	Continuous LED Current 連續的LED電流	I _F	50mA	
	Peak LED Current LED的峰值電流(f=100 Hz, duty=1%)	I _{FP}	500mA	
	LED Reverse Voltage 逆向的LED電壓	V _R	5V	
	Input Power Dissipation 容許損失	P _{In}	75mW	
Output 輸出	Load Voltage 負荷電壓	V _L	400V (AC peak or DC)	
	Load Current 負荷電流 (mA)	I _L	80(NO)60(NC)	100(NO)70(NC)
	Peak Load Current 峰值負荷電流 (1 ms,1 shot) (mA)	I _{Peak}	400	400
	Output Power Dissipation 電流損耗 (mW)	P _{Out}	400	600
Total Power Dissipation 全損耗 (mW)		P _T	450	650
I/O Breakdown Voltage 入/出力間絕緣電壓 (Vrms)		V _{I/O}	1500	1500
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)

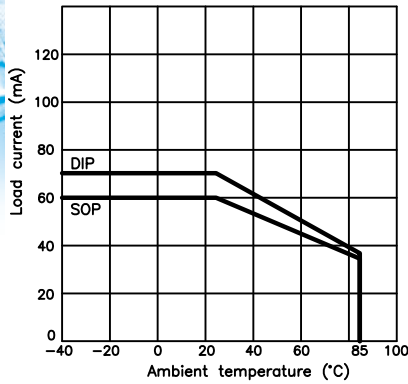
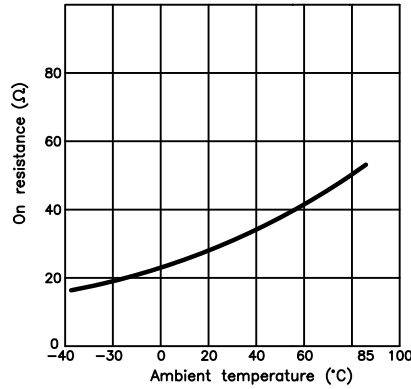
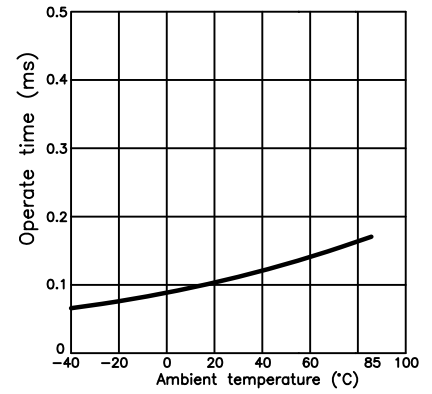
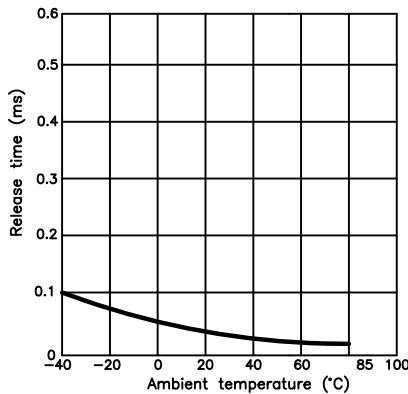
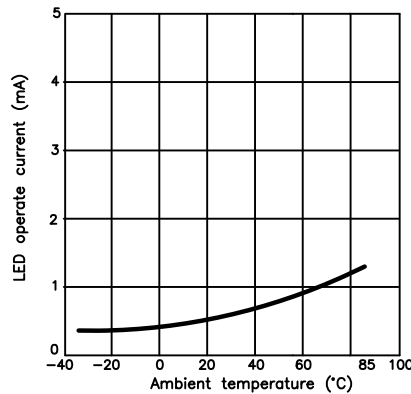
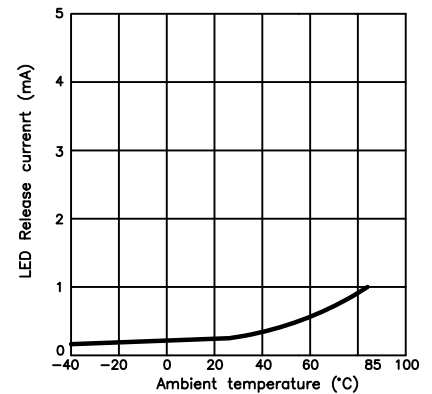
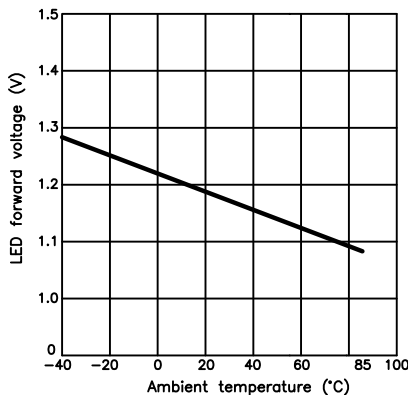
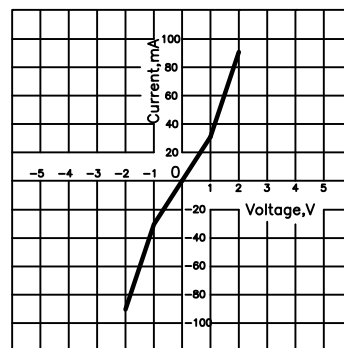
Item		Symbol	MIN.	TYP.	MAX.	Units	Conditions
Input 輸入	LED Forward Voltage LED順向電壓	V _F	1.0	1.17	1.5	V	I _F =10mA
	Operation LED Current LED的動作電流	I _{F Op}		0.6	3.0	mA	
	Recovery LED Voltage LED的恢復電壓	V _{F Rec}	0.5	1		V	
Output 輸出	On-Resistance 導通電阻 Drain to Drain	R _{On}		24(NO) 28(NC)	30(NO) 50(NC)	Ω	I _F =5mA(NO), I _F =0mA(NC) I _L =Rating Time to flow is within 1sec.
	Off-State Leakage Current 開路狀態時的電流	I _{Leak}			1(NO) 10(NC)	μA	I _F =0mA(NO), I _F =5mA(NC) V _L =400V
	Output Capacitance 輸出端容量	C _{Out}		100(NO) 165(NC)		pF	I _F =0mA(NO), I _F =5mA(NC) V _L =0V, f=1MHZ
Transmission 傳達	Operate Time 動作時間	T _{On} (NO) T _{Off} (NC)		0.2(NO) 0.1(NC)	2.0	ms	I _F =5mA I _L =Rating (for SOP type)
	Release Time 復位時間	T _{Off} (NO) T _{On} (NC)		0.05	0.5	ms	
	Operate Time 動作時間	T _{On} (NO) T _{Off} (NC)		0.2(NO) 0.15(NC)	2.0	ms	
	Release Time 復位時間	T _{Off} (NO) T _{On} (NC)		0.05	0.5	ms	I _F =10mA, I _L =Rating (for DIP/SMD type)
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

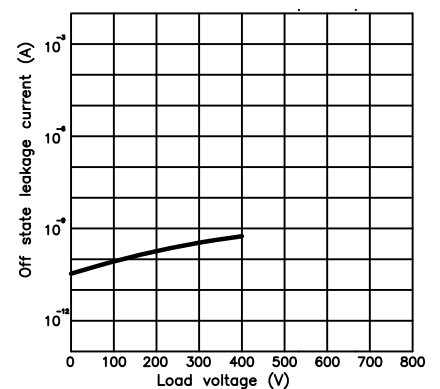
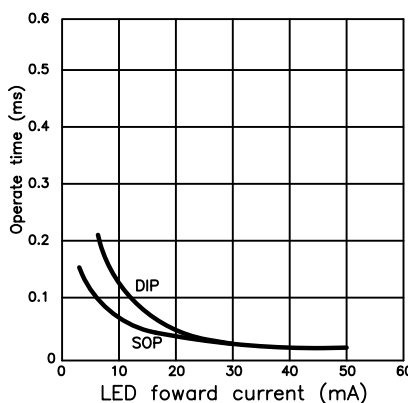
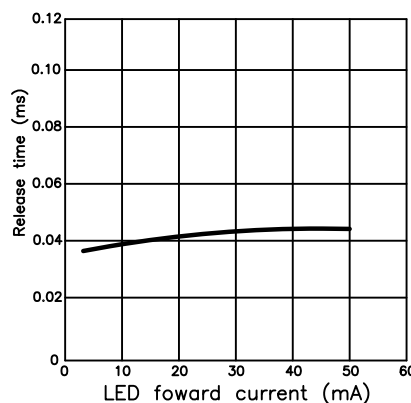
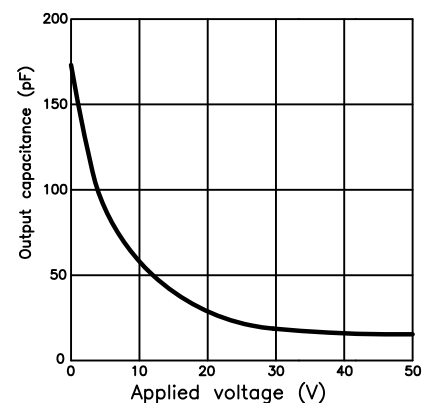
Off state leakage current

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

(Normally Open Characteristics)

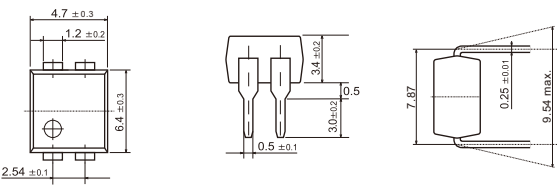
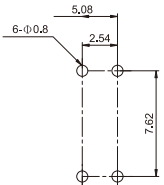
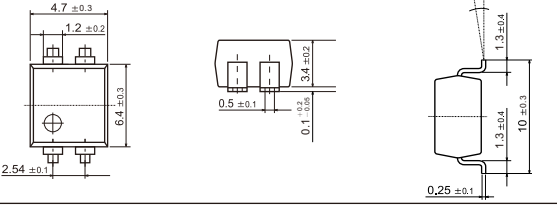
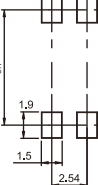
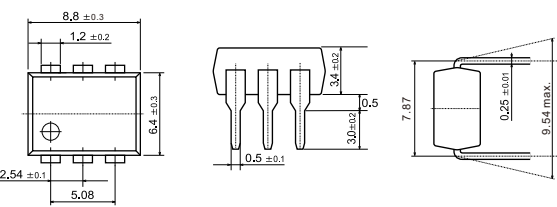
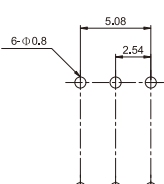
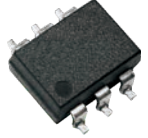
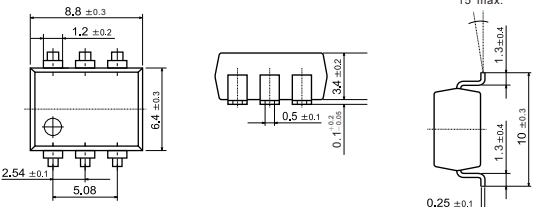
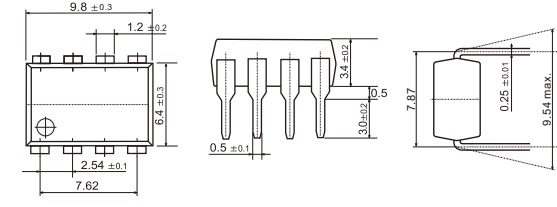
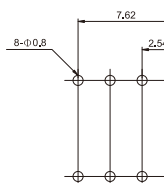
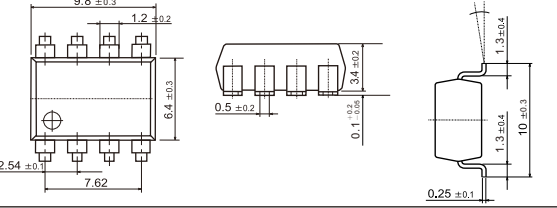
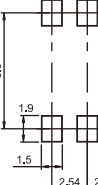
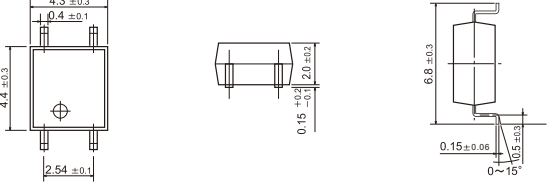
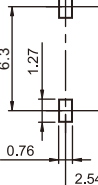
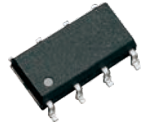
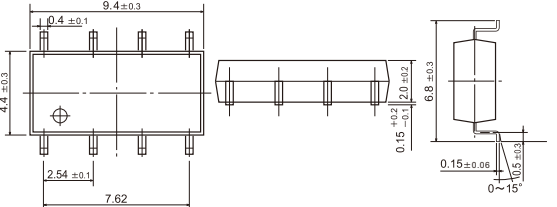
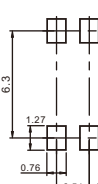
Load current Vs.
Ambient temperatureOn resistance Vs.
Ambient temperatureOperate time Vs.
Ambient temperatureRelease time Vs.
Ambient temperatureLED operate current Vs.
Ambient temperatureLED Release current Vs.
Ambient temperatureLED forward voltage Vs.
Ambient temperatureVoltage Vs. current characteristics
of output at MOS portion

Off state leakage current

LED foward current Vs.
operate time characteristicsLED foward current Vs.
Release time characteristicsApplied voltage Vs.
output capacitance characteristics

(Normally Close Characteristics)

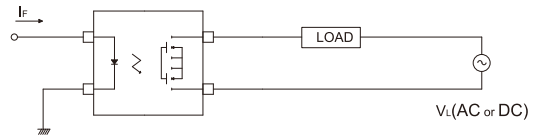
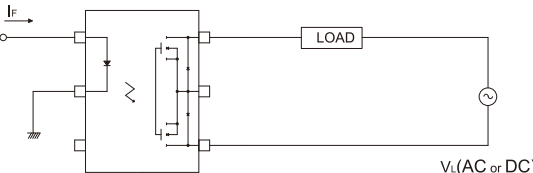
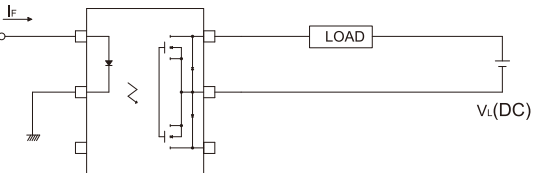
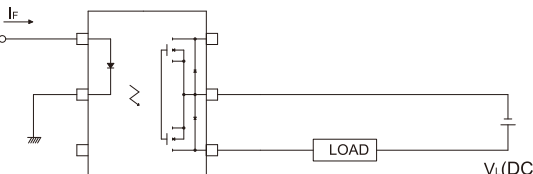
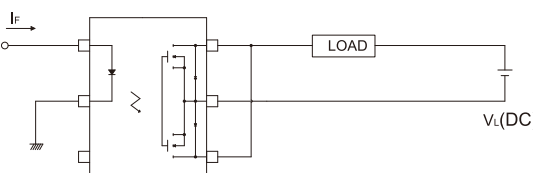
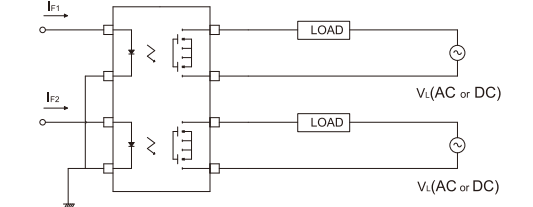
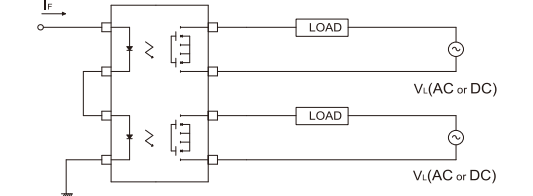
Package & PC Board Pattern

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 showing dimensions and carrier views.	Technical drawing of 4 Pin SOP reel showing dimensions and carrier views.	1000 pcs
8 Pin SOP	Technical drawing of 8 Pin SOP package showing dimensions and carrier views.	Technical drawing of 8 Pin SOP reel showing dimensions and carrier views.	1000 pcs
4 Pin SMD	Technical drawing of 4 Pin SMD package showing dimensions and carrier views.	Technical drawing of 4 Pin SMD reel showing dimensions and carrier views.	1000 pcs
6 Pin SMD	Technical drawing of 6 Pin SMD package showing dimensions and carrier views.	Technical drawing of 6 Pin SMD reel showing dimensions and carrier views.	1000 pcs
8 Pin SMD	Technical drawing of 8 Pin SMD package showing dimensions and carrier views.	Technical drawing of 8 Pin SMD reel showing dimensions and carrier views.	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