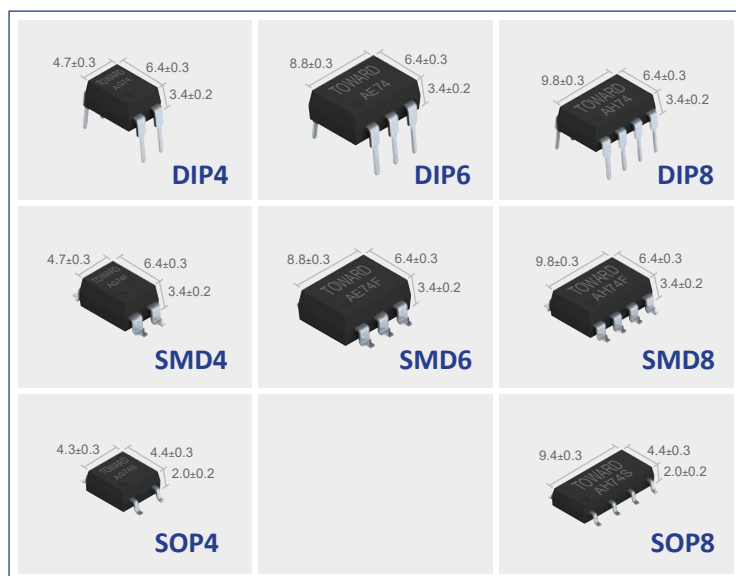


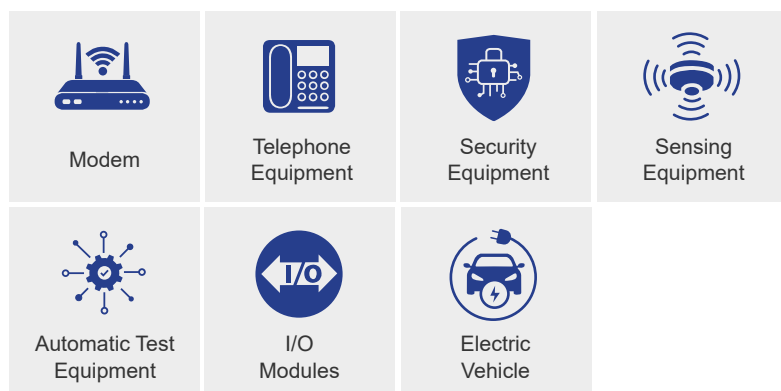


74 SERIES

400V. 1b / 2b



APPLICATIONS



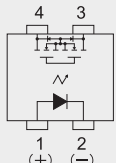
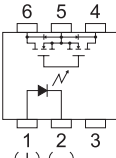
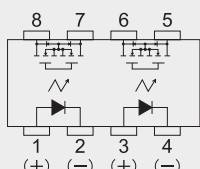
KEY FEATURES

- MINIATURE SIZE SOLID STATE RELAY
- Long life / silent operations
- Great performing linearity
- Require low drive current / voltage
- Minimized noise
- High insulation / high isolation

SPECIFICATIONS

ITEM		PERFORMANCE CHARACTERISTICS
Contact Form		1b / 2b
Load Voltage	V _L	400V
Operation LED Current	I _{F ON}	3.0mA
Load Current	I _L	90mA
On-Resistance	R _{ON}	28Ω
Output Capacitance	C _{OUT}	165pF
Low Off-State Leakage Current	I _{LEAK}	10.0μA

PIN DESCRIPTION & PART NUMBER

CIRCUIT DIAGRAM	PIN DESCRIPTION	PART NO.	PACKAGE	PACKING
 AG74(F)(S)	1: Anode (+) • LED 2: Cathode (-) • LED 3,4: Drain • MOSFET	AG74 AG74F AG74S AG74F-R1 AG74S-R1	DIP-4 SMD-4 SOP-4 SMD-4 SOP-4	Tube (90pcs) Tube (90pcs) Tube (100pcs) Reel (1000pcs) Reel (1000pcs)
 AE74(F)	1: Anode (+) • LED 2: Cathode (-) • LED 3: NC 4,6: Drain • MOSFET 5: Source • MOSFET	AE74 AE74F AE74F-R1	DIP-6 SMD-6 SMD-6	Tube (50pcs) Tube (50pcs) Reel (1000pcs)
 AH74(F)(S)	1,3: Anode (+) • LED 2,4: Cathode (-) • LED 5~8: Drain • MOSFET	AH74 AH74F AH74S AH74F-R1 AH74S-R1	DIP-8 SMD-8 SOP-8 SMD-8 SOP-8	Tube (45pcs) Tube (45pcs) Tube (50pcs) Reel (1000pcs) Reel (1000pcs)

ABSOLUTE MAXIMUM RATINGS (Ambient Temperature 周圍溫度 : 25°C)

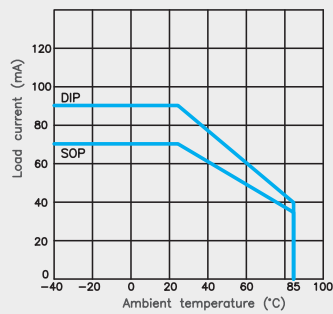
ITEM		CONDITION	SYMBOL	VALUE				
OUTLINE PACKAGE				AG74S (1CH)	AH74S (2CH)	AG74(F) (1CH)	AH74(F) (2CH)	AE74(F) (1CH)
Input 輸入	Continuous LED Current 連續 LED 電流		I _F	50mA				
	Peak LED Current LED 峰值電流	100 Hz, Duty 1%	I _{FP}	500mA				
	LED Reverse Voltage 逆向 LED 電壓		V _R	5V				
	Input Power Dissipation 輸入損耗		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	70	60	90	80	90
	Peak Load Current 峰值負荷電流	1 ms, 1 shot (mA)	I _{PEAK}	400	400	400	400	400
	Output Power Dissipation 輸出損耗	(mW)	P _{OUT}	300	450	450	600	450
Relay 繼電器	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	1500	1500	1500
	Operating Temperature 使用時溫度		T _{OPR}	-40 ~ +85°C				
	Storage Temperature 保存溫度		T _{STG}	-40 ~ +100°C				

ELECTRICAL SPECIFICATIONS (Ambient Temperature 周圍溫度 : 25°C)

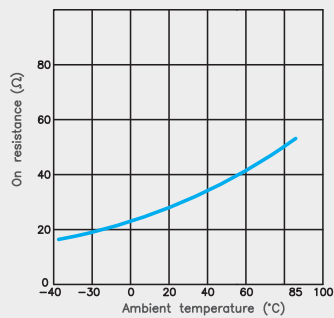
ITEM		CONDITION	SYM.	MIN.	TYP.	MAX.	UNIT
Input 輸入	LED Forward Voltage LED 順向電壓	I _F =10mA	V _F	1.0	1.17	1.5	V
	Operation LED Current LED 動作電流		I _{F ON}		0.9	3.0	mA
	Recovery LED Voltage LED 復位電壓		V _{F OFF}	0.5	1.0		V
Output 輸出	On-Resistance 導通電阻 Drain to Drain (Time to flow is within 1 sec.)	I _F =0mA, I _L =Rating	R _{ON}		28	30	Ω
	Off-State Leakage Current 開路狀態漏電流	I _F =5mA, V _L =400V	I _{LEAK}			10	μA
	Output Capacitance 輸出端容量	I _F =5mA, V _L =0V, f=1MHz	C _{OUT}		165		pF
Transmission 傳達	Turn-On Time 動作時間	I _F =5mA, I _L =Rating (for SOP type)	T _{OFF}		0.1	1.0	ms
	Turn-Off Time 復位時間		T _{ON}		0.05	0.5	ms
	Turn-On Time 動作時間	I _F =10mA, I _L =Rating (for DIP/SMD type)	T _{OFF}		0.15	1.0	ms
	Turn-Off Time 復位時間		T _{ON}		0.05	0.5	ms
Coupled 結合	I/O Insulation Resistance 輸入/ 出間絕緣阻抗		R _{I/O}	10 ⁹			Ω
	I/O Capacitance 輸入/ 力端靜電容量	f=1MHz	C _{I/O}		1.3		pF

REFERENCE DATA

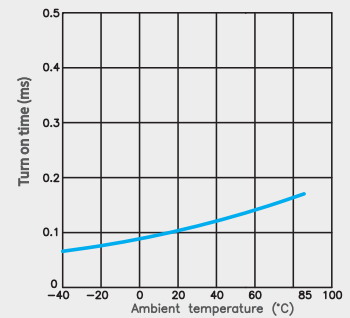
Load current vs. Ambient temp.



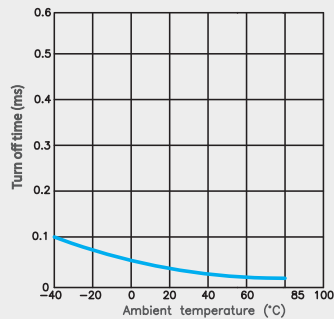
On resistance vs. Ambient temp.



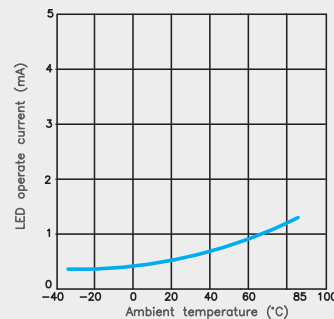
Turn on time vs. Ambient temp.



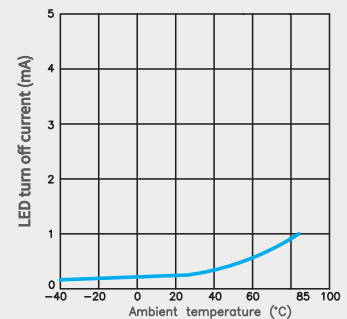
Turn off time vs. Ambient temp.



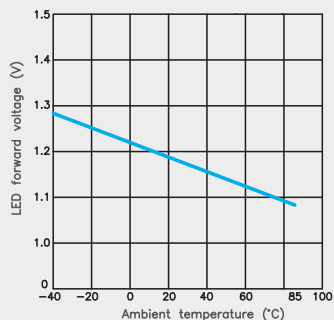
LED operate current vs. Ambient temp.



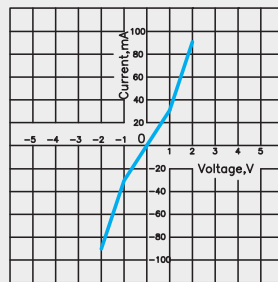
LED turn off current vs. Ambient temp.



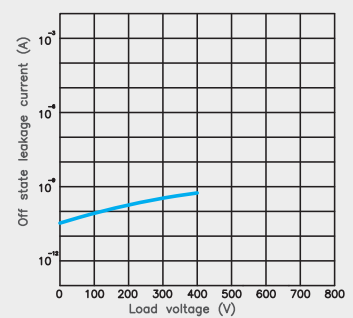
LED forward voltage vs. Ambient temp.



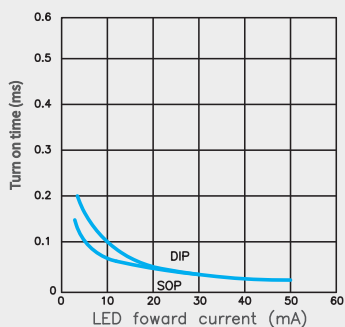
Current vs. Voltage characteristics of output at MOS portion



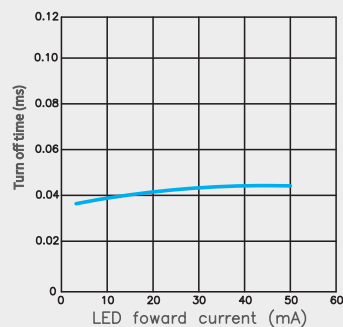
Off state leakage current vs. Load voltage



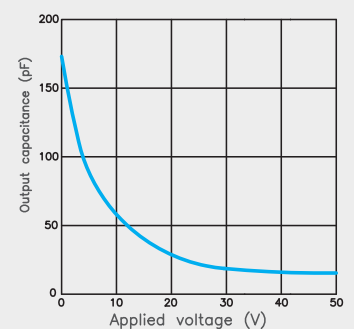
Turn on time vs. LED forward current



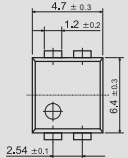
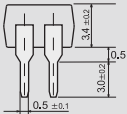
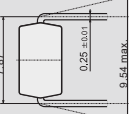
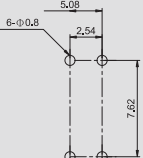
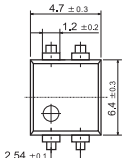
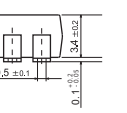
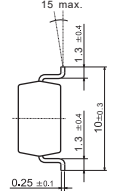
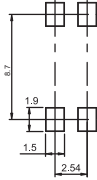
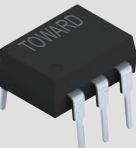
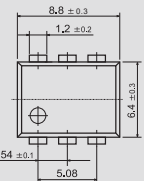
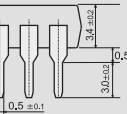
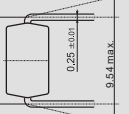
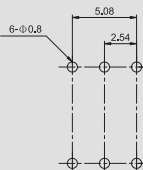
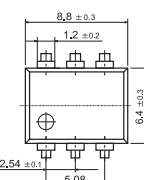
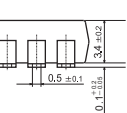
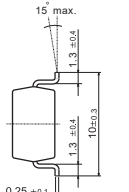
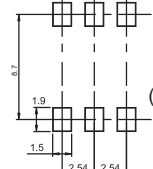
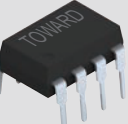
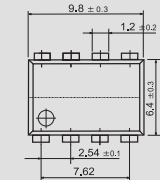
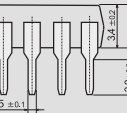
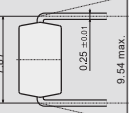
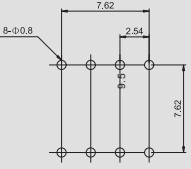
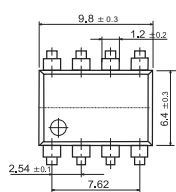
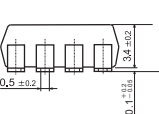
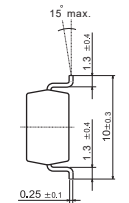
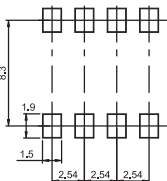
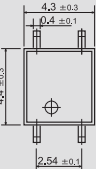
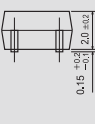
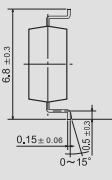
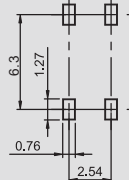
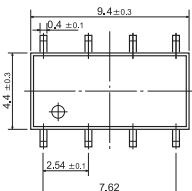
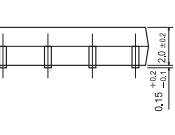
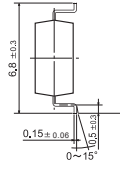
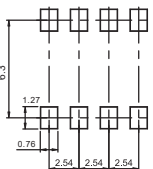
Turn off time vs. LED forward current



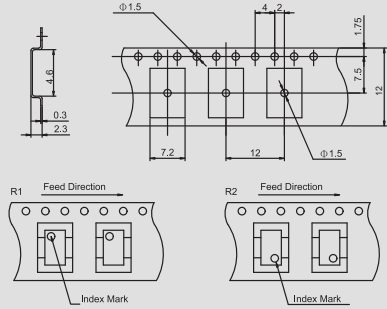
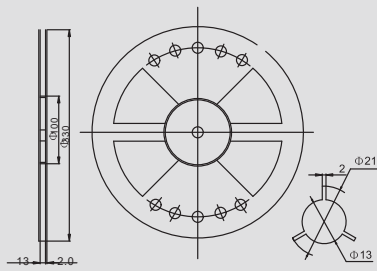
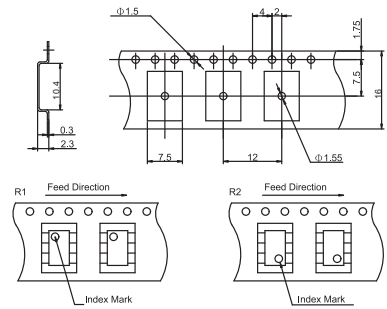
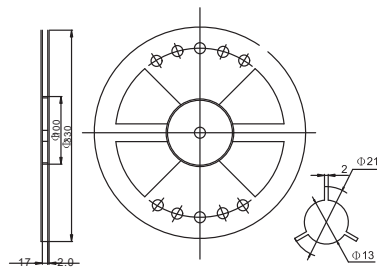
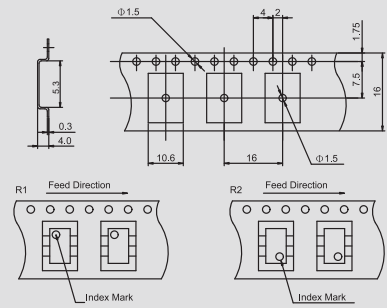
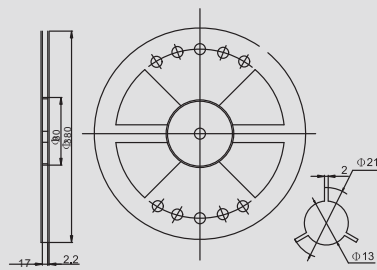
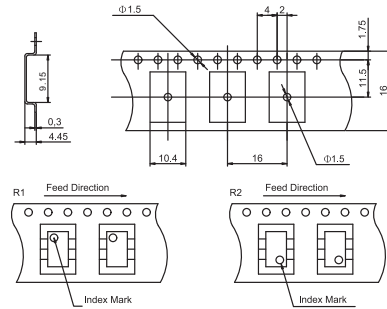
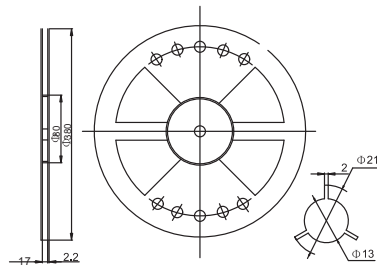
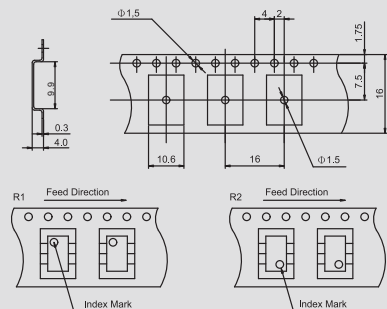
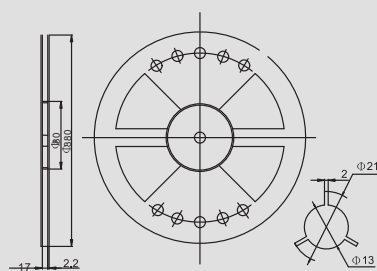
Output capacitance vs. Applied voltage



PACKAGE & PC BOARD PATTERN

PACKAGE	DIMENSIONS			PC BOARD PATTERN
 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 圖帶形狀和尺寸	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

LOAD CONNECTING METHOD

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 AC or DC		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)
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