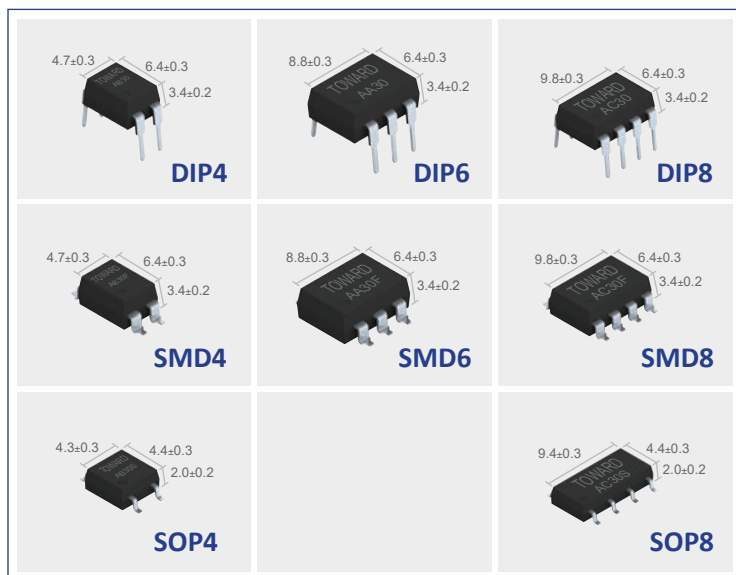


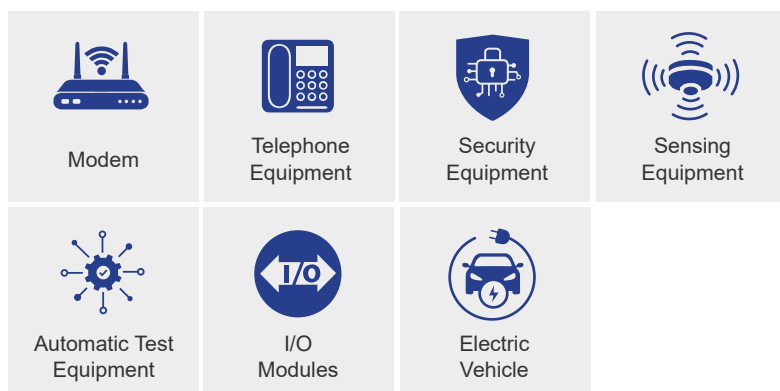


30 SERIES

400V·1a/2a



APPLICATIONS



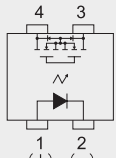
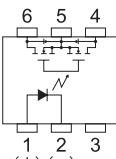
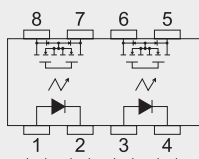
KEY FEATURES

- High voltage with low on-resistance
- Fast reverse recovery time
- High avalanche ruggedness

SPECIFICATIONS

ITEM		PERFORMANCE CHARACTERISTICS
Contact Form		1a / 2a
Load Voltage	VL	400V
Operation LED Current	IF ON	3.0mA
Load Current	IL	120mA
On-Resistance	RON	21Ω
Output Capacitance	COU	36pF
Low Off-State Leakage Current	ILEAK	1.0μA

PIN DESCRIPTION & PART NUMBER

CIRCUIT DIAGRAM	PIN DESCRIPTION	PART NO.	PACKAGE	PACKING
 AB30(F)(S)	1: Anode (+) • LED 2: Cathode (-) • LED 3,4: Drain • MOSFET	AB30 AB30F AB30S AB30F-R1 AB30S-R1	DIP-4 SMD-4 SOP-4 SMD-4 SOP-4	Tube (90pcs) Tube (90pcs) Tube (100pcs) Reel (1000pcs) Reel (1000pcs)
 AA30(F)	1: Anode (+) • LED 2: Cathode (-) • LED 3: NC 4,6: Drain • MOSFET 5: Source • MOSFET	AA30 AA30F AA30F-R1	DIP-6 SMD-6 SMD-6	Tube (50pcs) Tube (50pcs) Reel (1000pcs)
 AC30(F)(S)	1,3: Anode (+) • LED 2,4: Cathode (-) • LED 5~8: Drain • MOSFET	AC30 AC30F AC30S AC30F-R1 AC30S-R1	DIP-8 SMD-8 SOP-8 SMD-8 SOP-8	Tube (45pcs) Tube (45pcs) Tube (50pcs) Reel (1000pcs) Reel (1000pcs)

ABSOLUTE MAXIMUM RATINGS 絕對最大定格 (Ambient Temperature 周圍溫度 : 25℃)

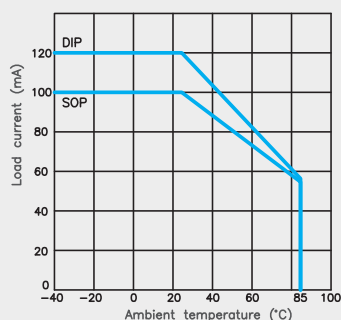
ITEM		CONDITION	SYMBOL	VALUE					UNIT
Outline Package				AB30S	AC30S	AB30(F)	AC30(F)	AA30(F)	
				1CH	2CH	1CH	2CH	1CH	
Input 輸入	Continuous LED Current 連續 LED 電流		I _F	50					mA
	Peak LED Current LED 峰值電流	f=100 Hz,Duty=1%	I _{FP}	500					mA
	LED Reverse Voltage 逆向 LED 電壓		V _R	5					V
	Input Power Dissipation 輸入損耗		P _{IN}	75					mW
Output 輸出	Load Voltage 負荷電壓		V _L	400 (AC peak or DC)					V
	Load Current 負荷電流		I _L	100	85	120	100	120	mA
	Peak Load Current 峰值負荷電流	1ms,1 shot	I _{PEAK}	600	600	600	600	600	mA
	Output Power Dissipation 輸出損耗		P _{OUT}	300	450	450	600	450	mW
Relay 繼電器	Total Power Dissipation 全損耗		P _T	350	500	500	650	500	mW
	I/O Breakdown Voltage 入/出力間絕緣電壓		V _{I/O}	1500	1500	3750	3750	3750	V _{rms}
	I/O Breakdown Voltage 入/出力間絕緣電壓	Suffix-H	V _{I/O}	3750	3750	5000	5000	5000	V _{rms}
	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 電性規格 (Ambient Temperature 周圍溫度 : 25°C)

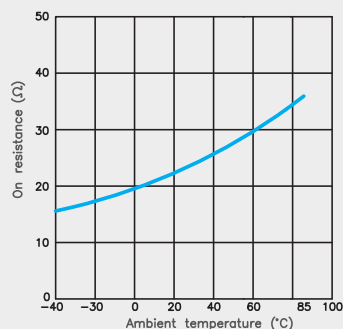
ITEM		CONDITION	SYM.	MIN.	TYP.	MAX.	UNIT
Input 輸入	LED Forward Voltage LED 順向電壓	$I_F=10\text{mA}$	V_F	1.0	1.17	1.5	V
	Operation LED Current LED 動作電流		$I_{F\text{ ON}}$		0.7	3.0	mA
	Recovery LED Voltage LED 復位電壓		$V_{F\text{ OFF}}$	0.5	1.0		V
Output 輸出	On-Resistance 導通電阻 Drain to Drain	$I_F=5\text{mA}, I_L=\text{Rating}$ Time to flow is within 1sec.	R_{ON}		21	24	Ω
	Off-State Leakage Current 開路狀態漏電流	$V_L=400\text{V}$	I_{LEAK}			1.0	μA
	Output Capacitance 輸出端電容	$V_L=0\text{V}, f=1\text{MHz}$	C_{OUT}		36		pF
Trans- mission 傳達	Turn-On Time 動作時間	$I_F=5\text{mA}$ $I_L=\text{Rating}$ (for SOP type)	T_{ON}		0.2	0.5	ms
	Turn-Off Time 復位時間		T_{OFF}		0.05	0.2	ms
	Turn-On Time 動作時間	$I_F=10\text{mA}$ $I_L=\text{Rating}$ (for DIP/SMD type)	T_{ON}		0.2	1.0	ms
	Turn-Off Time 復位時間		T_{OFF}		0.05	0.5	ms
Coupled 結合	I/O Insulation Resistance 輸入/ 出間絕緣阻抗		$R_{\text{I/O}}$	10^9			Ω
	I/O Capacitance 輸入/ 力端靜電容量	$f=1\text{MHz}$	$C_{\text{I/O}}$		1.3		pF

REFERENCE DATA

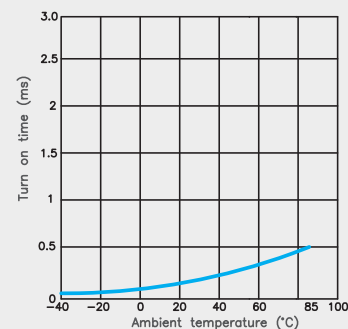
Load current vs. Ambient temp.



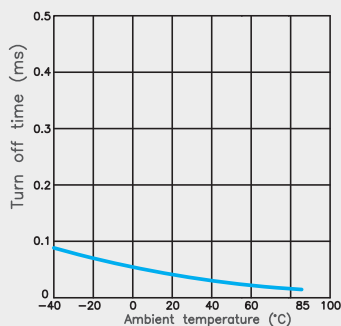
On resistance vs. Ambient temp.



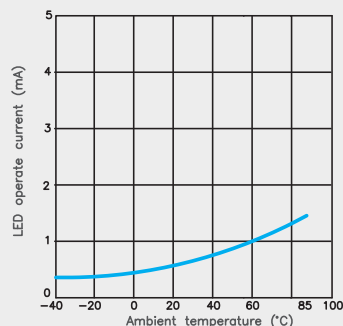
Turn on time vs. Ambient temp.



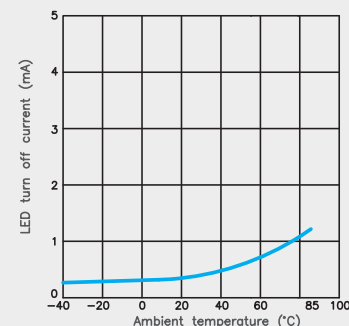
Turn off time vs. Ambient temp.



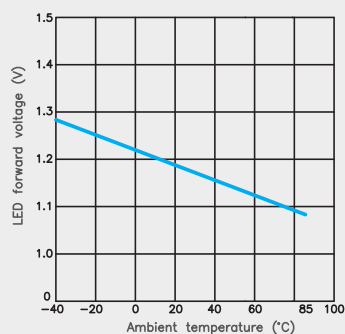
LED operate current vs. Ambient temp.



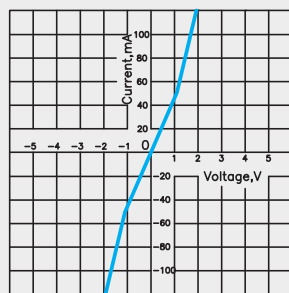
LED turn off current vs. Ambient temp.



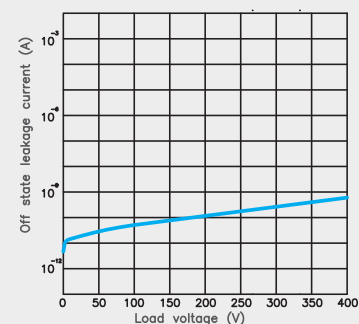
LED forward voltage vs. Ambient temp.



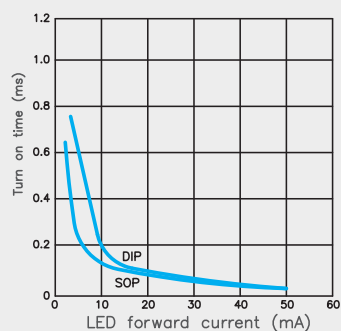
Current vs. Voltage characteristics of output at MOS portion



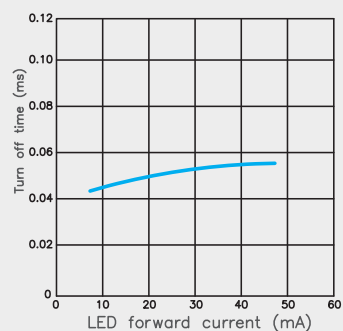
Off state leakage current vs. Load voltage



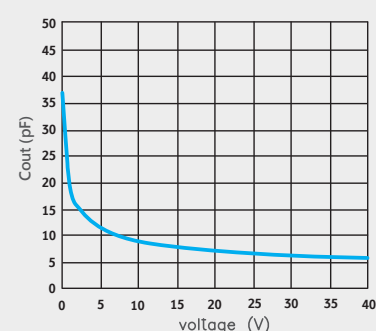
Turn on time vs. LED forward current



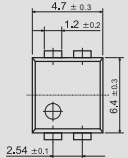
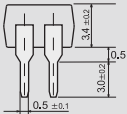
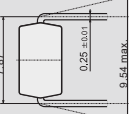
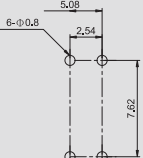
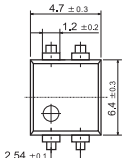
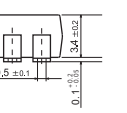
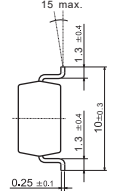
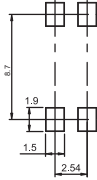
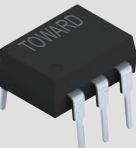
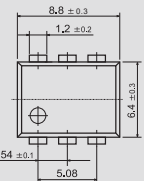
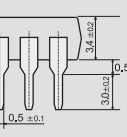
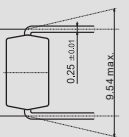
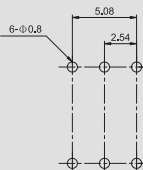
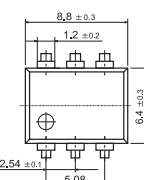
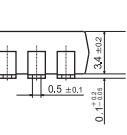
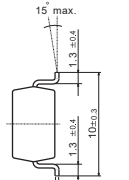
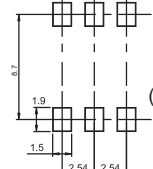
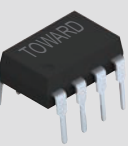
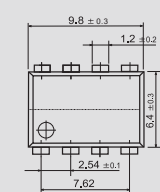
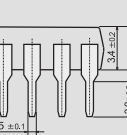
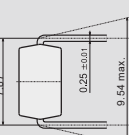
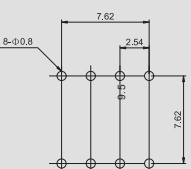
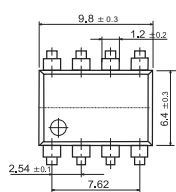
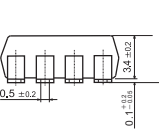
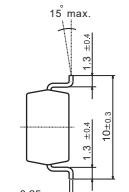
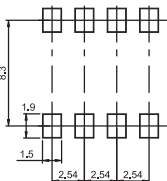
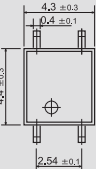
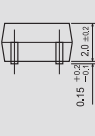
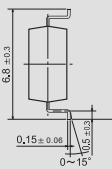
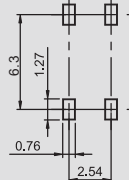
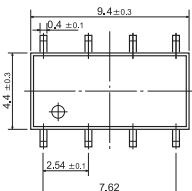
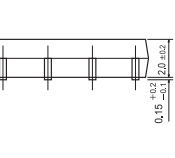
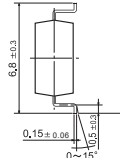
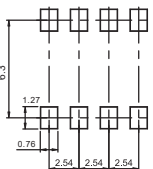
Turn off time vs. LED forward current



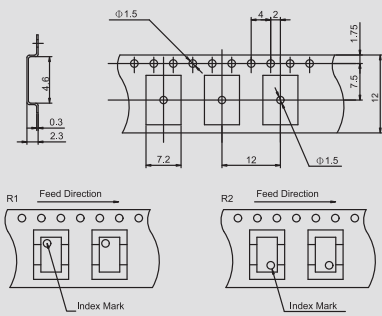
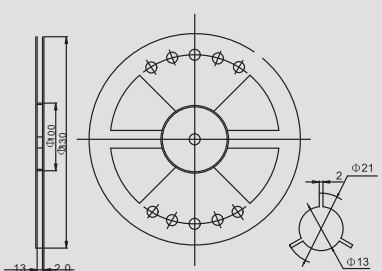
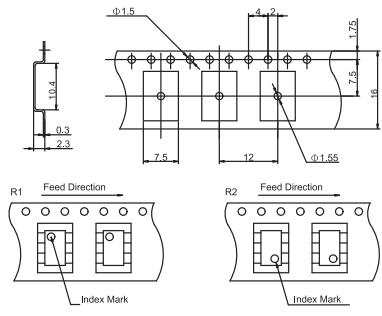
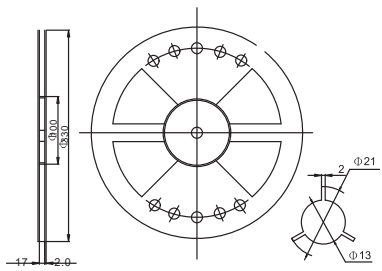
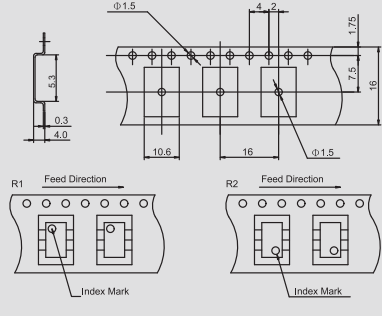
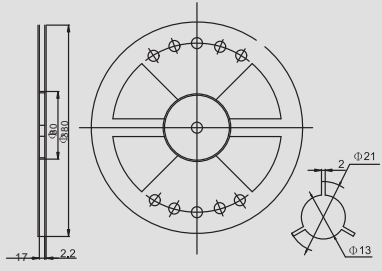
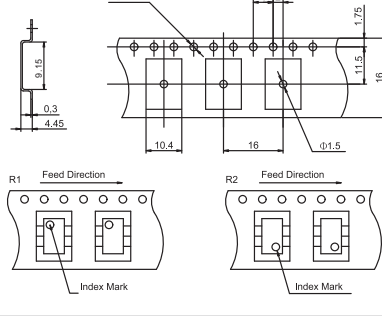
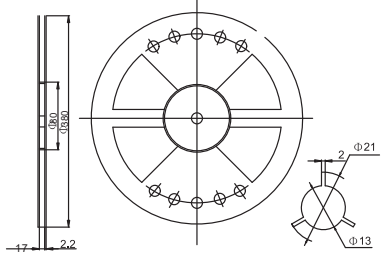
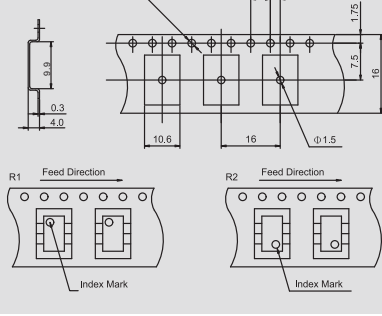
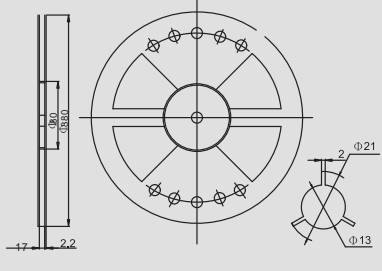
Cout pin87 vs. Voltage



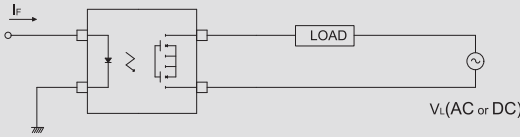
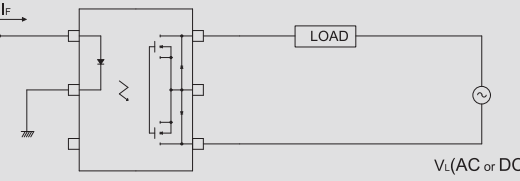
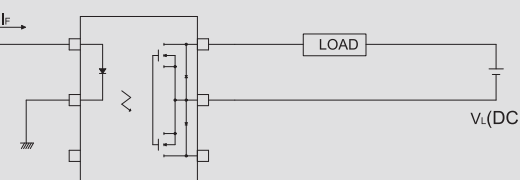
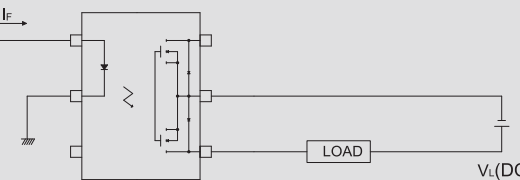
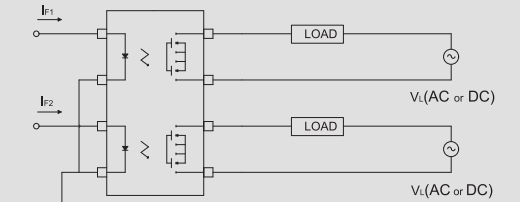
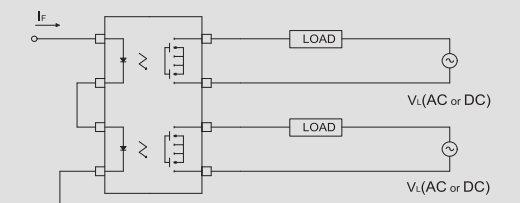
PACKAGE & PC BOARD PATTERN

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
	C DC		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