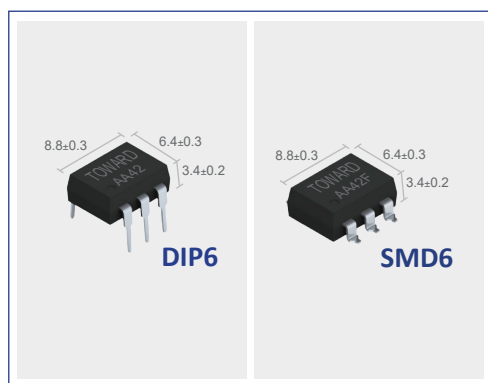
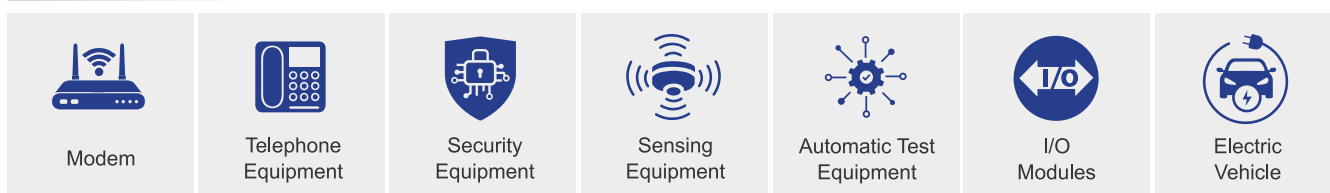




AA42(F)

OPTOMOS RELAY 5A • 1a

APPLICATIONS



SPECIFICATIONS

ITEM	PERFORMANCE CHARACTERISTICS
Contact Form	1a
Load Voltage V_L	60V Max.
Operation LED Current I_F ON	5mA Max.
Load Current I_L	5A Max.
On-Resistance R_{ON}	0.02Ω Typ.
Output Capacitance C_{OUT}	1450pF Typ.
Low Off-State Leakage Current I_{LEAK}	1.0μA Max.

PIN DESCRIPTION & PART NUMBER

CIRCUIT DIAGRAM	PIN DESCRIPTION	PART NO.	PACKAGE	PACKING
	1: Anode (+) • LED 2: Cathode (-) • LED 3: NC 4,6: Drain • MOSFET 5: Source • MOSFET	AA42 AA42F	DIP6 SMD6	Tube (50pcs) Tube (50pcs)

CONNECTION

A	B	C
Control bi-directional signal	On-Resistance is 1/2 of A-connection	On-Resistance is 1/2 of B-connection

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

	ITEM	CONDITION	SYMBOL	VALUE	UNIT
Input 輸入	Continuous LED Current 連續 LED 電流		I _F	50	mA
	Peak LED Current LED 峰值電流	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	60 (AC peak or DC)	V
	Load Current 負荷電流		I _L	A 5A (AC or DC)	A
				B 6.5A (DC)	
				C 8A (DC)	
	Peak Load Current 峰值負荷電流	1 ms, 1 shot	I _{PEAK}	10	A
	Output Power Dissipation 輸出損耗		P _{OUT}	600	mW
Relay 繼電器	Total Power Dissipation 全損耗		P _T	650	mW
	I/O Breakdown Voltage 入/出力間絕緣電壓		V _{I/O}	3750	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 (Ambient Temperature 周圍溫度：25°C)

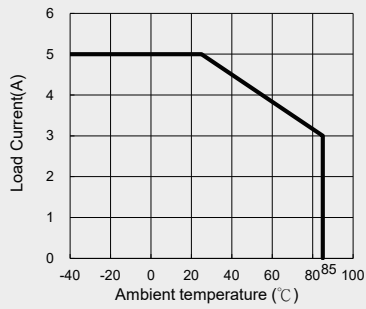
	ITEM	CONDITION	SYM.	MIN.	TYP.	MAX.	UNIT
Input 輸入	LED Forward Voltage LED 順向電壓	I _F =10mA	V _F	1.0	1.4	1.6	V
	Operation LED Current LED 動作電流	I _L =Rating	I _{F ON}		1.7	5.0	mA
	Recovery LED Voltage LED 復位電壓		V _{F OFF}	0.5	1.2		V
Output 輸出	On-Resistance 導通電阻 Drain to Drain (Tested within 1 sec.)	I _F =10mA, I _L =Rating	R _{ON}		0.02	0.035	Ω
	Off-State Leakage Current 開路狀態漏電流	I _F =0mA, I _L =60V	I _{LEAK}			1	μA
	Output Capacitance 輸出端容量	V _L =0V, f=1MHz	C _{OUT}		1450		pF
Trans- mission 傳達	Turn-On Time 動作時間	I _F =10mA, I _L =Rating	T _{ON}		1.5	3.0	ms
	Turn-Off Time 復位時間	I _F =10mA, I _L =Rating	T _{OFF}		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		pF

RECOMMENDED OPERATING CONDITION (Ambient Temperature 周圍溫度：25°C)

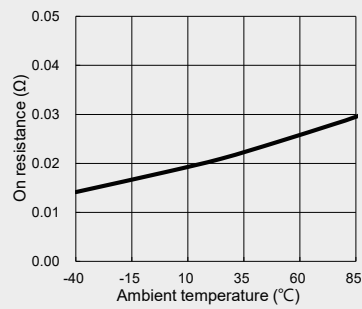
ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT
Continuous LED Current 連續 LED 電流	I _F	8	10	25	mA
Load Voltage 負荷電壓	V _L	-	-	48	V
Load Current 負荷電流	I _L	-	-	5000	mA

REFERENCE DATA

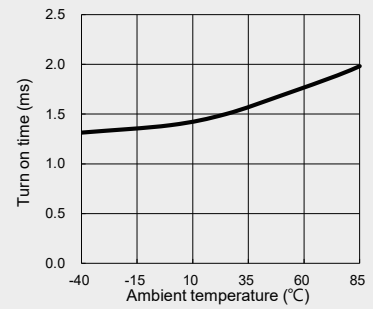
Load current vs. Ambient temp.



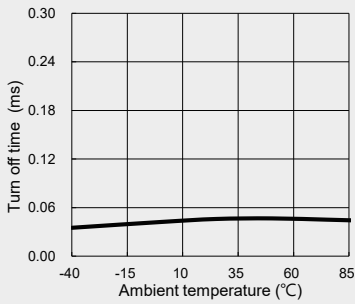
On resistance vs. Ambient temp.



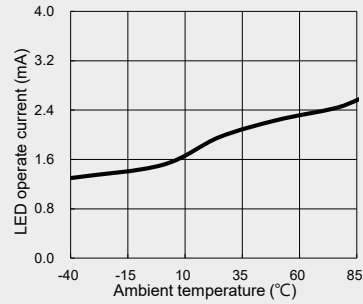
Turn on time vs. Ambient temp.



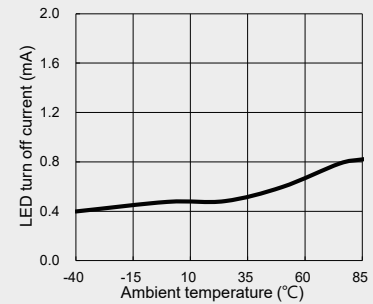
Turn off time vs. Ambient temp.



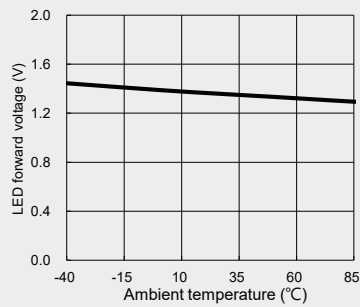
LED operate current vs. Ambient temp.



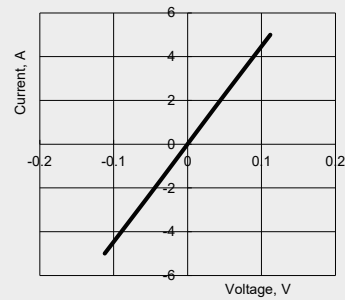
LED turn off current vs. Ambient temp.



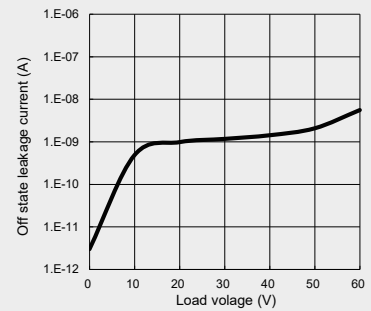
Load forward voltage vs. Ambient temp.



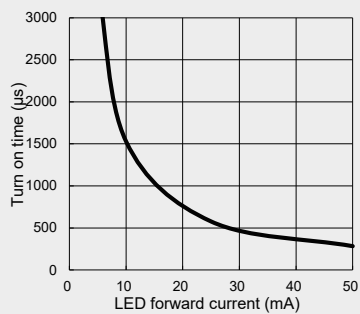
Current vs. Voltage characteristics of output at MOS portion



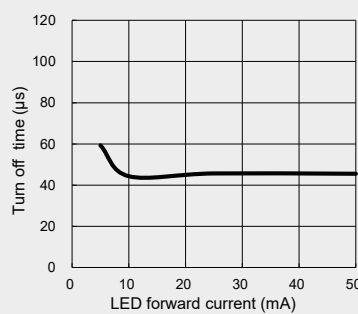
Off state leakage current vs. Load voltage



Turn on time vs. LED forward current



Turn off time vs. LED forward current



Output capacitance vs. Applied voltage

