



**THE DATASHEET OF**  
**AA40F**



# 40 Series 1500V·1a

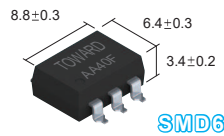
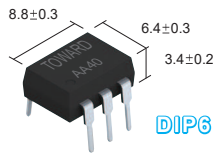


## Features

- Contact Form 1a
- Load Voltage 1500V
- Operation LED Current 5.0mA
- Load Current 45mA
- On-Resistance 180Ω
- Output Capacitance 83pF
- Low Off-State Leakage Current 10μA

## Application

- Modem
- Telephone Equipment
- Security Equipment
- Sensing Equipment
- Automatic Test Equipment
- I/O Modules
- Electric Vehicle

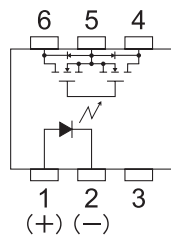


PART NO	PACKAGE	PACKING
AA40	DIP6	Tube 50pcs
AA40	SMD6	Tube 50pcs
AA40F-R1	SMD6	Reel 1000pcs

\* Package & PCB Layout Design, See Page 134

## Terminal Identification

### AA40(F)



- 1: Anode (LED)
- 2: Cathode (LED)
- 3: NC
- 4,6: Drain (MOS FET)
- 5: Source (MOSFET)

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

Item		Symbol	Value
Input 輸入	Continuous LED Current 連續 LED 電流	I <sub>F</sub>	50mA
	Peak LED Current LED 峰值電流 (f=100 Hz,Duty=1%)	I <sub>FP</sub>	500mA
	LED Reverse Voltage 逆向 LED 電壓	V <sub>R</sub>	5V
	Input Power Dissipation 輸入損耗	P <sub>IN</sub>	75mW
output 輸出	Load Voltage 負荷電壓	V <sub>L</sub>	1500V (AC peak or DC)
	Load Current 負荷電流 (mA)	I <sub>L</sub>	A (AC or DC) 45 B (DC) 50 C (DC) 70
	Peak Load Current 峰值負荷電流 (1ms, 1 shot) (mA)	I <sub>PEAK</sub>	180
	Output Power Dissipation 輸出損耗 (mW)	P <sub>OUT</sub>	450
Total Power Dissipation 全損耗 (mW)		P <sub>T</sub>	500
I/O Breakdown Voltage 入 / 出力間絕緣電壓 (V <sub>rms</sub> )		V <sub>I/O</sub>	3750
I/O Breakdown Voltage 入 / 出力間絕緣電壓 (Suffix-H) (V <sub>rms</sub> )		V <sub>I/O</sub>	5000
Operating Temperature 使用時溫度		T <sub>OPR</sub>	-40°C ~ +85°C
Storage Temperature 保存溫度		T <sub>STG</sub>	-40°C ~ +100°C

## Electrical Specifications 電性規格 (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 <sub>F</sub>	1.0	1.17	1.5	V	I <sub>F</sub> =10mA
	Operation LED Current LED 動作電流	I <sub>F ON</sub>		0.8	5.0	mA	
	Recovery LED Voltage LED 復位電壓	V <sub>F OFF</sub>	0.5	1.0		V	
Output 輸出	On-Resistance 導通電阻 Drain to Drain	R <sub>ON</sub>		110	200	Ω	I <sub>F</sub> =10mA, I <sub>L</sub> =Rating (within 1sec.)
	Off-State Leakage Current 開路狀態漏電流	I <sub>LEAK</sub>		180	300	Ω	I <sub>F</sub> =10mA, I <sub>L</sub> <5mA
	Output Capacitance 輸出端容量	C <sub>OUT</sub>		83		pF	V <sub>L</sub> =0V, f=1MHz
Transmission 傳達	Turn-On Time 動作時間	T <sub>ON</sub>		0.2	1.0	ms	I <sub>F</sub> =10mA, I <sub>L</sub> =Rating
	Turn-Off Time 復位時間	T <sub>OFF</sub>		0.04	0.5	ms	
Coupled 結合	I/O Insulation Resistance 輸入 / 出間絕緣阻抗	R <sub>I/O</sub>	10 <sup>10</sup>			Ω	
	I/O Capacitance 輸入 / 力端靜電容量	C <sub>I/O</sub>		1.3		pF	f=1MHz

Note\*1 :

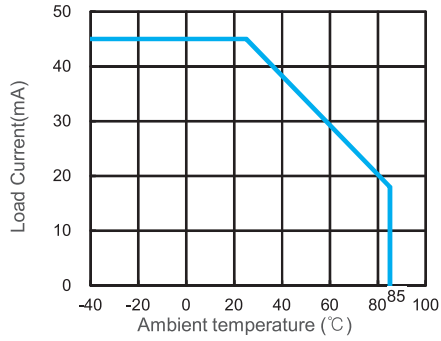
- \* The off-state leakage current value is for 25 degree C.
- \* In case a continual DC bias is applied between outputs , the output MOSFET may deteriorate due to the voltage. Please verify operation of the actual design before using, or contact your local sales representative.

為了持續的改進，敝司有權在不影響規格範圍的情況下修改設計。  
In the interest of continuous development, our companies reserve the right to alter designs within specification range.

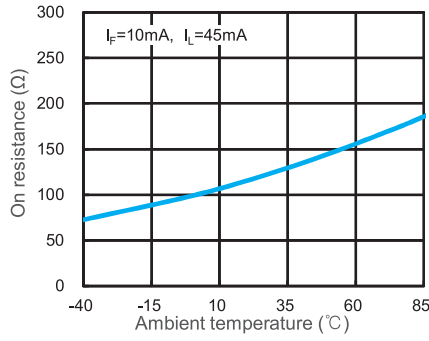
BRIGHT TOWARD INDUSTRIAL CO.,LTD.

40 Series. REV.12/2018

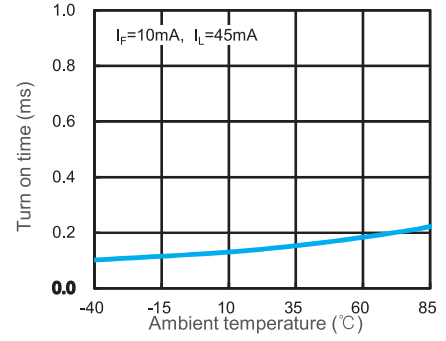
Load Current Vs. Ambient temperature



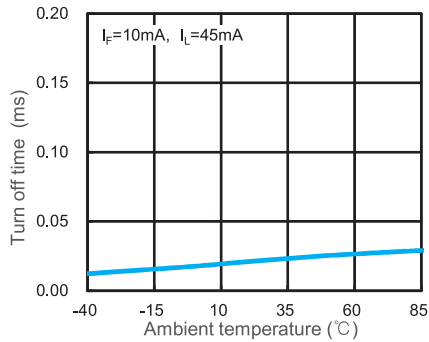
On resistance Vs. Ambient temperature



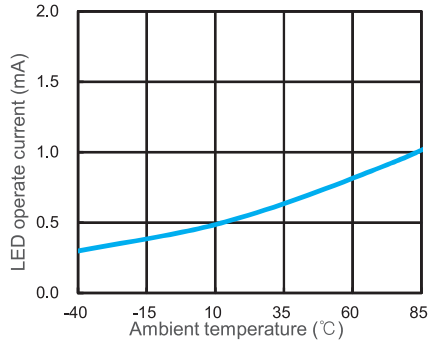
Turn on time Vs. Ambient temperature



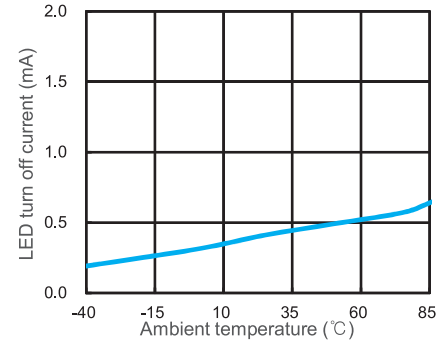
Turn off time Vs. Ambient temperature



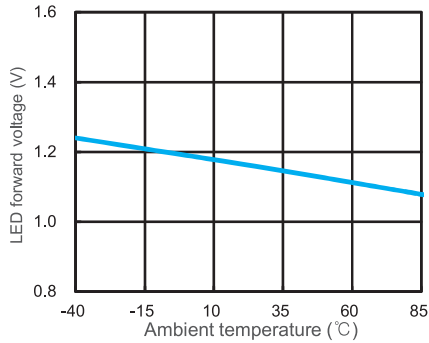
LED operate current Vs. Ambient temperature



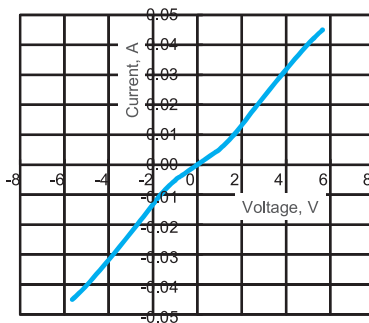
LED Turn off current Vs. Ambient temperature



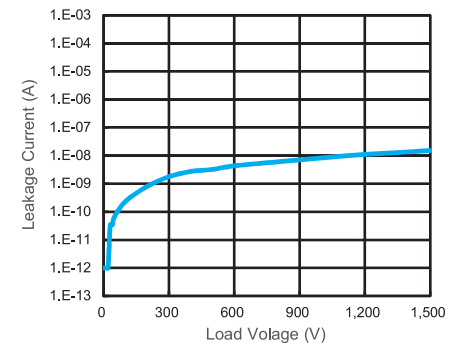
LED forward voltage Vs. Ambient temperature



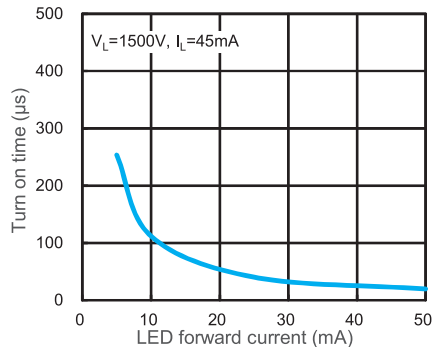
Current vs. voltage characteristics of output at MOS portion



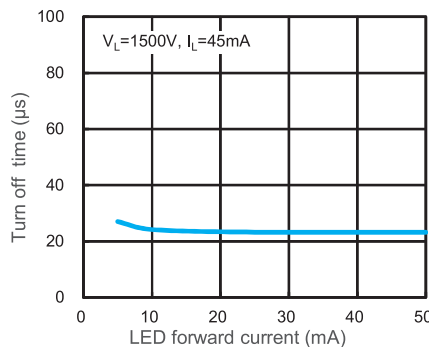
Off state leakage Current Vs. load voltage



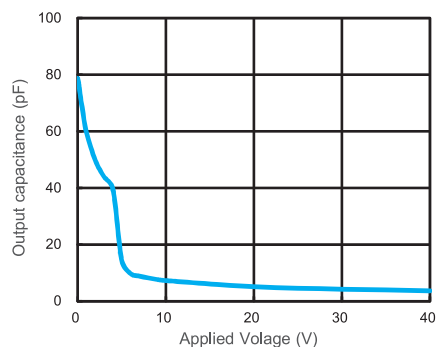
Turn on time Vs. LED forward current characteristics



Turn off time Vs. LED forward current characteristics



Output capacitance Vs. applied voltage



為了持續的改進，敝司有權在不影響規格範圍的情況下修改設計。  
 In the interest of continuous development, our companies reserve the right to alter designs within specification range.

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- [View AA40F on WIN SOURCE](#)
- [Bright Toward Industrial Co., Ltd. Information](#)

## Optimize Your Supply Chain with WIN SOURCE Solutions

- ✓ Global Sourcing Solution
- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management