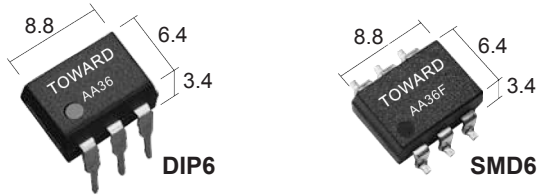


**Part Number: 36 Series**  
**High Current - 1 Form A - PhotoDMOS Relays**  
**Product Data Sheet**

**60 VOLTS**

**High Current up to 2.5A**

**PICTURE**



Drawings not to scale. All dimensions in mm nominal. Pitch: 2.54 mm

**RoHS Compliant**

**ORDERING INFORMATION**

| Body Style      | Series | Options  |
|-----------------|--------|--|
| AA = DIP(6 pin) | 36     | F = SMD<br>R1 = Tape & Reel (SMD Only)<br>H = 5KV I/O BV |

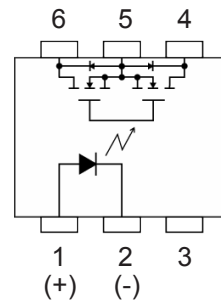
**Part Number Example:** AA36X-XX  
 AA36F-R1 = Series 36, 6-Pin DIP, SMD style with tape and reel packaging

**FEATURES**

- **TOWARD** PhotoDMOS Relays
- 60 Volt, 2.5 Amp Hi-Current design
- On-Resistance: 0.07  $\Omega$  (typical)
- I/O Breakdown Voltage 3750 Vrms Min.
- Optional High I/O BV 5000 Vrms Min.
- Max LED Current 3.0 mA
- Low Off-State Leakage Current 1.0  $\mu$  A Max

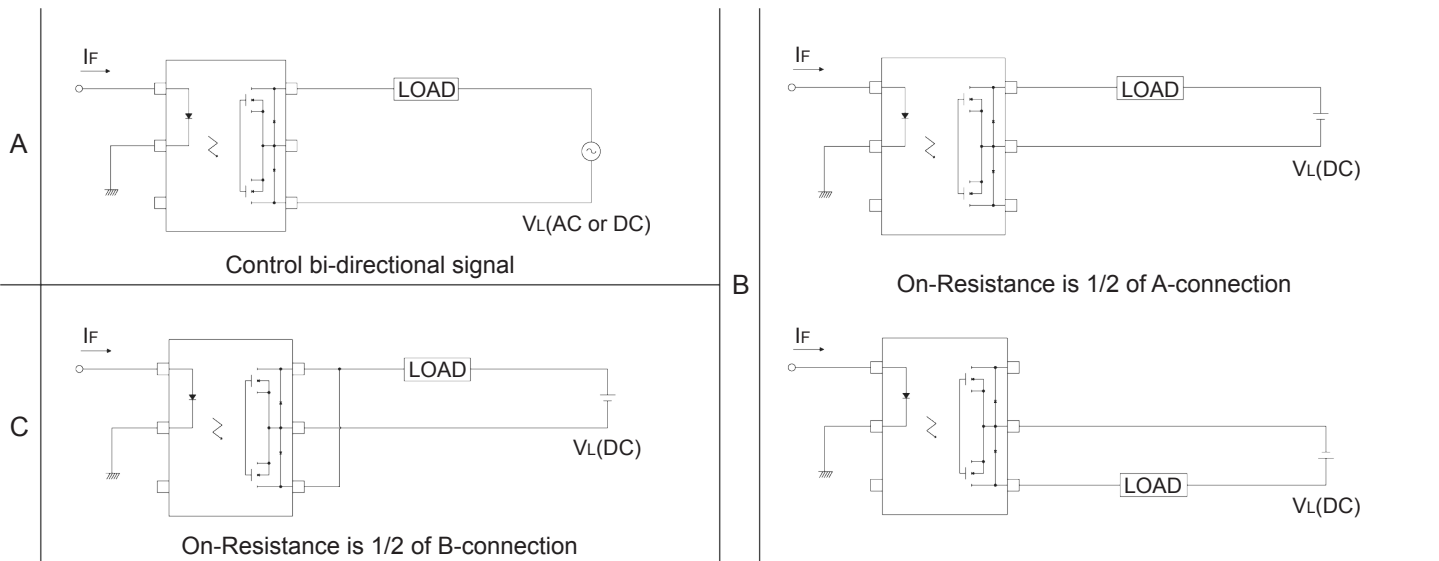
**SCHEMATIC**

AA36(F)



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

**CONNECTION DIAGRAM**



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**ABSOLUTE MAXIMUM RATINGS (Ambient Temperature: 25°C)**

| ITEM                          |                                      | SYMBOL            | VALUE                |                  |
|-------------------------------|--------------------------------------|-------------------|----------------------|------------------|
| Input                         | Continuous LED Current               | I <sub>F</sub>    | 50 mA                |                  |
|                               | Peak LED Current (f=100 Hz, duty=1%) | I <sub>FP</sub>   | 500 mA               |                  |
|                               | LED Reverse Voltage                  | V <sub>R</sub>    | 5 V                  |                  |
|                               | Input Power Dissipation              | P <sub>In</sub>   | 75 mW                |                  |
| Output                        | Load Voltage                         | V <sub>L</sub>    | 60 V (AC peak or DC) |                  |
|                               | Load Current (A)                     | I <sub>L</sub>    | A                    | 2.5 A (AC or DC) |
|                               |                                      |                   | B                    | 3.5 A (DC)       |
|                               |                                      |                   | C                    | 5.0 A (DC)       |
|                               | Peak Load Current (1 ms, 1 shot) (A) | I <sub>Peak</sub> | 6.0 A                |                  |
| Output Power Dissipation (mW) | P <sub>Out</sub>                     | 500 mW            |                      |                  |
| Total Power Dissipation (mW)  |                                      | P <sub>T</sub>    | 550 mW               |                  |
| I/O Breakdown Voltage         |                                      | V <sub>I/O</sub>  | 3750 Vrms            |                  |
| Operating Temperature         |                                      | T <sub>Opr</sub>  | -40°C to +85°C       |                  |
| Storage Temperature           |                                      | T <sub>Stg</sub>  | -40°C to +100°C      |                  |

**ELECTRICAL SPECIFICATIONS LED (Ambient Temperature: 25°C)**

| ITEM         |                              | SYMBOL             | MIN               | TYP  | MAX  | UNITS | CONDITIONS   |
|--------------|------------------------------|--------------------|-------------------|------|------|-------|--|
| Input        | LED Forward Voltage          | V <sub>F</sub>     | 1.0               |      | 1.5  | V     | I <sub>F</sub> = 10mA  |
|              | Operation LED Current        | I <sub>F On</sub>  |                   | 1.5  | 3.0  | mA    |  |
|              | Recovery LED Voltage         | V <sub>F Off</sub> | 0.5               | 1.0  |      | V     |  |
| Output       | On-Resistance Drain to Drain | R <sub>On</sub>    |                   | 0.07 | 0.14 | Ω     | I <sub>F</sub> = 10mA<br>I <sub>L</sub> = Rating Time to flow is within 1 sec. |
|              | Off-State Leakage Current    | I <sub>Leak</sub>  |                   |      | 1.0  | μA    | I <sub>F</sub> = 0mA, V <sub>L</sub> = 50V                                     |
|              | Output Capacitance           | C <sub>Out</sub>   |                   | 470  |      | pF    | V <sub>L</sub> =0V, f=1MHz   |
| Transmission | Turn-On Time                 | T <sub>On</sub>    |                   | 0.6  | 3.0  | ms    | I <sub>F</sub> = 10mA, I <sub>L</sub> = Rating                                 |
|              | Turn-Off Time                | T <sub>Off</sub>   |                   | 0.04 | 0.5  | ms    |  |
| Coupled      | I/O Insulation Resistance    | R <sub>I/O</sub>   | 5*10 <sup>9</sup> |      |      | Ω     |  |
|              | I/O Capacitance              | C <sub>I/O</sub>   |                   | 1.0  |      | pF    | f = 1MHz   |

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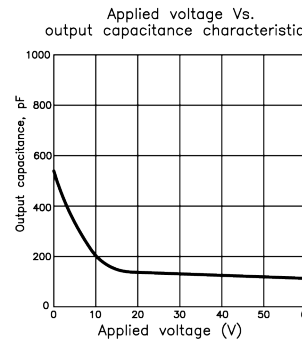
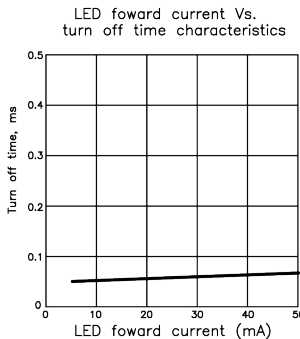
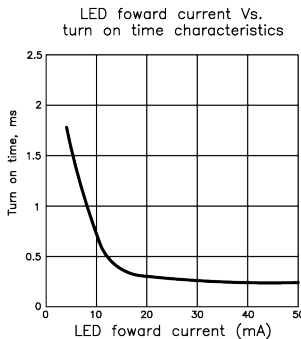
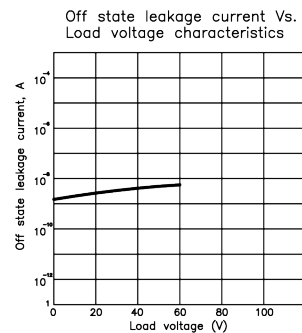
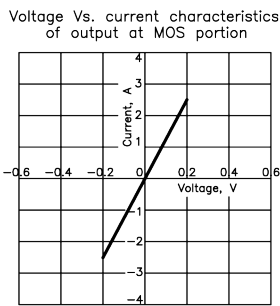
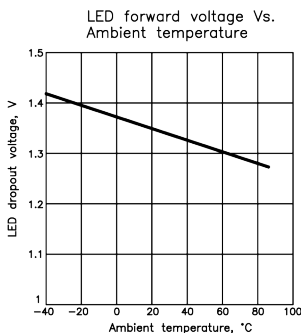
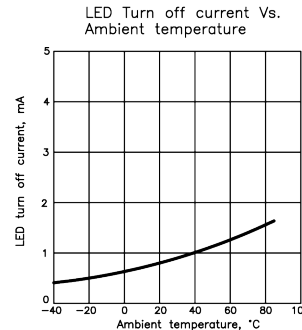
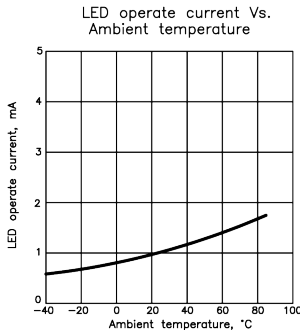
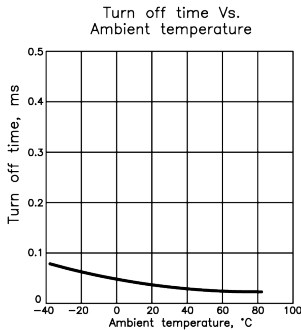
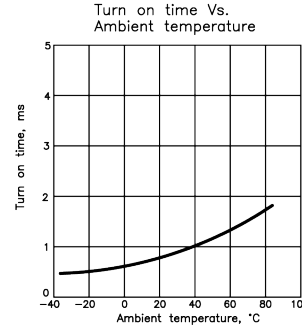
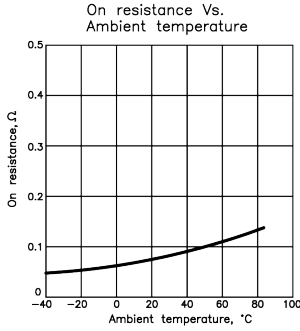
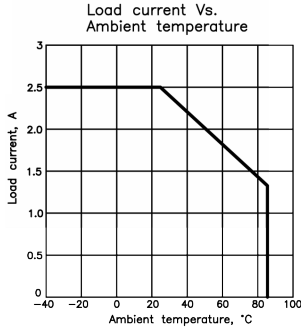
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**GRAPHS**



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