

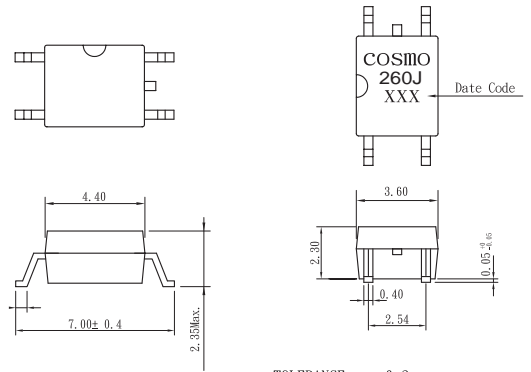
## Features

1. Opaque type, mini-flat package.
2. Subminiature type  
(The volume is smaller than that of our conventional DIP type by as far as 30%)
3. Isolation voltage between input and output (Viso:3000Vrms).

## For 115/240 Vac (rms) Application:

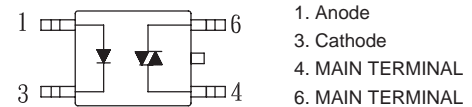
1. Solenoid/Valve Controls.
2. Lighting Controls.
3. Static Power Switches.
4. AC Motor Drives.
5. Temperature Controls.
6. E.M. Contactors.
7. AC Motor Staters.
8. Solid State Relays.
9. Programmable controllers.

## Outside Dimension:Unit (mm)



TOLERANCE : ± 0.2mm

## Schematic:Top View



## Absolute Maximum Ratings

(Ta=25°C)

| Parameter                       | Symbol   | Rating         | Unit      |
|---------------------------------|--|----------------|-----------|
| Input                           | Forward current                                  | IF             | 50 mA     |
|                                 | Peak forward current (100us)                     | IFM            | 1 A       |
|                                 | Reverse voltage                                  | VR             | 6 V       |
|                                 | Power dissipation                                | PD             | 70 mW     |
| Output                          | Off-State Output Terminal voltage                | VDRM           | 600 Vpeak |
|                                 | On-State R. M. S. Current                        | IT(RMS)        | 70 mA     |
|                                 | Peak Repetitive Surget Current (PW=10ms, DC 10%) | ITSM           | 1 A       |
|                                 | Power dissipation                                | PD             | 150 mW    |
| Total power dissipation         | Ptot   | 200 mW         |           |
| Isolation voltage 1 minute      | Viso   | 2500 Vrms      |           |
| Operating temperature           | Topr   | -40 to +100 °C |           |
| Storage temperature             | Tstg   | -50 to +125 °C |           |
| Soldering temperature 10 second | Tsol   | 260 °C         |           |

## Electro-optical Characteristics

(Ta=25°C)

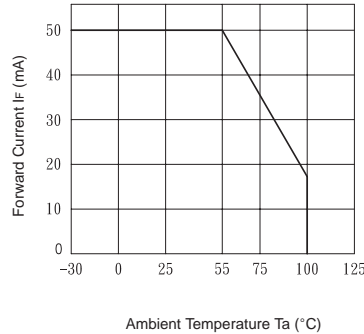
| Parameter                | Symbol                                     | Conditions                 | MIN.               | TYP.             | MAX. | Unit |
|--------------------------|--|----------------------------|--------------------|------------------|------|------|
| Input                    | Forward voltage                            | IF=10mA                    |                    | 1.2              | 1.4  | V    |
|                          | Peak forward voltage                       | IFM=0.5A                   |                    |                  | 3.5  | V    |
|                          | Reverse Leakage Current                    | VR=5V                      |                    |                  | 10   | μA   |
| Output                   | Peak Blocking Current                      | VDRM=600V                  |                    |                  | 1.0  | nA   |
|                          | ON-State Voltage                           | ITM=70mA                   |                    | 1.6              | 2.8  | V    |
| Transfer characteristics | Holding Current                            |                            |                    | 1.0              |      | mA   |
|                          | Critical rate of rise of OFF-state voltage | VDRM= (1/ 2) *Rated        | 600                | 旆                |      | V/μS |
|                          | Isolation resistance                       | DC500V                     | 5x10 <sup>10</sup> | 10 <sup>11</sup> |      | ohm  |
|                          | Minimum trigger current                    | Main Terminal Voltage=3V   |                    | 5                | 10   | mA   |
|                          | Tunr-on time                               | VD=6V, RL=100 ohm, IF=20mA |                    | 旆                | 100  | μS   |

Classification table of Trigger LED current is shown below.

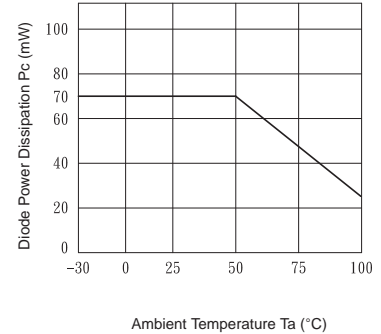
( $T_a=25^\circ\text{C}$ )

| Classification | Trigger LED Current (mA) |      |
|----------------|--------------------------|------|
|                | Min.                     | Max. |
| 1 (Standard)   | -                        | 10   |
| 2              | -                        | 7    |
| 3              | -                        | 5    |

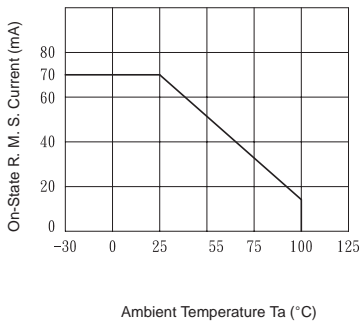
**Fig.1** Forward Current vs. Ambient Temperature



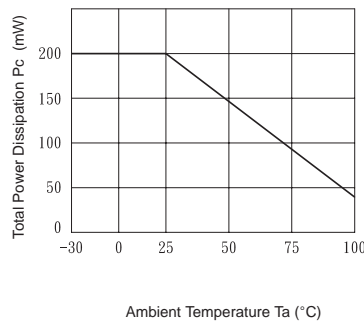
**Fig.2** Diode Power Dissipation vs. Ambient Temperature



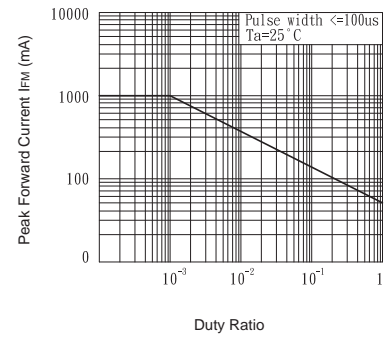
**Fig.3** On-State R. M. S. Current vs. Ambient Temperature



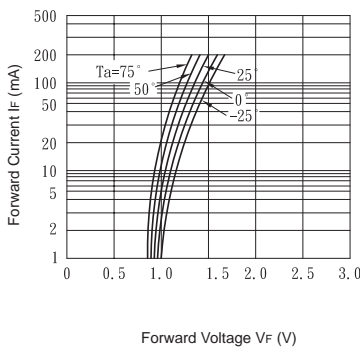
**Fig.4** Total Power Dissipation vs. Ambient Temperature



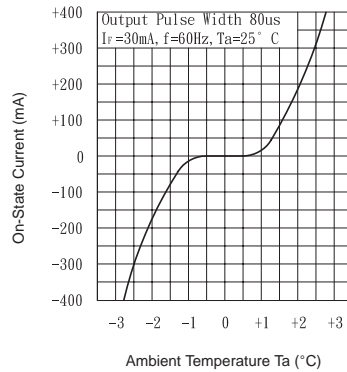
**Fig.5** Peak Forward Current vs. Duty Ratio



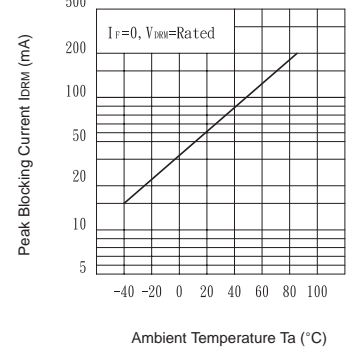
**Fig.6** Forward Current vs. Forward Voltage



**Fig.7** On-State Characteristics



**Fig.8** Leakage with LED off vs. Ambient Temperature



**Fig.9** Trigger Current vs. Ambient Temperature

