# PRODUCT SPECIFICATION

DATE：04/29/2011

| cosmo ELECTRONICS CORPORATION | Photocoupler： KMOC3082S | NO.61P42006 | REV. 4 |
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## Zero Crossing Optoisolators TRIAC Driver Output (800V Volts Peak)

## ● Features

1. Compact surface mount type package.
2. 800V peak blocking voltage.
3. Isolation voltage between input and output (Viso：5000Vrms).

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

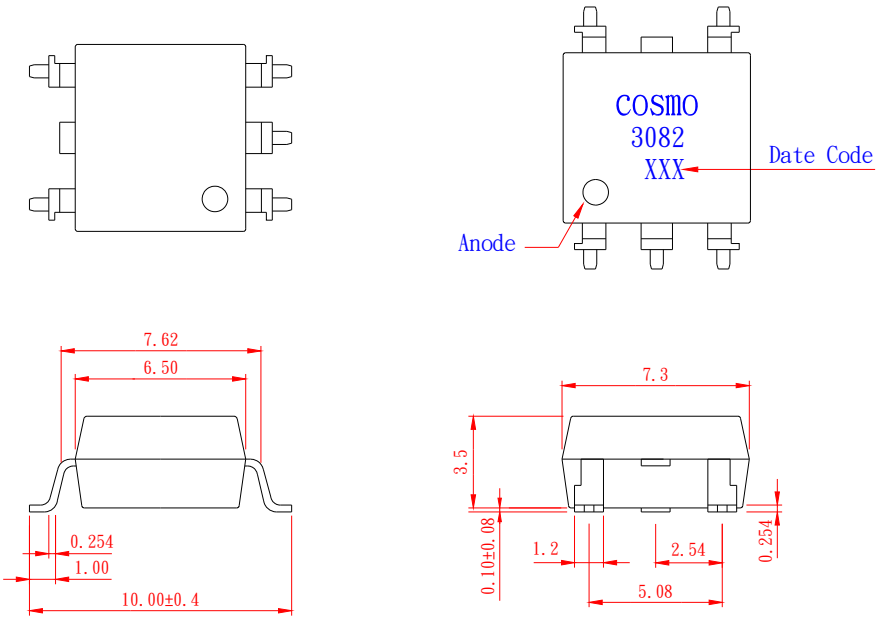
1. Solenoid/Valve Controls.
2. Lighting Controls.
3. Static Power Switches.
4. AC Motor Drives.
5. Temperature Controls.
6. E.M. Contactors.
7. AC Motor Starters.
8. Solid State Relays.
9. Programmable controllers.

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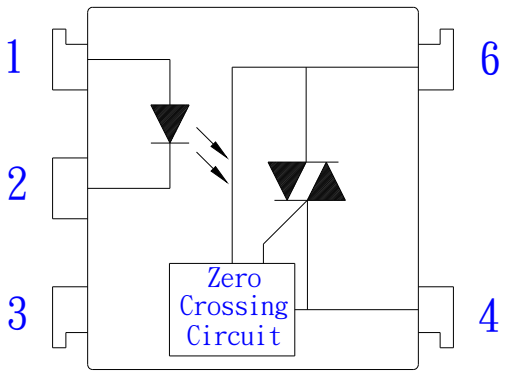
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## 1. OUTSIDE DIMENSION：UNIT (mm)




TOLERANCE： ±0.2mm

## 2. SCHEMATIC：TOP VIEW




1. Anode
2. Cathode
3. NC
4. Main Terminal
6. Main Terminal

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## ● Absolute Maximum Ratings

| Parameter | | Symbol | Rating | Unit |
|---|---|---|---|---|
| Input | Forward current | $I_F$ | 50 | mA |
| | Peak forward current | $I_{FM}$ | 1 | A |
| | Reverse voltage | $V_R$ | 6 | V |
| | Power dissipation | $P_D$ | 70 | mW |
| Output | Off-State Output Terminal voltage | $V_{DRM}$ | 800 | $V_{PEAK}$ |
| | On-State R.M.S. Current | $I_{T(RMS)}$ | 100 | mA |
| | Peak Repetitive Surge Current (PW=10ms.DC 10%) | $I_{TSM}$ | 1 | A |
| | Power dissipation | $P_D$ | 300 | mW |
| Total power dissipation | | Ptot | 330 | mW |
| Isolation voltage 1 minute | | Viso | 5000 | Vrms |
| Operating temperature | | Topr | -40 to +100 | ℃ |
| Storage temperature | | Tstg | -50 to +125 | ℃ |
| Soldering temperature 10 second | | Tsol | 260 | ℃ |

## ● Electro-optical Characteristics

| Parameter | | Symbol | Conditions | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|---|
| Input | Forward voltage | $V_F$ | $I_F$=10mA | - | 1.2 | 1.4 | V |
| | Reverse current | $I_R$ | $V_R$=4V | - | - | 10 | uA |
| Output | Peak Blocking Current | $I_{DRM}$ | $V_{DRM}$=800V | - | - | 500 | nA |
| | ON-State Voltage | $V_{TM}$ | $I_{TM}$=100mA | - | 1.8 | 3 | V |
| Tranfer charac-teristics | Holding Current | $I_H$ | | - | 0.1 | - | mA |
| | Critical rate of rise of OFF-state voltage | dV/dt | $V_{DRM}$=(1/$\sqrt{2}$)*Rated | 600 | - | - | V/uS |
| | Inhibit Voltage (MT1-MT2 Voltage above which device not trigger.) | $V_{INH}$ | IF=10mA | - | 10 | 20 | V |
| | Leakage in Inhibited State | $I_{DRM2}$ | $I_F$=Rated $I_{FT}$, Rated $V_{DRM}$, Off State | - | - | 500 | uA |
| | Isolation resistance | Riso | DC500V | $5x10^{10}$ | $10^{11}$ | - | Ohm |
| | Minimum trigger current | $I_{FT}$ | Main Terminal Voltage=3V | - | - | 10 | mA |

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Fig.1 Forward Current vs. Ambient Temperature

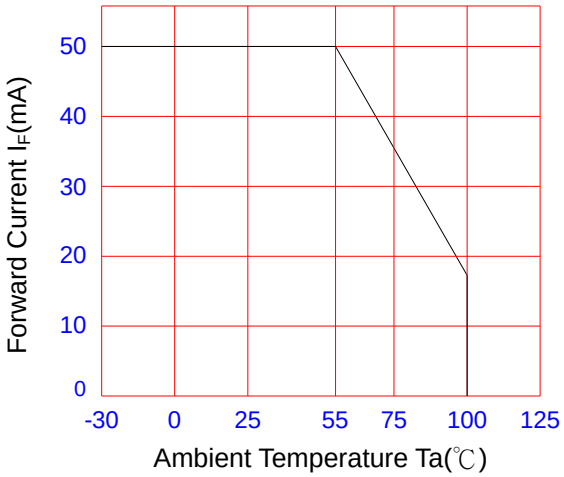



Fig.2 Diode Power Dissipation vs. Ambient Temperature

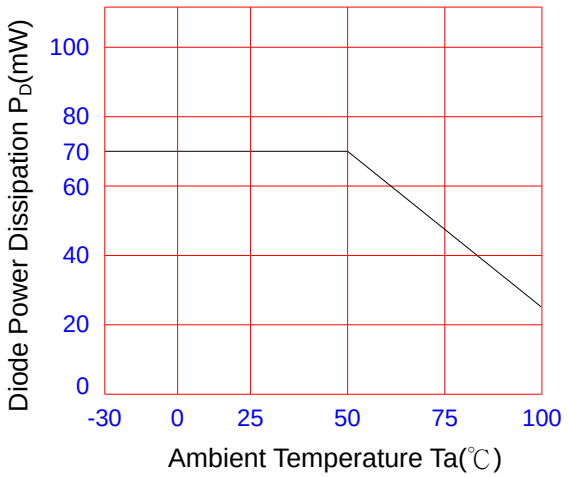



Fig.3 On-State R.M.S. Current vs. Ambient Temperature

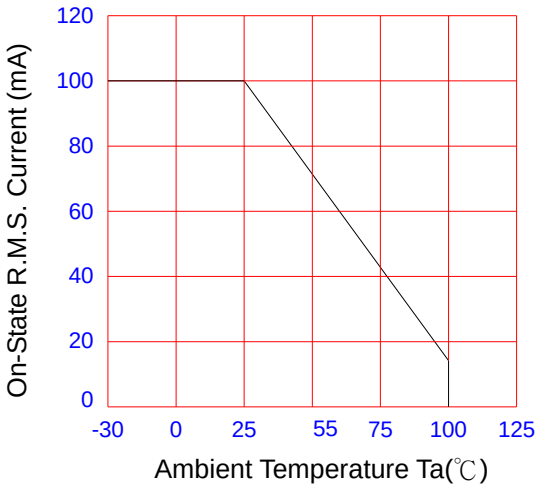



Fig.4 Total Power Dissipation vs. Ambient Temperature

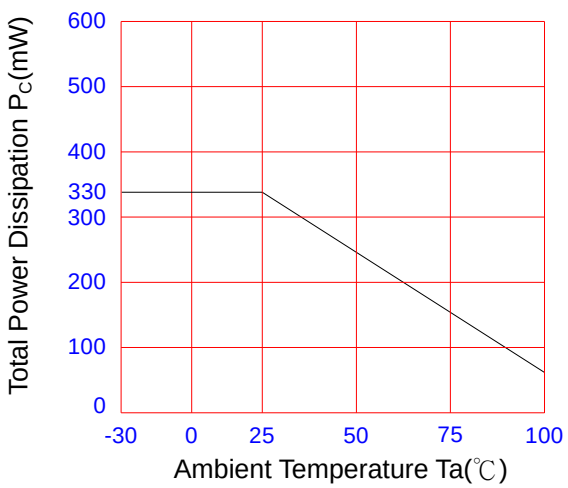



Fig.5 Peak Forward Current vs. Duty Ratio

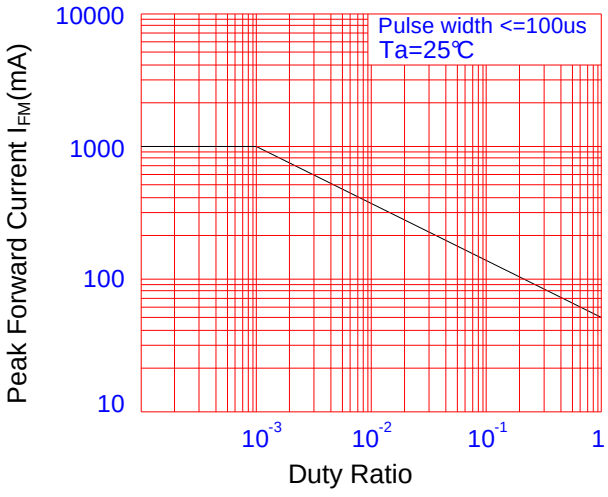
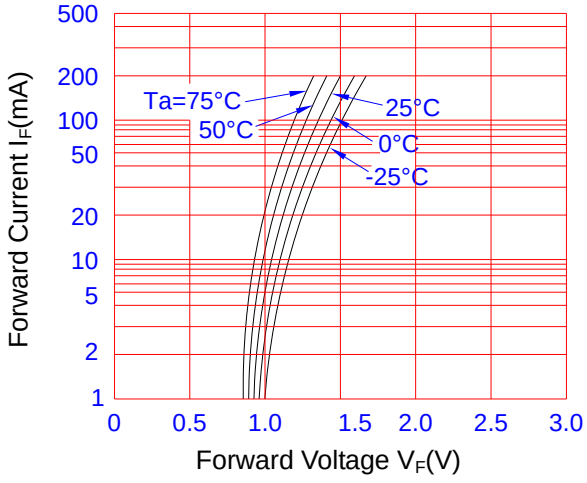



Fig.6 Forward Current vs. Forward Voltage



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Fig.7 On-State Characteristics

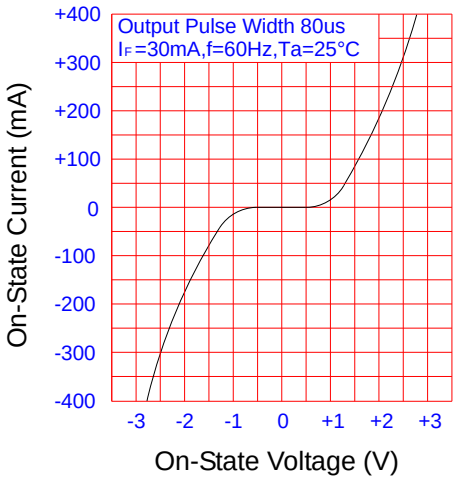



Fig.8 Inhibit Voltage vs. Temperature

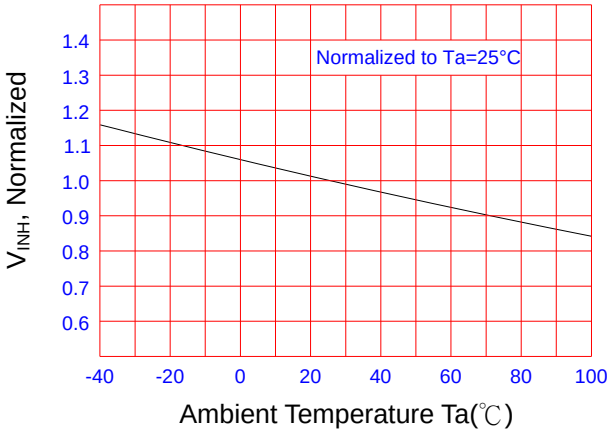



Fig.9 Leakage with LED off vs. Ambient Temperature

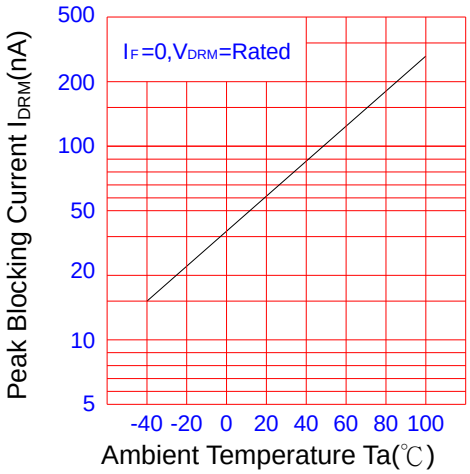



Fig.10 $I_{DRM2}$ ,Leakage in Inhibit State vs. Temperature

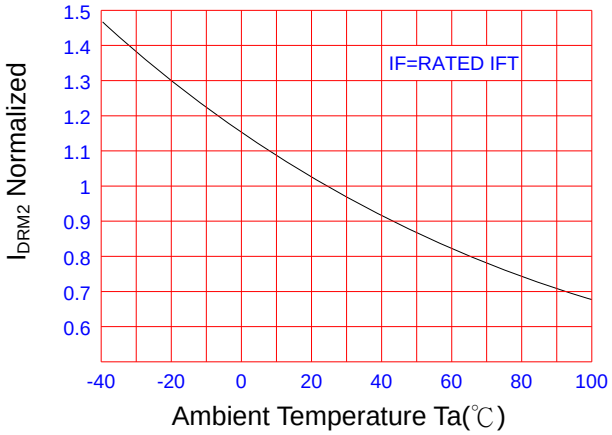
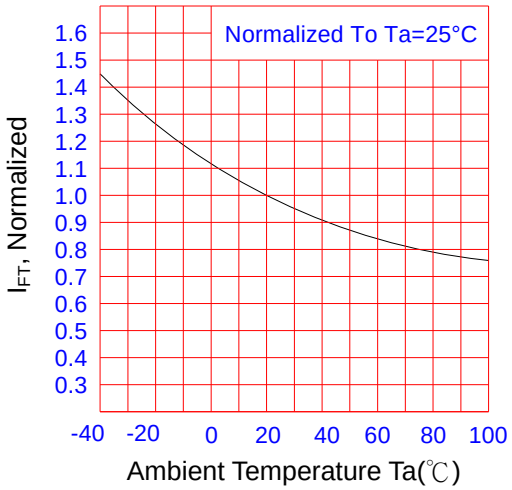



Fig.11 Trigger Current vs. Ambient Temperature



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