

# PRODUCT SPECIFICATION

DATE : 05/21/2007

|                                         |                                         |              |           |
|-----------------------------------------|-----------------------------------------|--------------|-----------|
| <b>cosmo</b><br>ELECTRONICS CORPORATION | Power Photo TRIAC :<br><b>KTLP3616H</b> | 62P45003     | REV.<br>2 |
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## Photo Coupler for Power Photo TRIAC Output

### ● Features

1. Compact dual-in-line package.
2. 600V peak blocking voltage.
3. Isolation voltage between input and output 5000Vrms.

### ● Application :

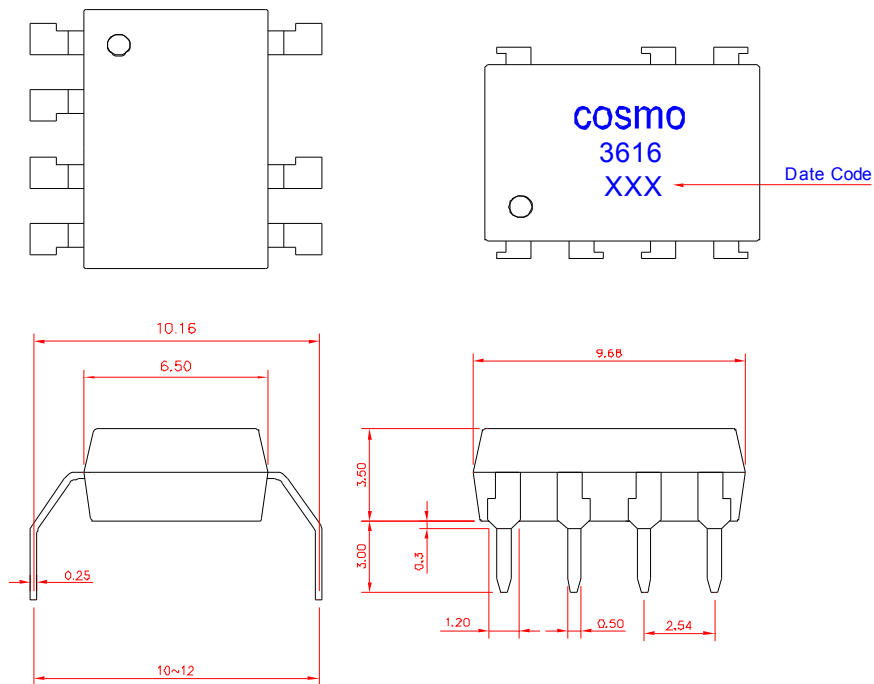
1. TRIAC Driver.
2. Programmable Controllers.
3. AC-Output Module.
4. Solid State Relay.

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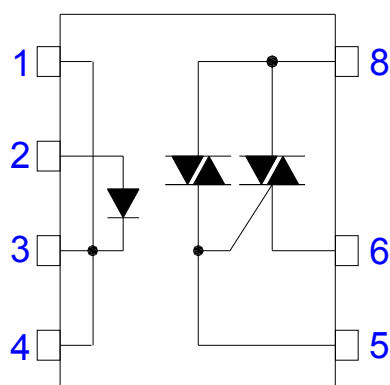
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## ● Outside dimension : Unit ( mm )



Tolerance :  $\pm 0.2\text{mm}$

## ● Schematic : Top View



- 1. Cathode
- 2. Anode
- 3. Cathode
- 4. Cathode
- 5. Gate
- 6. T1
- 8. T2

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## ● Absolute Maximum Ratings

| Parameter                          |                                                 | Symbol       | Rating      | Unit      |
|------------------------------------|-------------------------------------------------|--------------|-------------|-----------|
| Input                              | Forward current                                 | $I_F$        | 50          | mA        |
|                                    | Peak forward current                            | $I_{FP}$     | 1           | A         |
|                                    | Reverse voltage                                 | $V_R$        | 6           | V         |
| Output                             | Off-State Output Terminal voltage               | $V_{DRM}$    | 600         | V         |
|                                    | On-State R.M.S. Current                         | $I_{T(RMS)}$ | 1.2         | A         |
|                                    | Peak Nonrepetitive Surge Current ( 60Hz, Peak ) | $I_{TSM}$    | 10          | A         |
| Isolation voltage ( AC, 1 minute ) |                                                 | $V_{iso}$    | 5000        | $V_{rms}$ |
| Operating temperature              |                                                 | $T_{opr}$    | -40 to +85  | °C        |
| Storage temperature                |                                                 | $T_{stg}$    | -40 to +125 | °C        |
| Soldering temperature 10 second    |                                                 | $T_{sol}$    | 260         | °C        |

## ● 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                            | $I_R$     | $V_R = 6V$                                  | -                  | -    | 10   | $\mu A$    |
| Output                   | Peak Blocking Current                      | $I_{DRM}$ | $V_{DRM} = \text{Rated}$                    | -                  | -    | 100  | $\mu A$    |
|                          | On-State Voltage                           | $V_{TM}$  | $I_T = 1.2A$                                | -                  | -    | 3    | V          |
|                          | Holding Current                            | $I_H$     | $V_D = 5V$                                  | -                  | -    | 25   | mA         |
|                          | Critical rate of rise of Off-state voltage | $dV/dt$   | $V_{DRM} = (1/\sqrt{2}) \cdot \text{Rated}$ | -                  | 1000 | -    | V/ $\mu s$ |
| Transfer characteristics | Isolation resistance                       | $R_{iso}$ | DC500V                                      | $5 \times 10^{10}$ | -    | -    | $\Omega$   |
|                          | Minimum trigger current                    | $I_{FT}$  | $V_D = 5V$                                  | -                  | -    | 10   | mA         |

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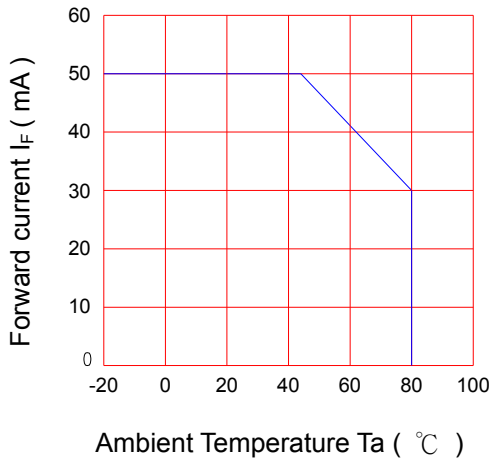
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Power Photo TRIAC :  
**KTLP3616H**

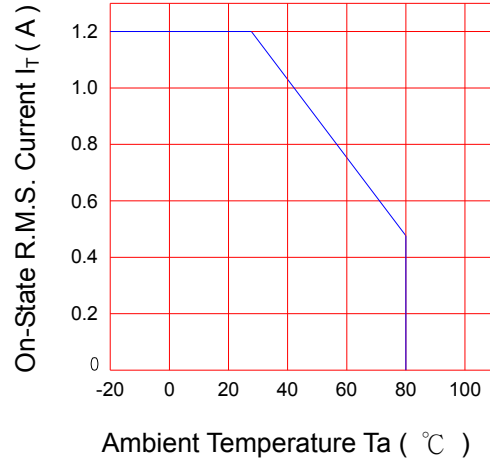
**62P45003**  
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2

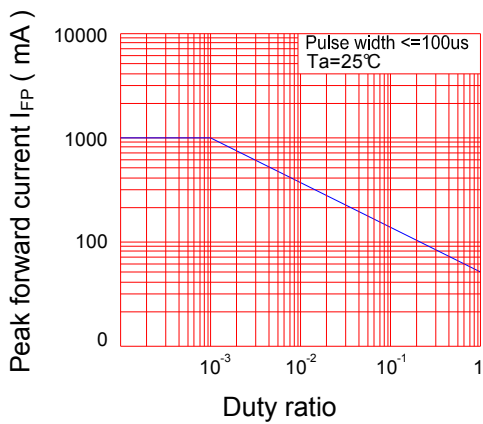
$I_F$  vs.  $T_a$



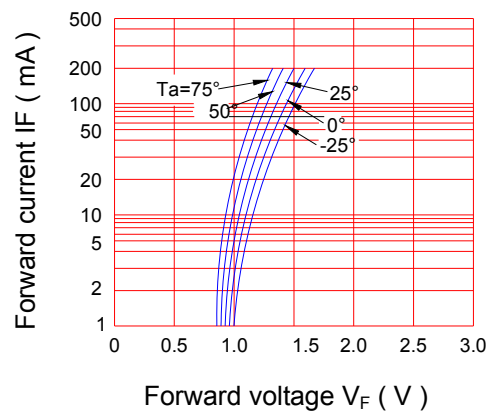
$I_T$  vs.  $T_a$



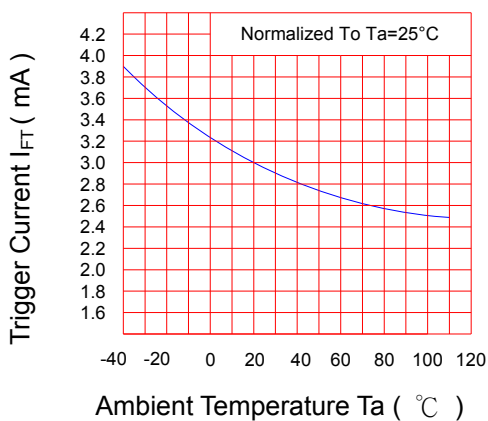
$I_{FP}$  vs. Duty Ratio



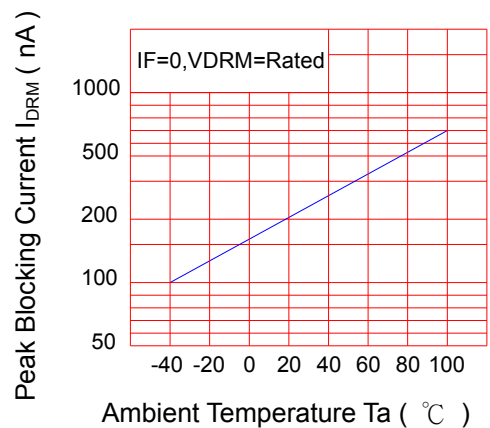
$I_F$  vs.  $V_F$



$I_{FT}$  vs.  $T_a$



$I_{DRM}$  vs.  $T_a$

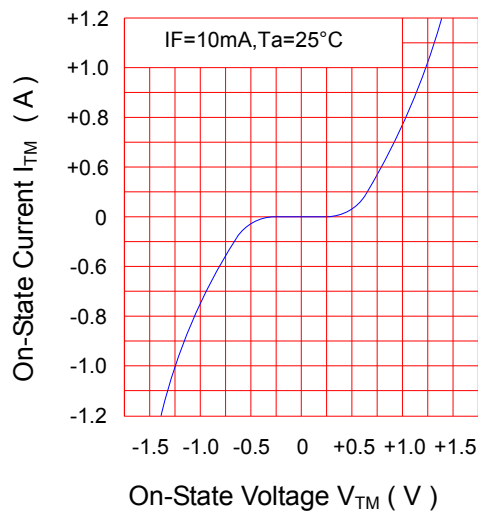


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$I_{TM}$  vs.  $V_{TM}$



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