

# PRODUCT SPECIFICATION

DATE : 07/31/2008

<b>cosmo</b> ELECTRONICS CORPORATION	Power Photo TRIAC :	61P46001	REV.
	<b>KTLP3503S</b>	SHEET 1 OF 6	3

## Photo Coupler for Power Photo TRIAC Output

### ● Features

1. Compact dual-in-line package.
2. 400V peak blocking voltage.
3. Isolation voltage between input and output 5000Vrms.

### ● Application :

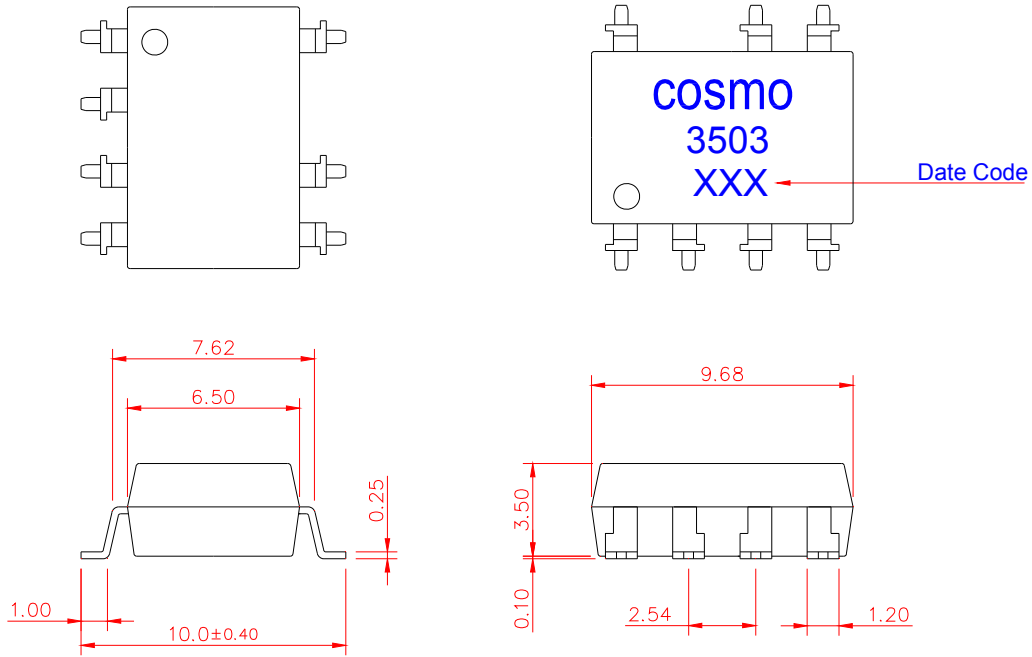
1. TRIAC Driver.
2. Programmable Controllers.
3. AC-Output Module.
4. Solid State Relay.

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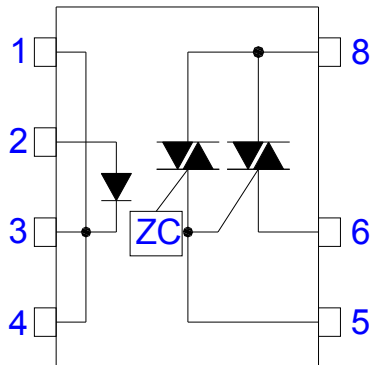
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## ● Outside dimension : Unit ( mm )



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	$V_{DRM}$	400	V
	On-State R.M.S. Current	$I_{T(RMS)}$	0.5	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	$V_{TM}$	$I_T = 0.75A$	-	-	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	Inhibit voltage ( MT1-MT2 Voltage above which device not trigger )	$V_{INH}$	$I_F = \text{Rated } I_{FT}$	-	-	50	V
	Leakage in Inhibited State	$I_{DRM2}$	$I_F = \text{Rated } I_{FT}, \text{ Rated } V_{DRM}, \text{ Off State}$	-	200	-	$\mu A$
	Isolation resistance	$R_{iso}$	DC500V	$5 \times 10^{10}$	-	-	$\Omega$
	Minimum trigger current	$I_{FT}$	$V_D = 5V$	-	-	10	mA

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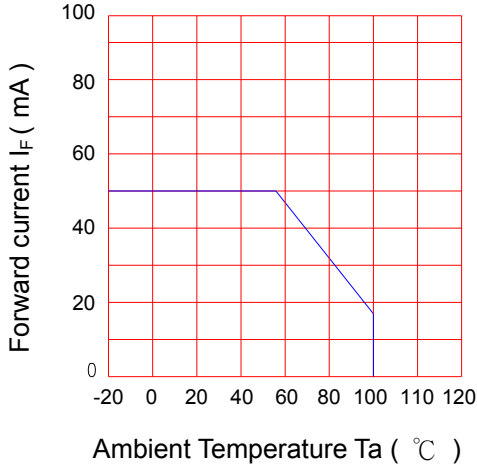
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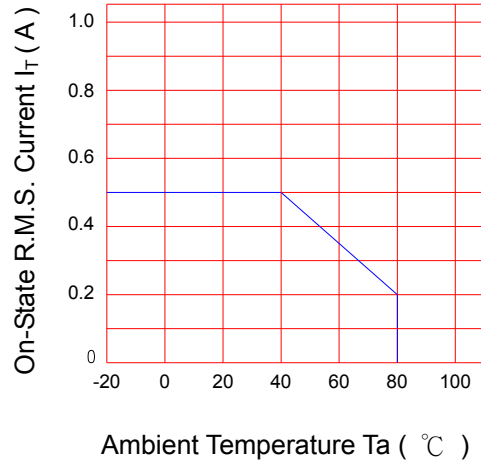
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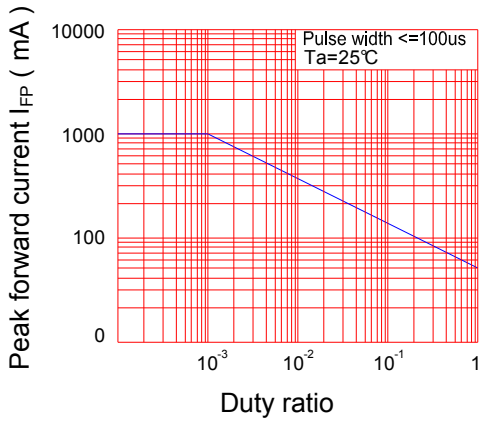
$I_F$  VS.  $T_a$



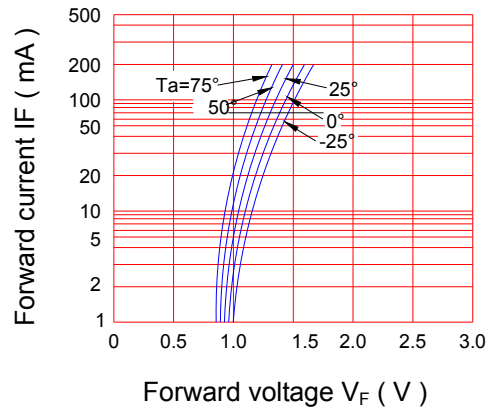
$I_T$  VS.  $T_a$



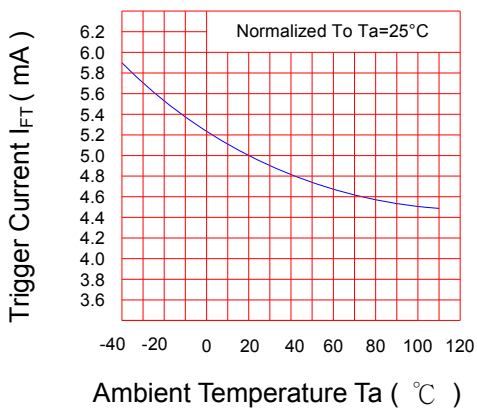
$I_{FP}$  VS. Duty Ratio



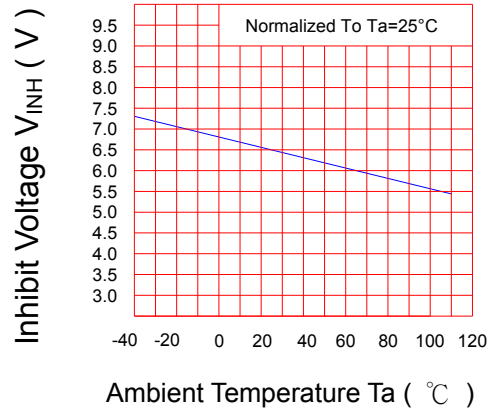
$I_F$  VS.  $V_F$



$I_{FT}$  VS.  $T_a$



$V_{INH}$  VS.  $T_a$



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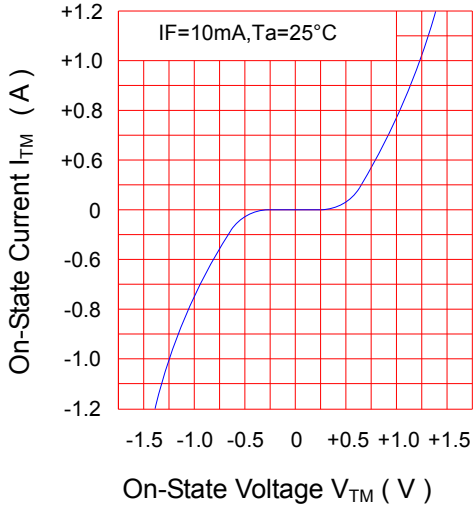
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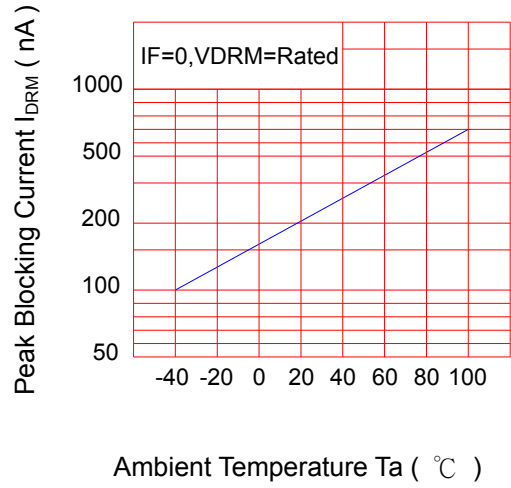
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$I_{TM}$  VS.  $V_{TM}$



$I_{DRM}$  VS.  $T_a$



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