

# PRODUCT SPECIFICATION

DATE : 05/05/2011

<b>cosmo</b> ELECTRONICS CORPORATION	Photocoupler : <b>KMOC3021S</b>	NO.61P41002	REV.
		SHEET 1 OF 6	5

## Optoisolators TRIAC Driver Output (400V Volts Peak)

### ● Features

1. Compact surface mount type package.
2. 400V peak blocking voltage.
3. Isolation voltage between input and output (Viso : 5000Vrms).

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

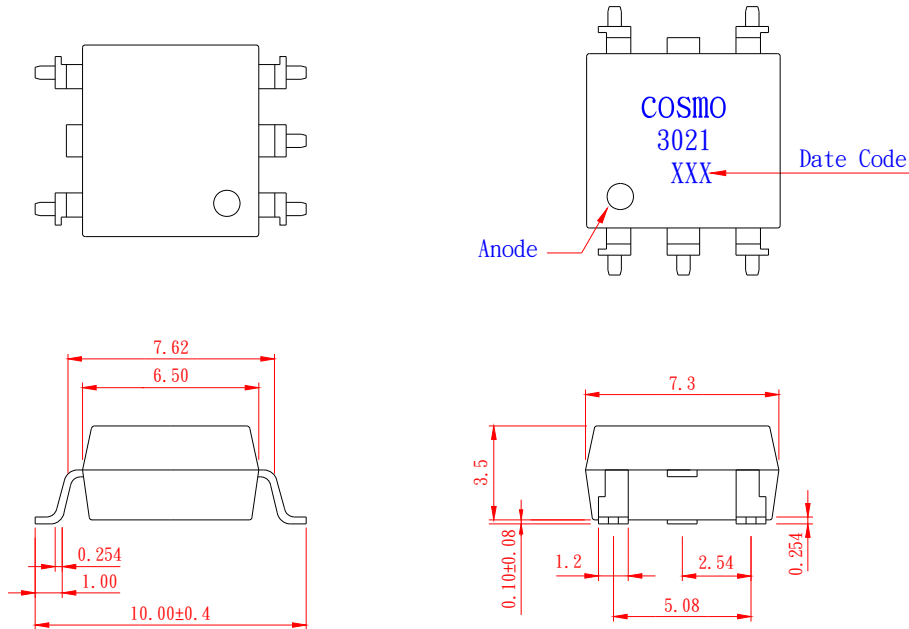
1. Solenoid/Valve Controls.
2. Lighting Controls.
3. Static Power Switches.
4. AC Motor Drives.
5. Temperature Controls.
6. E.M. Contactors.
7. AC Motor Starters.
8. Solid State Relays.
9. Programmable controllers.

# PRODUCT SPECIFICATION

DATE : 05/05/2011

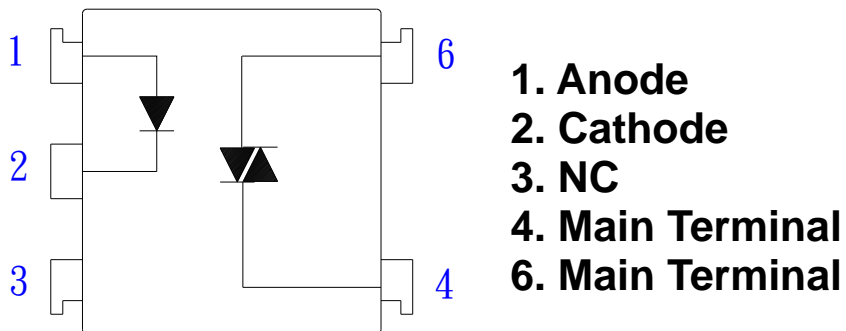
<b>cosmo</b> ELECTRONICS CORPORATION	Photocoupler : <b>KMOC3021S</b>	NO.61P41002	REV. 5
		SHEET 2 OF 6	

## 1. OUTSIDE DIMENSION : UNIT (mm)



TOLERANCE : ±0.2mm

## 2. SCHEMATIC : TOP VIEW



# PRODUCT SPECIFICATION

DATE : 05/05/2011

<b>cosmo</b> ELECTRONICS CORPORATION	Photocoupler : <b>KMOC3021S</b>	NO.61P41002	REV. 5
		SHEET 3 OF 6	

## ● Absolute Maximum Ratings

Parameter		Symbol	Rating	Unit
Input	Forward current	IF	50	mA
	Peak forward current	IFM	1	A
	Reverse voltage	VR	6	V
	Power dissipation	PD	70	mW
Output	Off-State Output Terminal voltage	VDRM	400	VPEAK
	On-State R.M.S. Current	IT(RMS)	100	mA
	Peak Repetitive Surge Current (PW=10ms.DC 10%)	ITSM	1	A
	Power dissipation	PD	300	mW
Total power dissipation		Ptot	330	mW
Isolation voltage 1 minute		Viso	5000	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

Parameter		Symbol	Conditions	Min.	Typ.	Max.	Unit
Input	Forward voltage	VF	IF=10mA	-	1.2	1.4	V
	Peak forward voltage	VFM	IFM=0.5A	-	-	3.5	V
	Reverse current	IR	VR=4V	-	-	10	uA
Output	Peak Blocking Current	IDRM	VDRM=400V	-	-	100	nA
	ON-State Voltage	VTM	ITM=100mA	-	1.6	3	V
Transfer characteristics	Holding Current	IH		-	0.1	-	mA
	Critical rate of rise of OFF-state voltage	dV/dt	VDRM=(1/√2)*Rated	600	-	-	V/uS
	Isolation resistance	Riso	DC500V	5x10 <sup>10</sup>	10 <sup>11</sup>	-	Ohm
	Minimum trigger current	IFT	Main Terminal Voltage=3V	-	-	15	mA
	Turn-on time	Ton	VD=6V,RL=100Ohm,IF=20mA	-	-	100	uS

# PRODUCT SPECIFICATION

DATE : 05/05/2011

**cosmo**  
ELECTRONICS CORPORATION

Photocoupler :  
**KMOC3021S**

NO.61P41002  
SHEET 4 OF 6

REV.  
5

Fig.1 Forward Current vs. Ambient Temperature

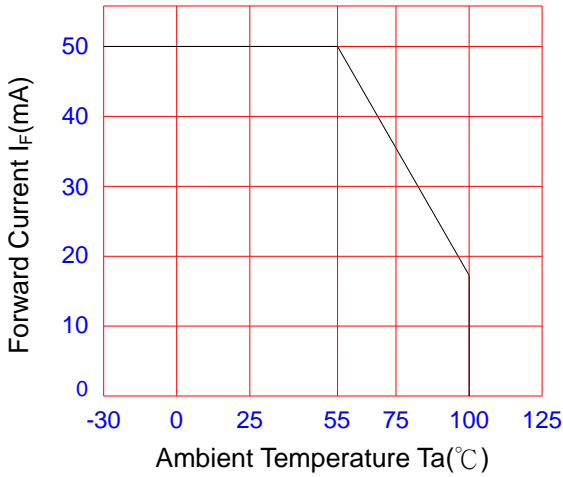


Fig.2 Diode Power Dissipation vs. Ambient Temperature

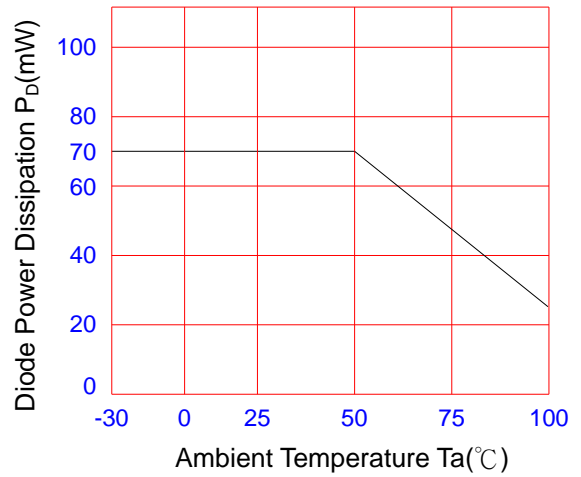


Fig.3 On-State R.M.S. Current vs. Ambient Temperature

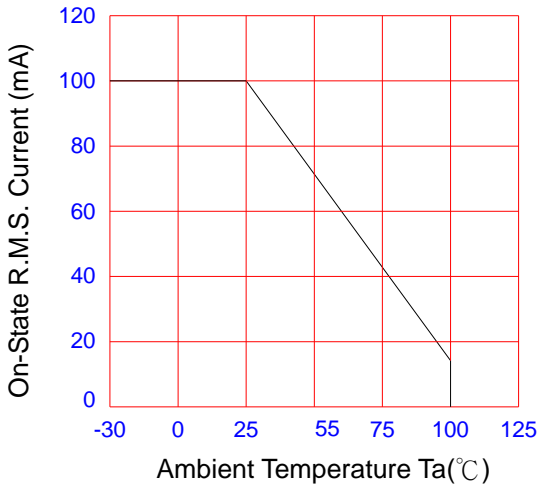


Fig.4 Total Power Dissipation vs. Ambient Temperature

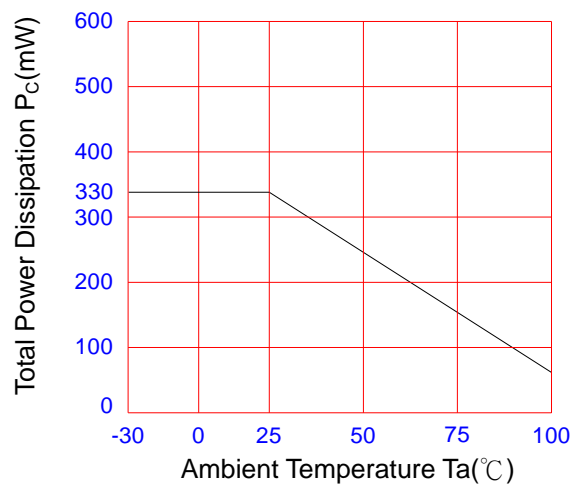
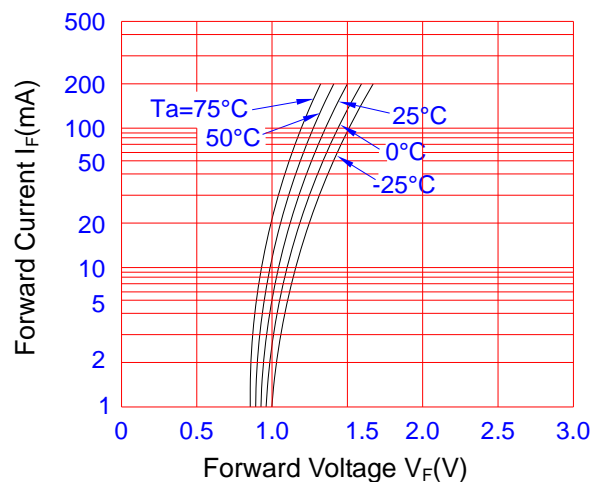


Fig.5 Peak Forward Current vs. Duty Ratio



Fig.6 Forward Current vs. Forward Voltage



# PRODUCT SPECIFICATION

DATE : 05/05/2011

**cosmo**  
ELECTRONICS CORPORATION

Photocoupler :  
**KMOC3021S**

NO.61P41002  
SHEET 5 OF 6

REV.  
5

Fig.7 On-State Characteristics

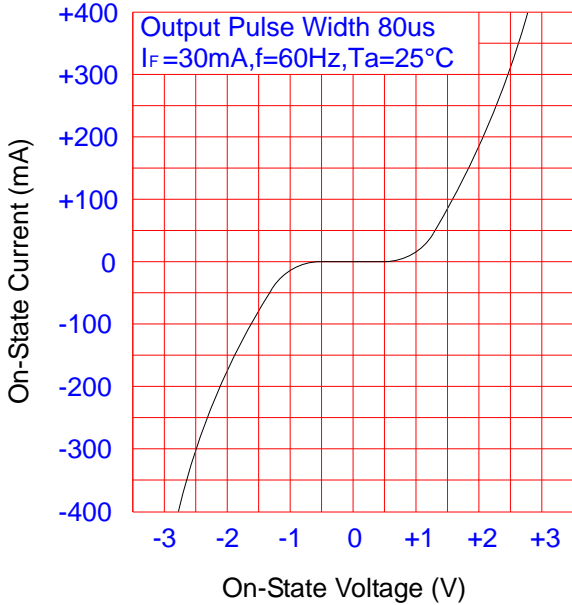


Fig.8 Leakage with LED off vs. Ambient Temperature

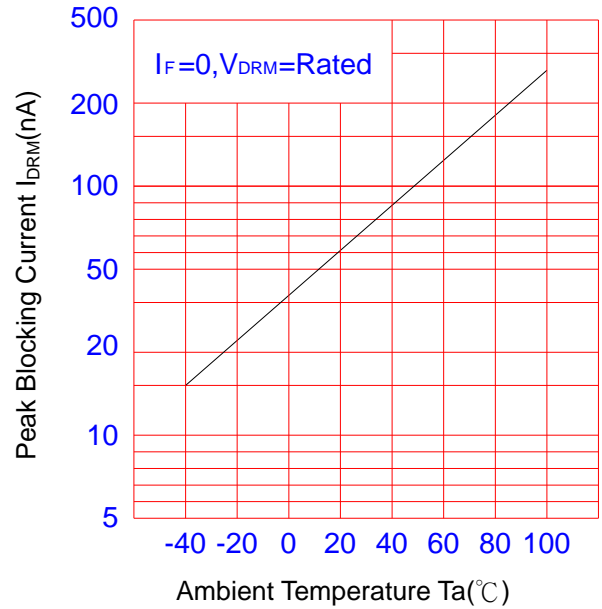
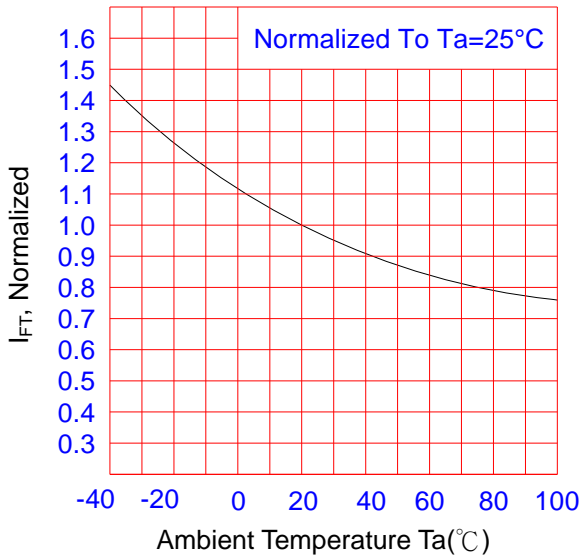


Fig.9 Trigger Current vs. Ambient Temperature



# PRODUCT SPECIFICATION

DATE : 05/05/2011

<b>cosmo</b> ELECTRONICS CORPORATION	Photocoupler : <b>KMOC3021S</b>	NO.61P41002	REV.
		SHEET 6 OF 6	5

## NOTICE

The information contained in this document is intended to be a general product description and is subject to change without notice. Please contact cosmo in order to obtain the latest device data sheets before using any cosmo device. cosmo does not assume any responsibility for use of any circuitry described. No circuit patent licenses are implied. This publication is the property of cosmo . No part of this publication may be reproduced or copied in any form or by any means, or transferred to any third party without the prior written consent of cosmo Electronics Corporation.

The devices listed in this document are designed for general applications only in electronic equipment. No devices shall be deployed which require higher level of reliability such as :

- Medical and other life support equipments.
- Space application.
- Telecommunication equipment (trunk lines).
- Nuclear power control equipment.

Unless it received prior written approval from cosmo.

cosmo takes no responsibility for damages arise form the improper usage of our device. Please contact cosmo for further information regarding the above notices.