

PRODUCT SPECIFICATION

DATE:03/23/2004

cosmo ELECTRONICS CORPORATION	Photocoupler : KMOC3021	NO.60P41002	REV.
		SHEET 1 OF 6	3

Optoisolators TRIAC Driver Output (400V Volts Peak)

●Features

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

●For 115/240 Vac(rms) Application:

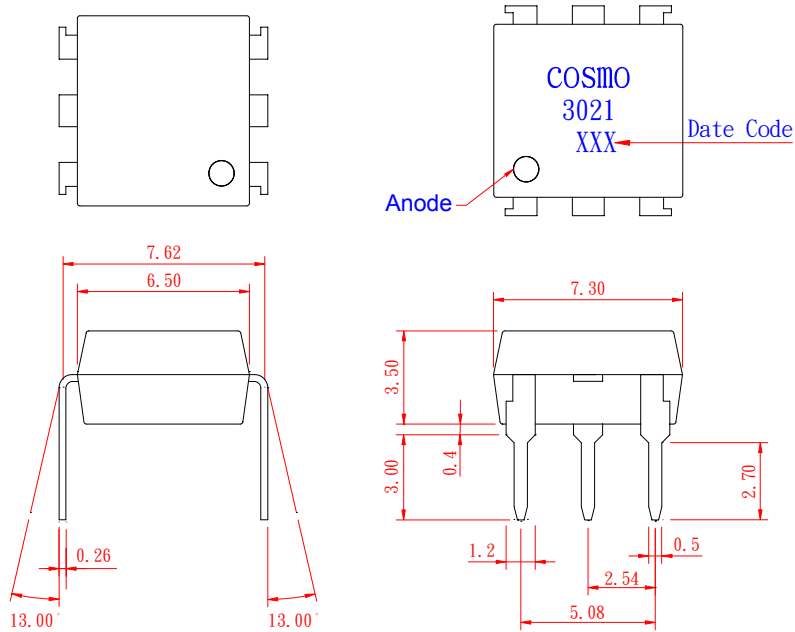
1. Solenoid/Valve Controls.
2. Lighting Controls.
3. Static Power Switches.
4. AC Motor Drives.
5. Temperature Controls.
6. E.M. Contactors.
7. AC Motor Staters.
8. Solid State Relays.
9. Programmable controllers.

PRODUCT SPECIFICATION

DATE:03/23/2004

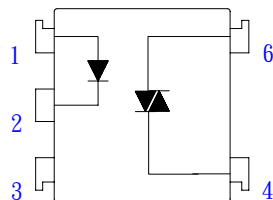
cosmo ELECTRONICS CORPORATION	Photocoupler : KMOC3021	NO.60P41002	REV. 3
		SHEET 2 OF 6	

1. OUTSIDE DIMENSION : UNIT (mm)



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

2. SCHEMATIC : TOP VIEW



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

PRODUCT SPECIFICATION

DATE:03/23/2004

cosmo ELECTRONICS CORPORATION	Photocoupler : KMOC3021	NO.60P41002	REV.
		SHEET 3 OF 6	3

●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}	400	V_{PEAK}
	On-State R.M.S. Current	$I_{T(RMS)}$	100	mA
	Peak Repetitive Surget Current (PW=10ms.DC 10%)	I_{TSM}	1	A
	Power dissipation	P_D	300	mW
	Total power dissipation	P_{tot}	330	mW
	Isolation voltage 1 minute	V_{iso}	5000	V_{rms}
	Operating temperature	T_{opr}	-40 to +80	°C
	Storage temperature	T_{sta}	-50 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
	Peak forward voltage	V_{FM}	$I_{FM}=0.5A$	-	-	3.5	V
	Reverse current	I_R	$V_R=4V$	-	-	10	uA
Output	Peak Blocking Current	I_{DRM}	$V_{DRM}=400V$	-	-	100	nA
	ON-State Voltage	V_{TM}	$I_{TM}=100mA$	-	1.6	3	V
Transfer characteristics	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
	Isolation resistance	R_{iso}	DC500V	5×10^{10}	10^{11}	-	ohm
	Minimum trigger current	I_{FT}	Main Terminal Voltage=3V	-	-	15	mA
	Turn-on time	T_{on}	$V_D=6V, R_L=100ohm, I_F=20mA$	-	-	100	uS

PRODUCT SPECIFICATION

DATE:03/23/2004

cosmo ELECTRONICS CORPORATION	Photocoupler :	NO.60P41002	REV. 3
	KMOC3021	SHEET 4 OF 6	

Fig.1 Forward Current vs. Ambient Temperature

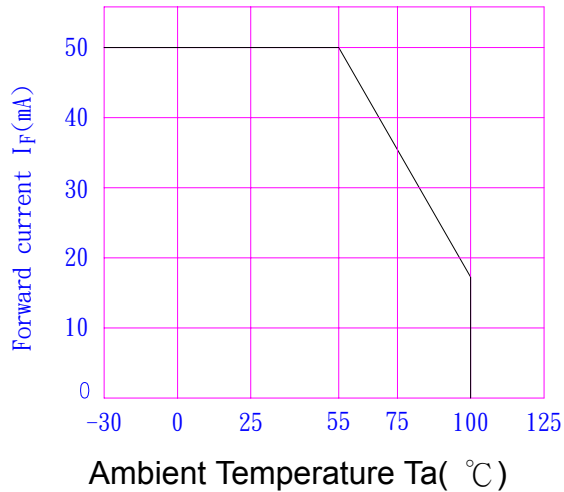


Fig.2 Diode Power Dissipation vs. Ambient Temperature

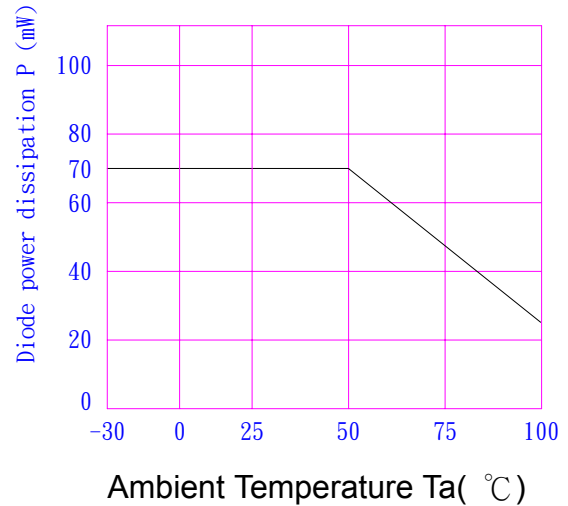


Fig.3 On-State R.M.S. Current vs. Ambient Temperature

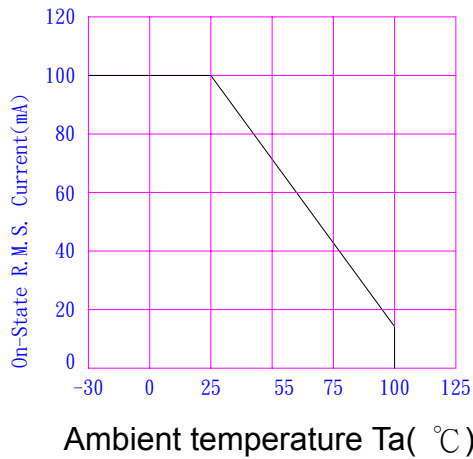


Fig.4 Total Power Dissipation vs. Ambient Temperature

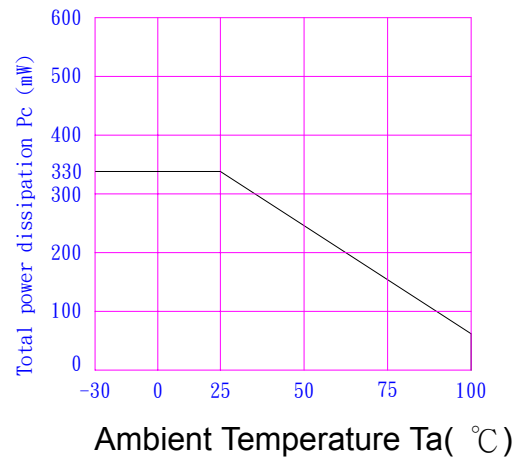


Fig.5 Peak Forward Current vs. Duty Ratio

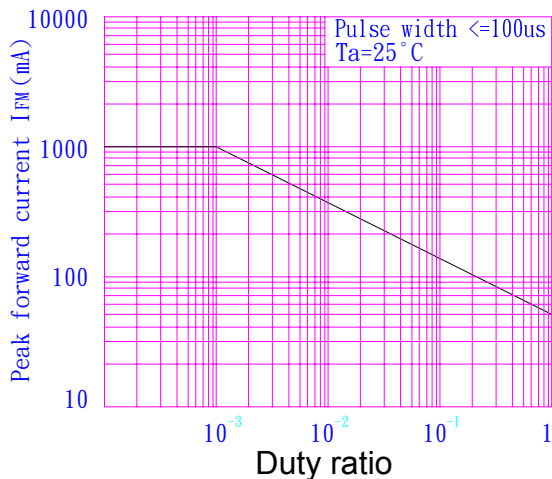
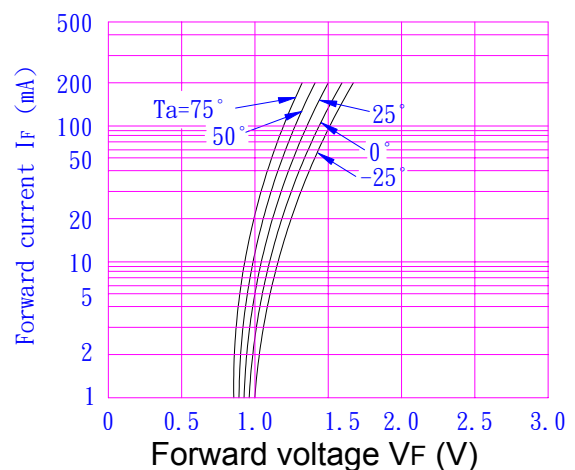


Fig.6 Forward Current vs. Forward Voltage



PRODUCT SPECIFICATION

DATE:03/23/2004

cosmo ELECTRONICS CORPORATION	Photocoupler :	NO.60P41002	REV. 3
	KMOC3021	SHEET 5 OF 6	

Fig.7 On-State Characteristics

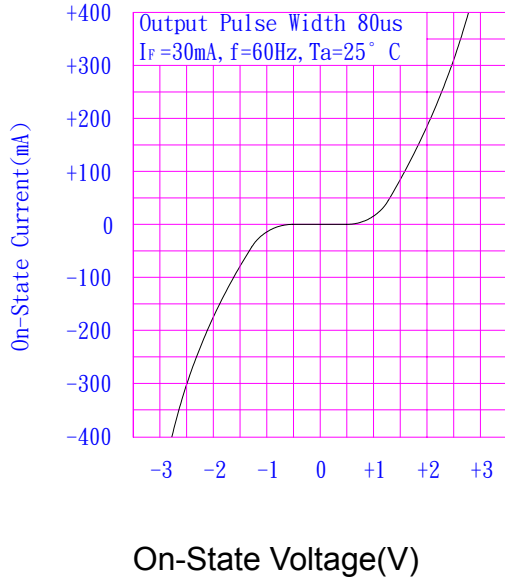


Fig.8 Leakage with LED off vs. Ambient Temperature

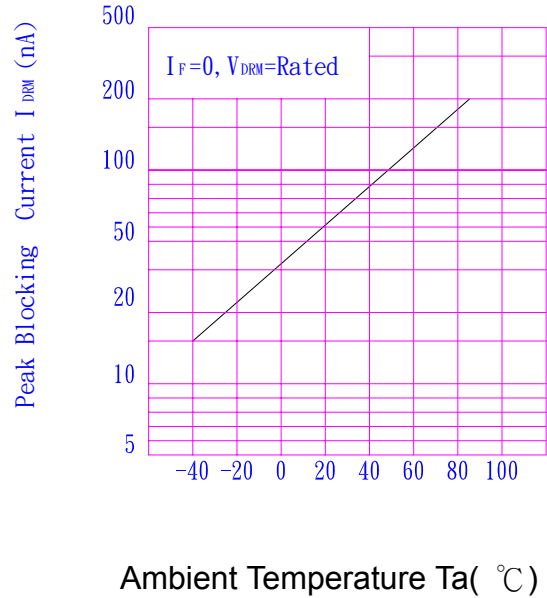
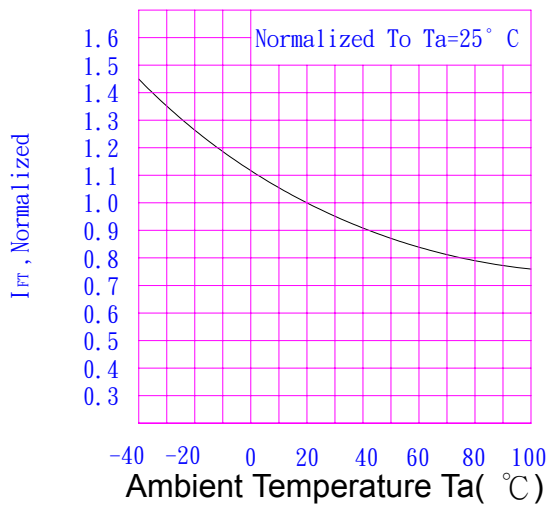


Fig.9 Trigger Current vs. Ambient Temperature



PRODUCT SPECIFICATION

DATE: 03/23/2004

cosmo ELECTRONICS CORPORATION	Photocoupler : KMOC3021	NO.60P41002	REV.
		SHEET 6 OF 6	3

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.