

PRODUCT SPECIFICATION

DATE:03/23/2004

cosmo ELECTRONICS CORPORATION	Photocoupler : KMOC3041	NO.60P42011	REV.
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Zero Crossing 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:

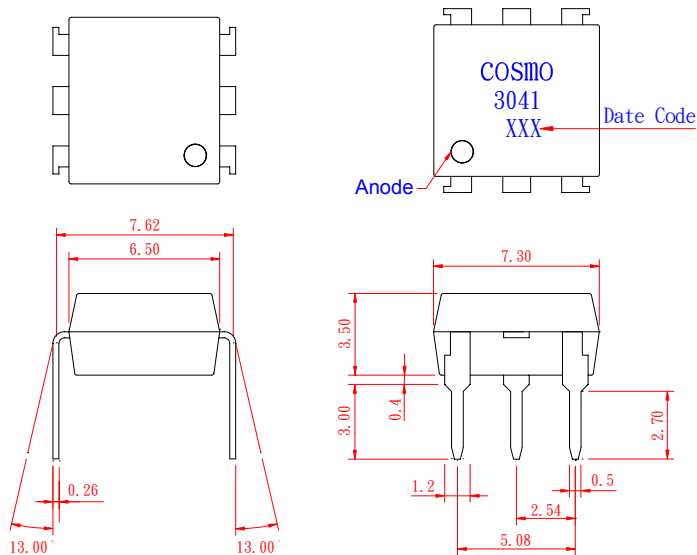
1. Solenoid/Valve Controls.
2. Lighting Controls.
3. Static Power Switches.
4. AC Motor Drives.
5. Temperature Controls.
6. E.M. Contactors.
7. AC Motor Staters.
8. Solid State Relays.
9. Programmable controllers.

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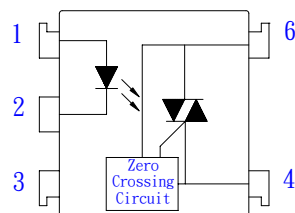
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1. OUTSIDE DIMENSION : UNIT (mm)



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

2. SCHEMATIC : TOP VIEW



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

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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}	400	V _{PEAK}
	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 _{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 =4V	-	-	10	uA
Output	Peak Blocking Current	I _{DRM}	V _{DRM} =400V	-	60	500	nA
	ON-State Voltage	V _{TM}	I _{TM} =100mA	-	1.8	3	V
Transfer characteristics	Holding Current	I _H		-	100	-	uA
	Critical rate of rise of OFF-state voltage	dV/dt	V _{DRM} =(1/√2)*Rated	600	-	-	V/uS
	Inhibit Voltage(MT1-MT2 Voltage above which device not trigger)	V _{INH}	I _F = Rated I _{FT}	-	5	20	V
	Leakage in Inhibited State	I _{DRM2}	I _F =Rated I _{FT} ,Rated V _{DRM} ,Off State	-	-	500	uA
	Isolation resistance	R _{iso}	DC500V	5x10 ¹⁰	10 ¹¹	-	ohm
	Minimum trigger current	I _{FT}	Main Terminal Voltage=3V	-	-	15	mA

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Fig.1 Forward Current vs. Ambient Temperature

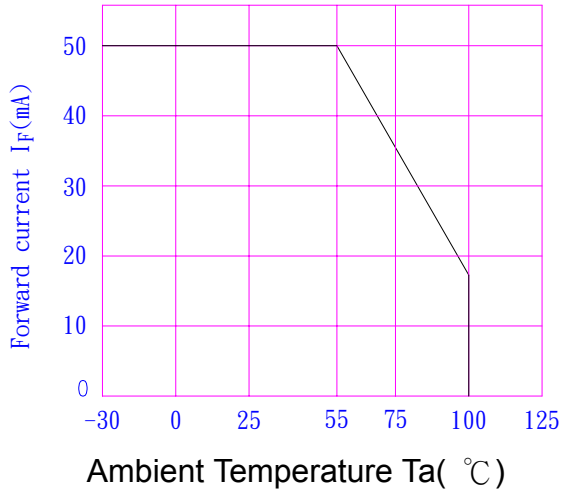


Fig.2 Diode Power Dissipation vs. Ambient Temperature

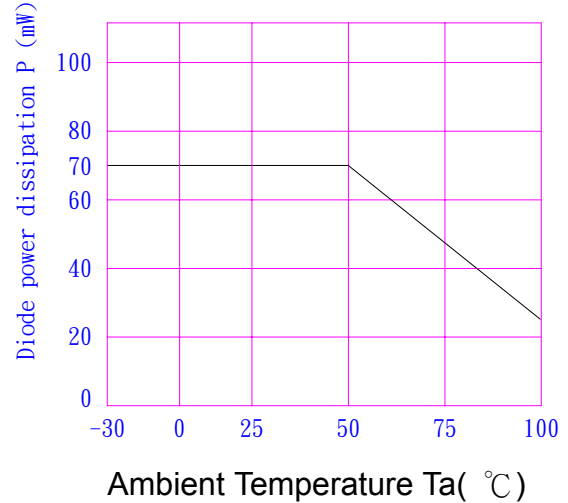


Fig.3 On-State R.M.S. Current vs. Ambient Temperature

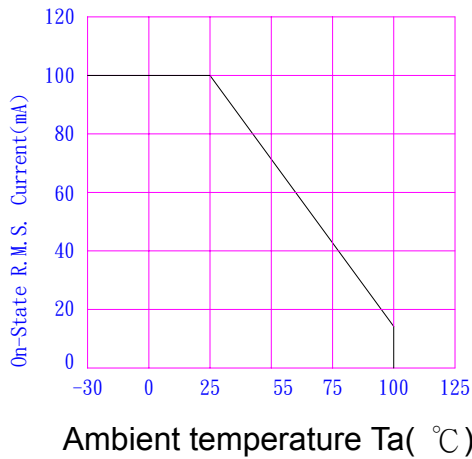


Fig.4 Total Power Dissipation vs. Ambient Temperature

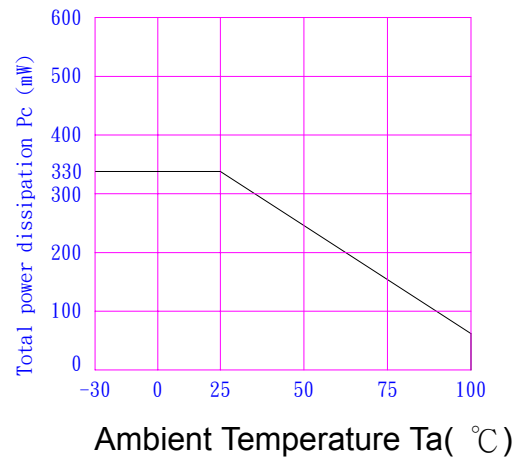


Fig.5 Peak Forward Current vs. Duty Ratio

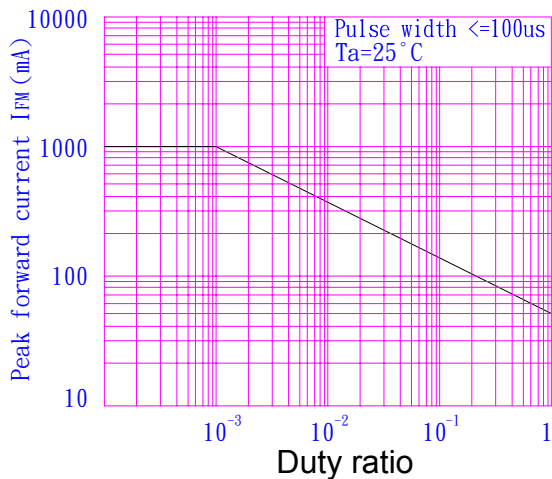
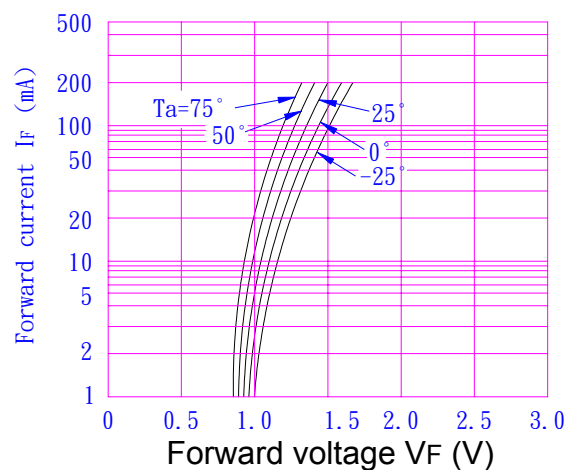


Fig.6 Forward Current vs. Forward Voltage



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Fig.7 On-State Characteristics

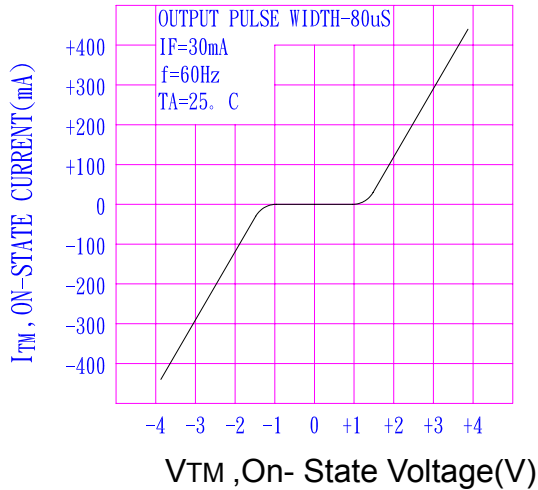


Fig.8 Inhibit Voltage vs. Temperature

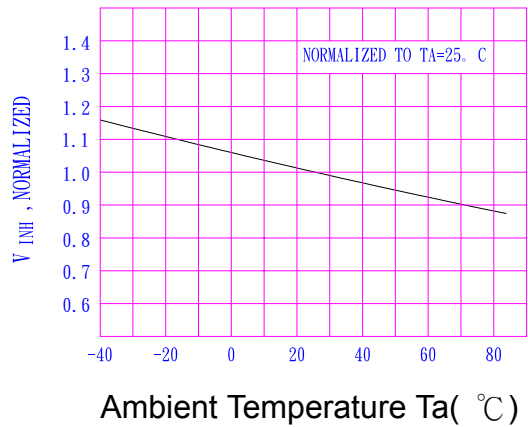


Fig.9 Leakage with LED Off vs. Temperature

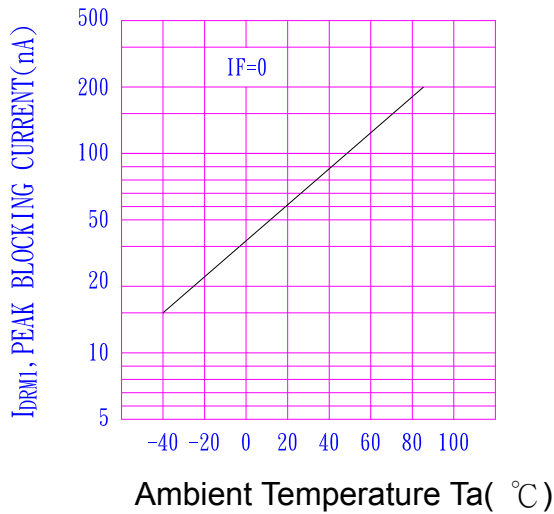


Fig.10 I_DRM2, Leakage in Inhibit State vs. Temperature

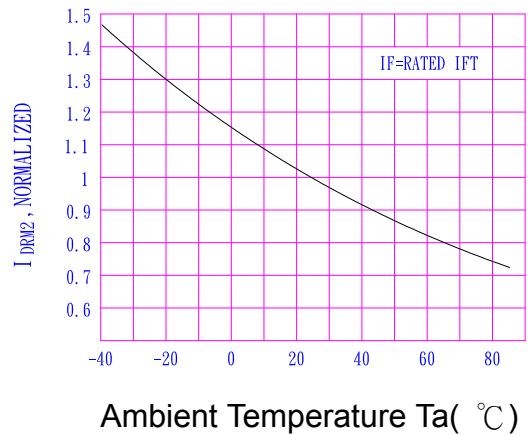
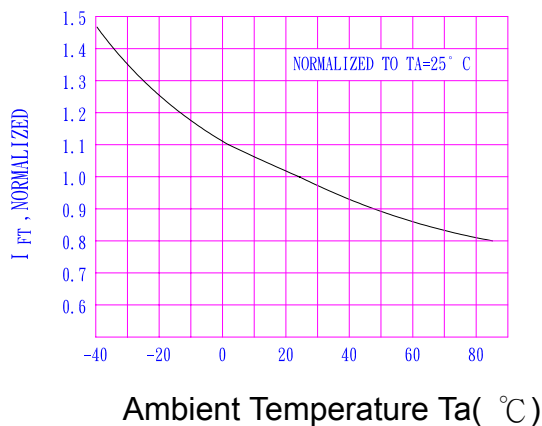


Fig.11 Trigger Current vs. Temperature



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