

PRODUCT SPECIFICATION

DATE : 05/05/2011

cosmo ELECTRONICS CORPORATION	Photocoupler : KMOC3053	NO.60P41008	REV.
		SHEET 1 OF 6	3

Optoisolators TRIAC Driver Output (600V Volts Peak)

● Features

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

● For 115/240 Vac(rms) Application :

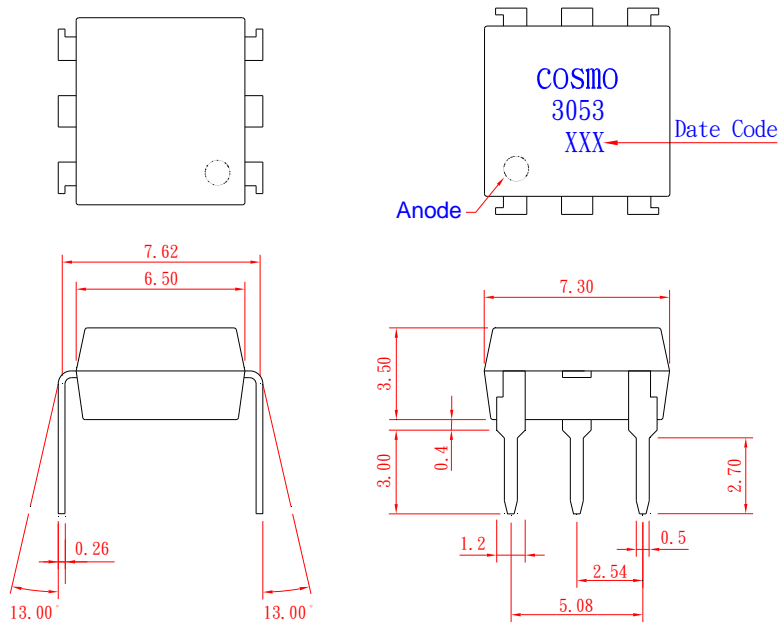
1. Solenoid/Valve Controls.
2. Lighting Controls.
3. Static Power Switches.
4. AC Motor Drives.
5. Temperature Controls.
6. E.M. Contactors.
7. AC Motor Starters.
8. Solid State Relays.
9. Programmable controllers.

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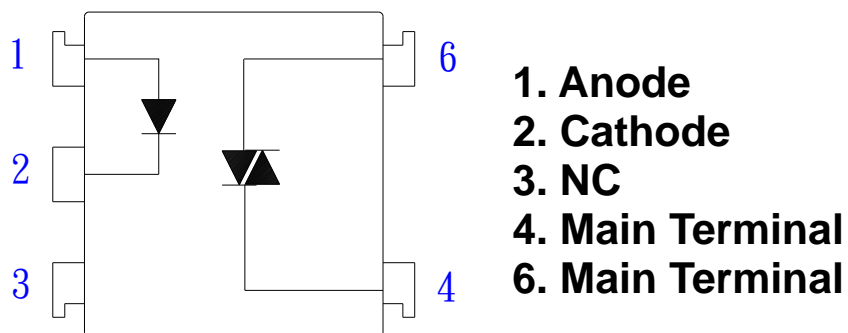
cosmo ELECTRONICS CORPORATION	Photocoupler : KMOC3053	NO.60P41008	REV. 3
		SHEET 2 OF 6	

1. OUTSIDE DIMENSION : UNIT (mm)



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

2. SCHEMATIC : TOP VIEW



PRODUCT SPECIFICATION

DATE : 05/05/2011

cosmo ELECTRONICS CORPORATION	Photocoupler : KMOC3053	NO.60P41008	REV. 3
		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	600	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=600V	-	-	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 ¹⁰	10 ¹¹	-	Ohm
	Minimum trigger current	IFT	Main Terminal Voltage=3V	-	-	5	mA
	Turn-on time	Ton	VD=6V,RL=100Ohm,IF=20mA	-	-	100	uS

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DATE : 05/05/2011

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Photocoupler :
KMOC3053

NO.60P41008
SHEET 4 OF 6

REV.
3

Fig.1 Forward Current vs. Ambient Temperature

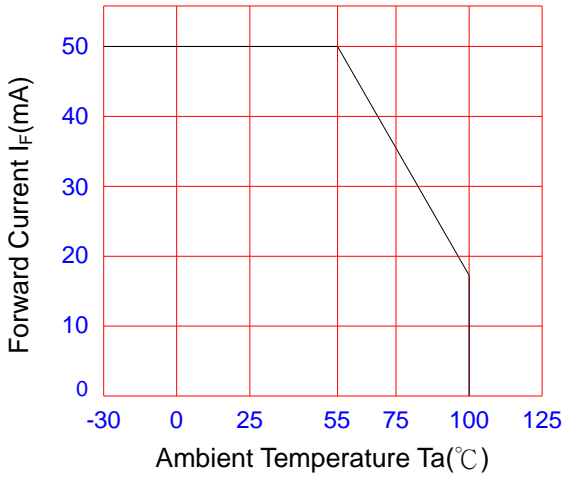


Fig.2 Diode Power Dissipation vs. Ambient Temperature

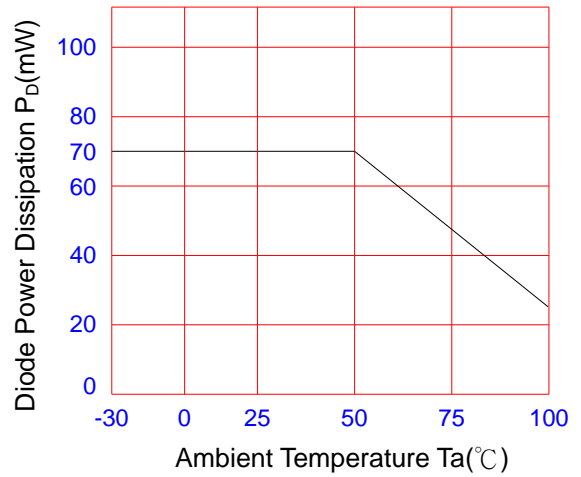


Fig.3 On-State R.M.S. Current vs. Ambient Temperature

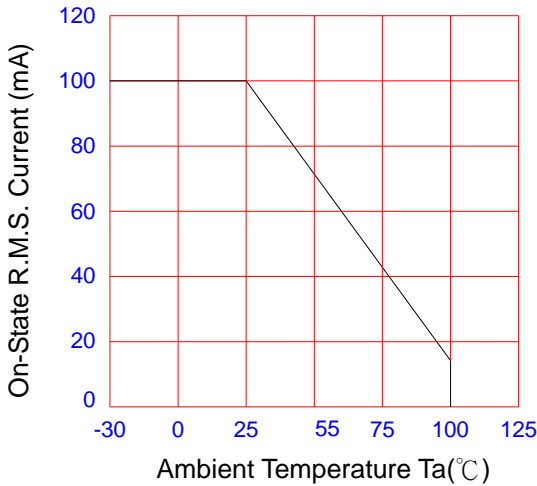


Fig.4 Total Power Dissipation vs. Ambient Temperature

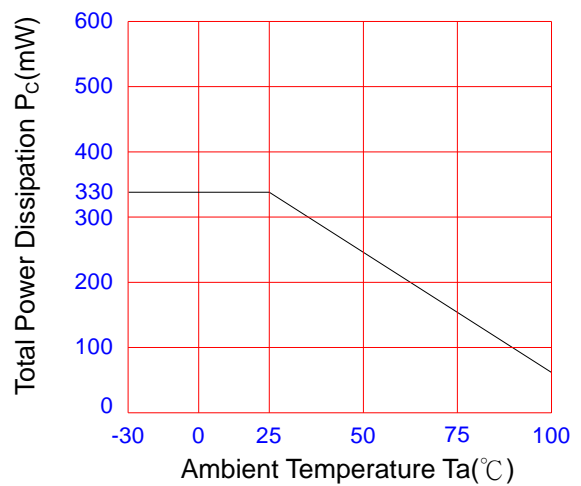


Fig.5 Peak Forward Current vs. Duty Ratio

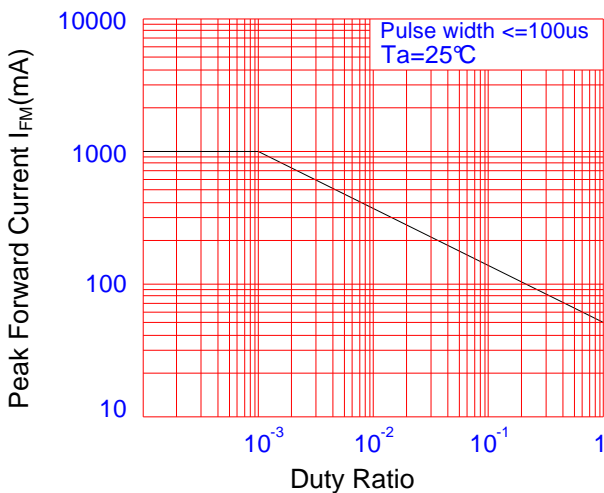
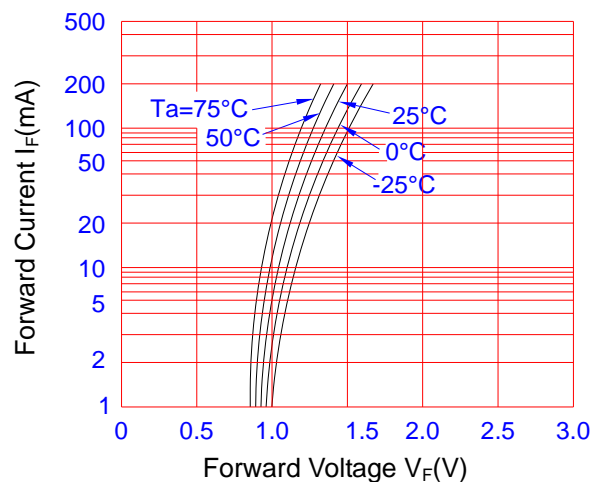


Fig.6 Forward Current vs. Forward Voltage



PRODUCT SPECIFICATION

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cosmo
ELECTRONICS CORPORATION

Photocoupler :
KMOC3053

NO.60P41008
SHEET 5 OF 6

REV.
3

Fig.7 On-State Characteristics

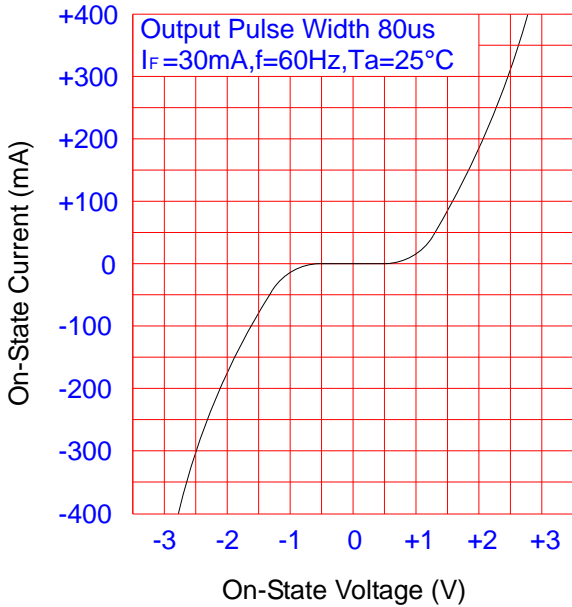


Fig.8 Leakage with LED off vs. Ambient Temperature

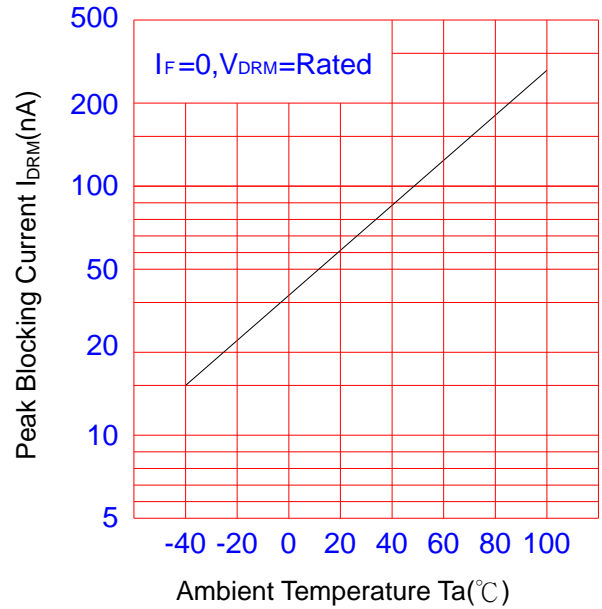
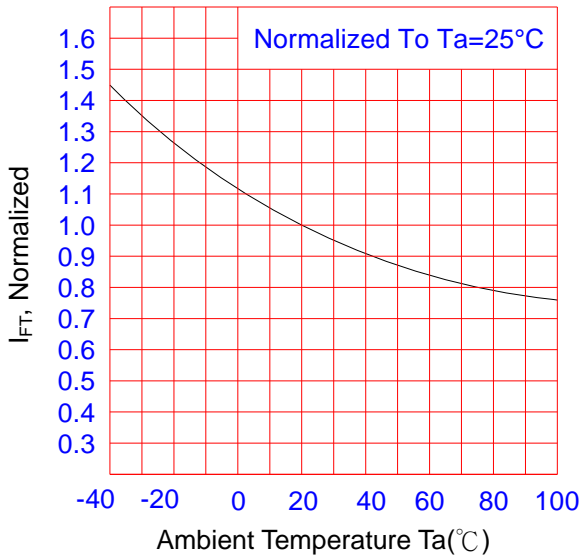


Fig.9 Trigger Current vs. Ambient Temperature



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cosmo ELECTRONICS CORPORATION	Photocoupler : KMOC3053	NO.60P41008	REV.
		SHEET 6 OF 6	3

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- Telecommunication equipment (trunk lines).
- Nuclear power control equipment.

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