PRODUCT SPECIFICATION

DATE:03/24/2004

cosmo ELECTRONICS CORPORATION	Photocoupler : KMOC3083	NO.60P42002	REV. 3
		SHEET 1 OF 6	

Zero Crossing Optoisolators TRIAC

Driver Output (800V Volts Peak)

●Features

1. Compact dual-in-line package.
2. 800V 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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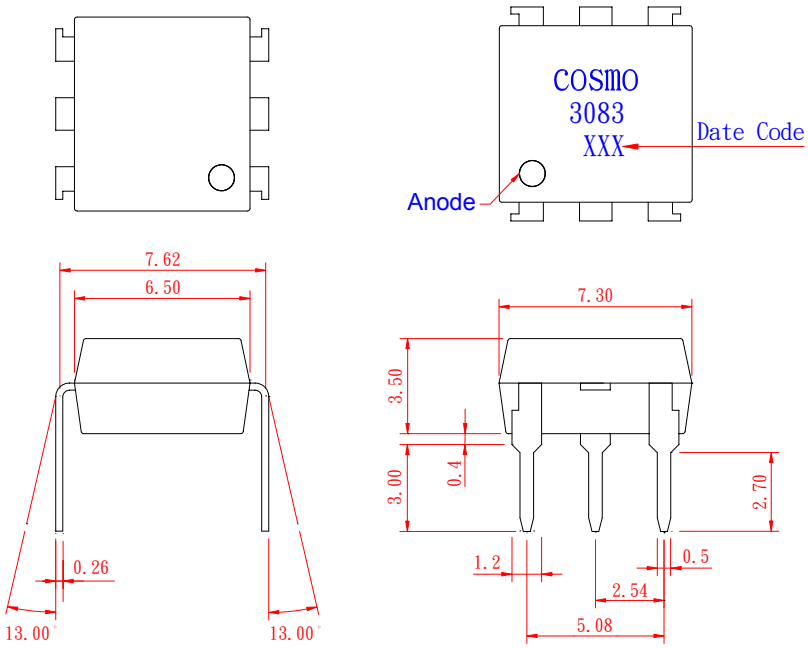
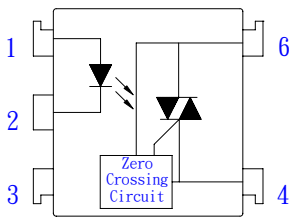
1. OUTSIDE DIMENSION : UNIT (mm)



TOLERANCE : ±0.2mm

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}	800	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		Ptot	330	mW
Isolation voltage 1 minute		Viso	5000	Vrms
Operating temperature		Topr	-40 to +80	℃
Storage temperature		Tstg	-40 to +125	℃
Soldering temperature 10 second		Tsol	260	℃

●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}=800V	-	60	500	nA
	ON-State Voltage	V_{TM}	I_{TM}=100mA	-	1.8	3	V
Tranfer characteristics	Holding Current	I_H		-	100	-	uA
	Critical rate of rise of OFF-state voltage	dV/dt	$V_{DRM}=(1/\sqrt{2})$*Rated	600	-	-	V/uS
	Inhibit Voltage(MT1-MT2 Voltage above which device not trigger)	V_{INH}	I_F= Rated I_{FT}	-	8	20	V
	Leakage in Inhibited State	I_{DRM2}	I_F=Rated I_{FT},Rated V_{DRM},Off State	-	-	500	uA
	Isolation resistance	Riso	DC500V	$5x10^{10}$	10^{11}	-	ohm
	Minimum trigger current	I_{FT}	Main Terminal Voltage=3V	-	-	5	mA

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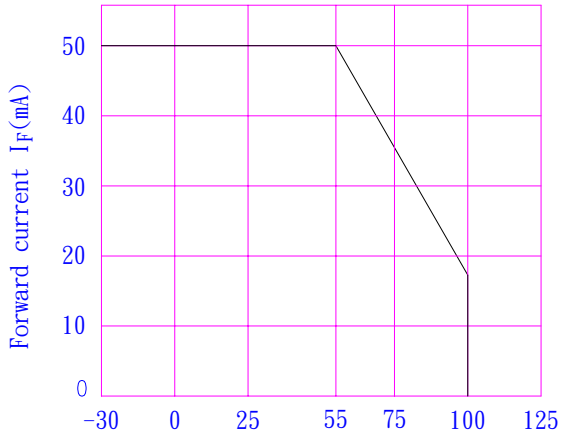
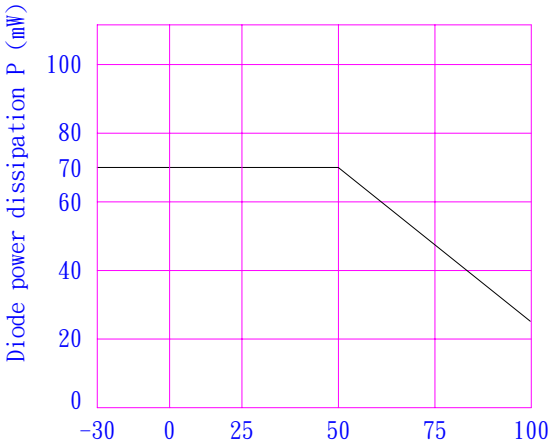
Fig.1 Forward Current vs. Ambient Temperature



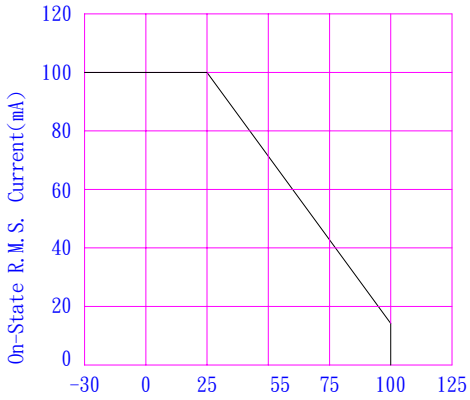
Ambient Temperature Ta(℃)

Fig.2 Diode Power Dissipation vs. Ambient Temperature



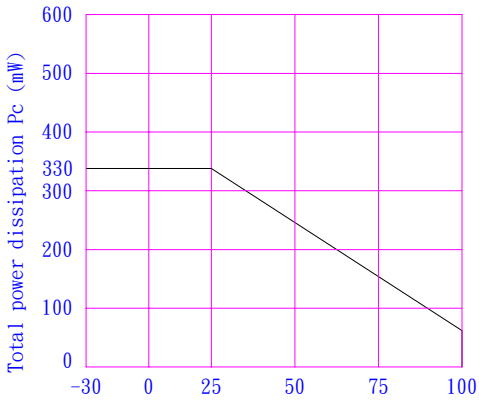
Ambient Temperature Ta(℃)

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



Ambient temperature Ta(℃)

Fig.4 Total Power Dissipation vs. Ambient Temperature



Ambient Temperature Ta(℃)

Fig.5 Peak Forward Current vs. Duty Ratio

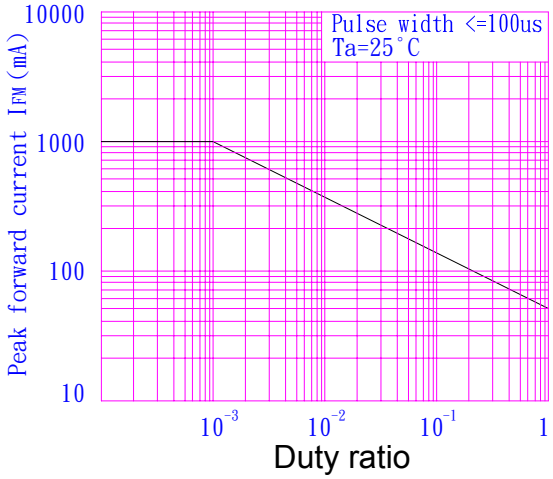


Fig.6 Forward Current vs. Forward Voltage

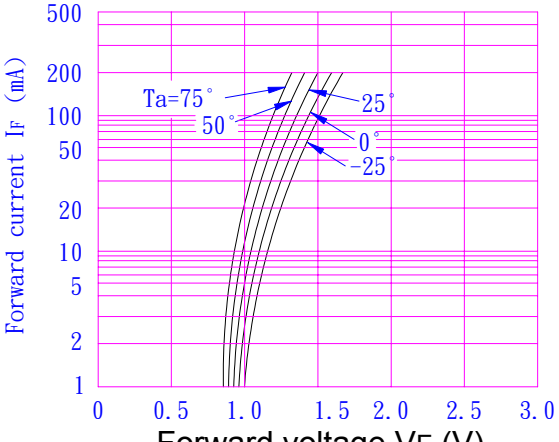


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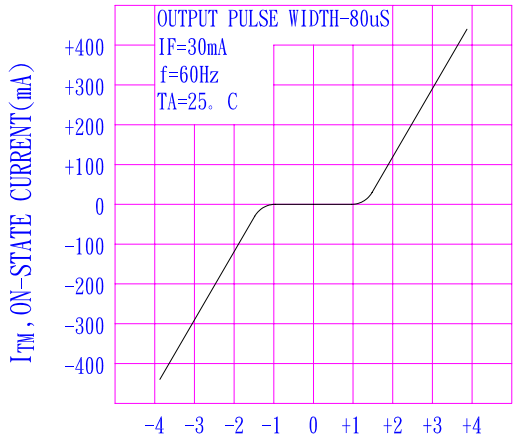
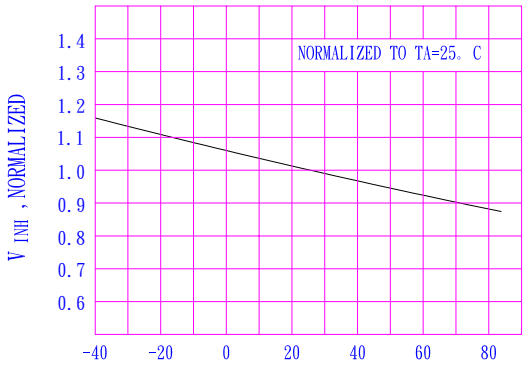
Fig.7 On-State Characteristics



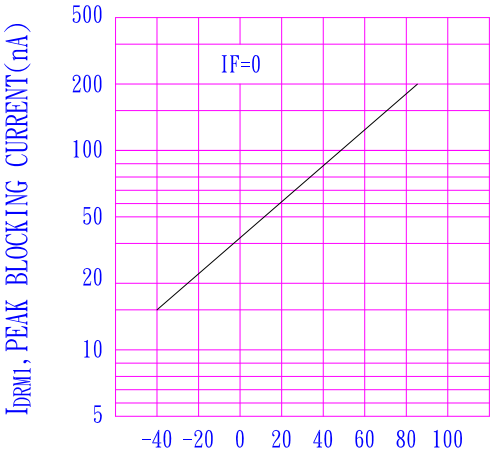
VTM ,On- State Voltage(V)

Fig.8 Inhibit Voltage vs. Temperature



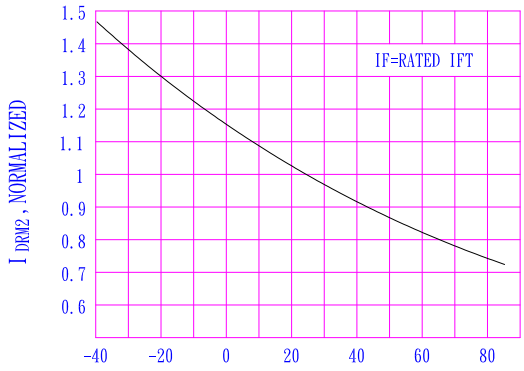
Ambient Temperature Ta(℃)

Fig.9 Leakage with LED Off vs. Temperature



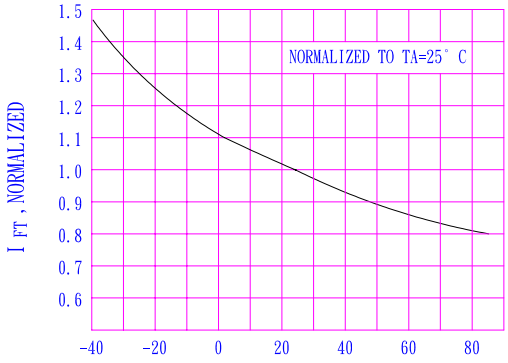
Ambient Temperature Ta(℃)

Fig.10 IDRM2 ,Leakage in Inhibit State vs. Temperature



Ambient Temperature Ta(℃)

Fig.11 Trigger Current vs. Temperature



Ambient Temperature Ta(℃)

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