cosmo

High Reliability Photocoupler KTLP260J

UL 1577 (File No.E169586) **VDE** EN60747-5-2 (File No.40009235)

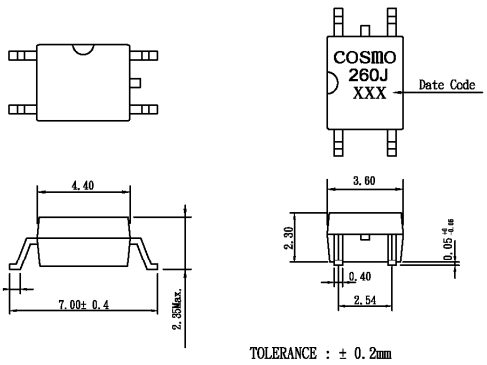
Features

1. Opaque type, mini-flat package.
2. Subminiature type
   (The volume is smaller than that of our conventional DIP type by as far as 30%)
3. Isolation voltage between input and output (Viso:3000Vrms).

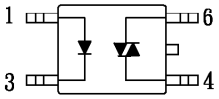
For 115/240 Vac (rms) Application:

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.

Outside Dimension:Unit (mm)



Schematic:Top View



1. Anode
3. Cathode
4. MAIN TERMINAL
6. MAIN TERMINAL

Absolute Maximum Ratings

(Ta=25°C)

	Parameter	Symbol	Rating	Unit
Input	Forward current	I_F	50	mA
	Peak forward current (100us)	I_{FM}	1	A
	Reverse voltage	V_R	6	V
	Power dissipation	P_D	70	mW
Output	Off-State Output Terminal voltage	V_{DRM}	600	Vpeak
	On-State R. M. S. Current	$I_{T(RMS}$	70	mA
	Peak Repetitive Surget Current (PW=10ms, DC 10%)	I_{TSM}	1	A
	Power dissipation	P_D	150	mW
Total power dissipation		Ptot	200	mW
Isolation voltage 1 minute		Viso	3000	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

(Ta=25°C)

	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 Leakage Current	I_R	V_R=5V	—	—	10	μA
Output	Peak Blocking Current	I_{DRM}	V_{DRM}=600V	—	—	1.0	μA
	ON-State Voltage	V_{TM}	I_{TM}=70mA	—	1.6	2.8	V
Transfer charac-teristics	Holding Current	I_H		—	1.0	—	mA
	Critical rate of rise of OFF-state voltage	dV/dt	V_{DRM}= (1/√2) *Rated	600			V/μS
	Isolation resistance	Riso	DC500V	$5x10^{10}$	10^{11}	—	ohm
	Minimum trigger current	I_{FT}	Main Terminal Voltage=3V	—	5	10	mA
	Tunr-on time	Ton	V_D=6V, R_L=100 ohm, I_F=20mA	—	—	100	μS

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Classification table of Trigger LED current is shown below.

(Ta=25°C)

Classification	Trigger LED Current (mA)	
	Min.	Max.
1 (Standard)	-	10
2	-	7
3	-	5

Fig.1 Forward Current vs. Ambient Temperature

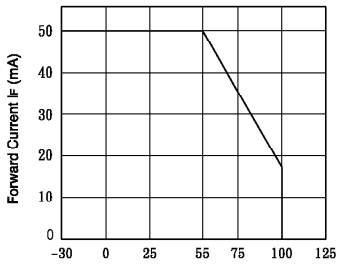


Fig.2 Diode Power Dissipation vs. Ambient Temperature

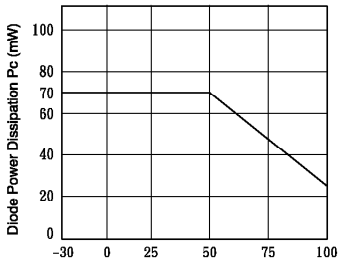


Fig.3 On-State R. M. S. Current vs. Ambient Temperature

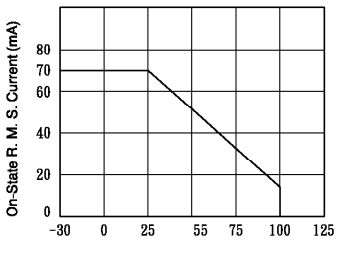


Fig.4 Total Power Dissipation vs. Ambient Temperature

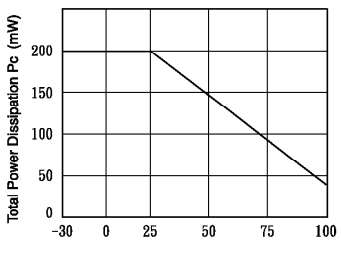


Fig.5 Peak Forward Current vs. Duty Ratio

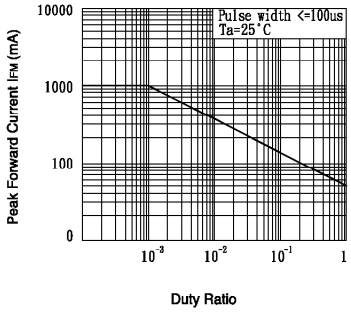


Fig.6 Forward Current vs. Forward Voltage

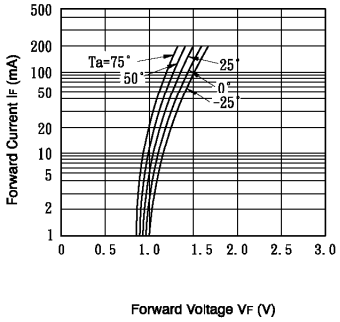


Fig.7 On-State Characteristics

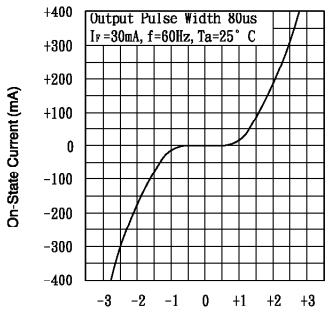


Fig.8 Leakage with LED off vs. Ambient Temperature

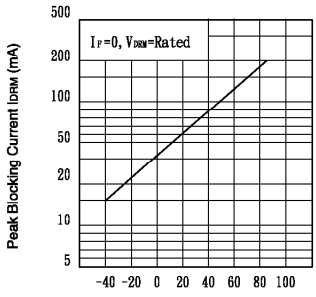
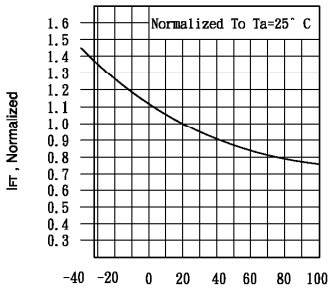


Fig.9 Trigger Current vs. Ambient Temperature



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