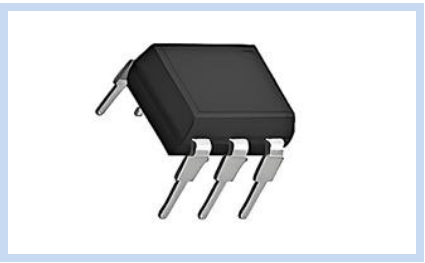
Optoisolator
TRIAC Driver 800V DIP-6

OPI137DCTK8D6

MERITEK

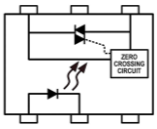
FEATURES



- Lower EMI help smart appliances and industrial equipment achieve EMC compliance
- Enhanced System Safety by isolating sensitive control circuitry from AC loads
- Zero Voltage Crossing to Minimize Conducted and Radiated Line Noise
- In Accordance with Safety Class UL1577 Standard

APPLICATIONS

- Motor Drivers and Starters for pumps, fans, compressors, industrial machinery
- Solid State Relays (SSR) for long-life, silent switching in industrial systems
- Lighting Control: LED lighting, lighting automation, smart building controls
- Solenoid, Valve, and Contactor Controls used in robotics, factory automation, HVAC



RoHS

c US

MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Input Forward Current		I_F	50	mA
Input Peak Forward Current	f=100Hz, duty=1%	I_{FP}	1000	mA
Input Reverse Voltage		V_R	5	V
Input Power Dissipation		P_I	120	mW
Output Power Dissipation		P_C	150	mW
Output Off−State Terminal Voltage		V_{DRM}	800	V
Output Peak Repetitive Surge Current	PW=100us, 120pps	I_{TSM}	1	A
Output Peak Load Current	100ms(1 pulse)	I_{Peak}	0.6	A
Isolation Voltage	RH=60%, 1min	V_{ISO}	3750	V_{RMS}
Total Power Dissipation		P_T	250	mW
Operating Temperature Range		T_{Opr}	-40~+100	°C
Storage Temperature Range		T_{Stg}	-50~+125	°C
Soldering Temperature	10 seconds Max.	T_{SOL}	260	°C

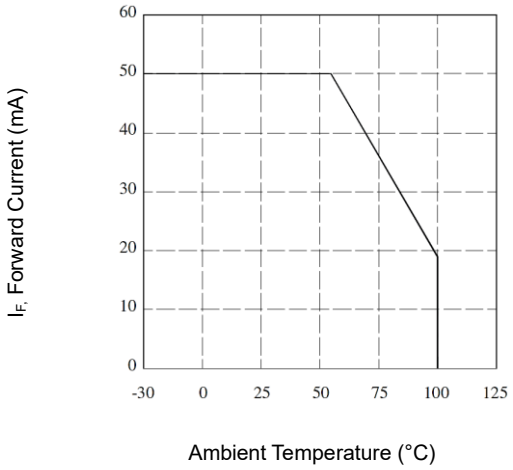
ELECTRICAL CHARACTERISTICS

Input Characteristics	Conditions	Symbol	Min	Typ.	Max	Unit
LED Forward Voltage	I_F=10mA	V_F	--	1.2	1.4	V
Reverse Current	V_R=5V	I_R	--	0.05	10	μA
Output Characteristics	**Conditions**	**Symbol**	**Min**	**Typ.**	**Max**	**Unit**
Peak Blocking Current	V_{DRM}=800V	I_{DRM}	--	--	500	nA
Peak On−State Voltage	I_{TM}=100mA Peak	V_{TM}	--	1.8	3	V
Critical Rate of Rise of Off−State Voltage	-	dv/dt	1000	2000	--	V/μs
Coupled Characteristics	**Conditions**	**Symbol**	**Min**	**Typ.**	**Max**	**Unit**
LED Trigger Current	Main Terminal Voltage=3V	I_{FT}	--	7	15	mA
Holding Current	-	I_H	--	100	--	μA
Turn-On Time	V_p=9V, I_F=20mA, R_L=100Ω	T_{on}	--	8	20	μs
Zero Crossing Characteristics	**Conditions**	**Symbol**	**Min**	**Typ.**	**Max**	**Unit**
Inhibit Voltage	I_F=Rated I_{FT}	V_{INH}	--	5	20	V
Leakage in Inhibited State	I_F=Rated I_{FT}, Rated V_{DRM}, Off State	I_{DRM2}	--	--	500	μA

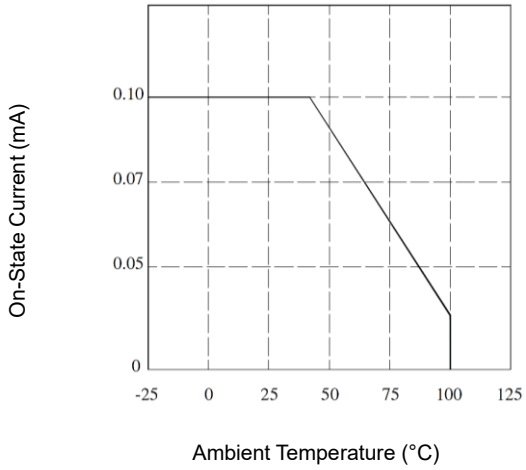
Notes: T_A=25°C unless otherwise noted.

CHARACTERISTIC CURVES

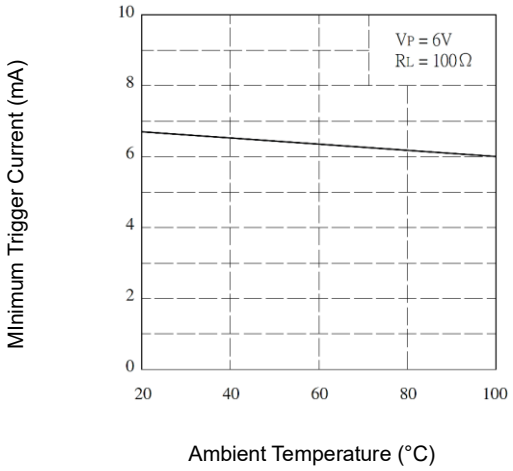
Forward Current vs. Ambient Temperature



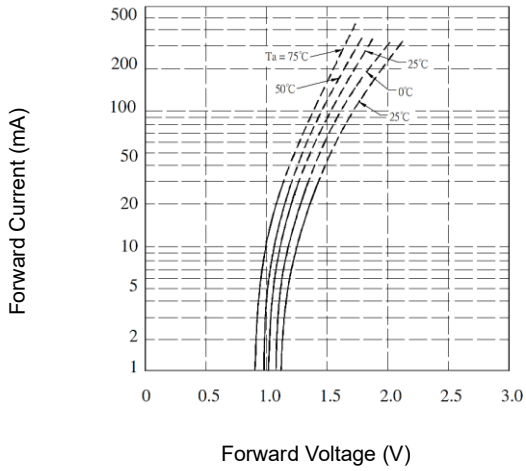
On-State Current vs. Ambient Temperature



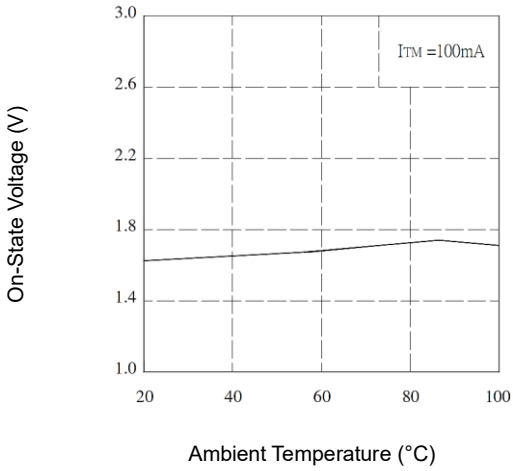
Minimum Trigger Current vs. Ambient Temperature



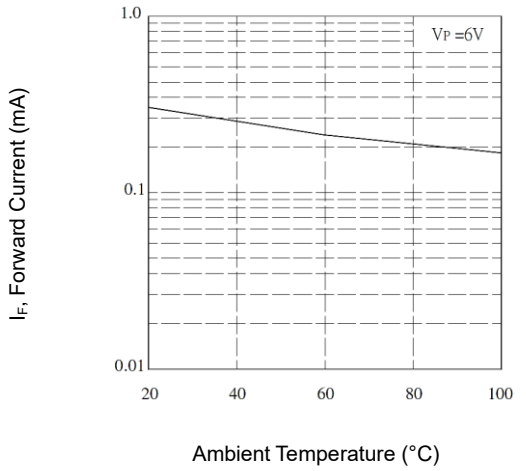
Forward Current vs. Forward Voltage



On-State Voltage vs. Ambient Temperature

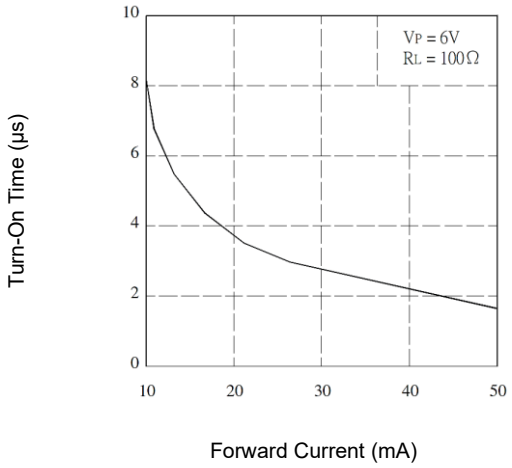


Holding Current vs. Ambient Temperature

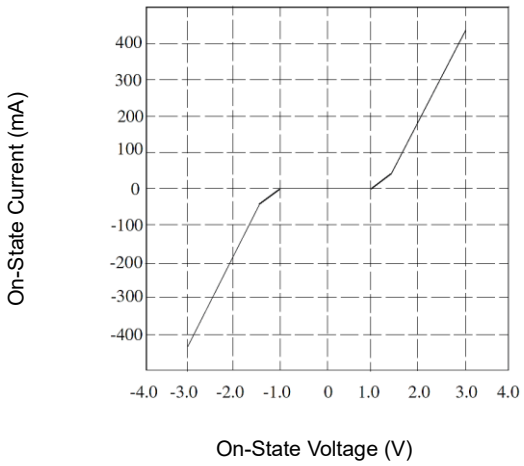


CHARACTERISTIC CURVES

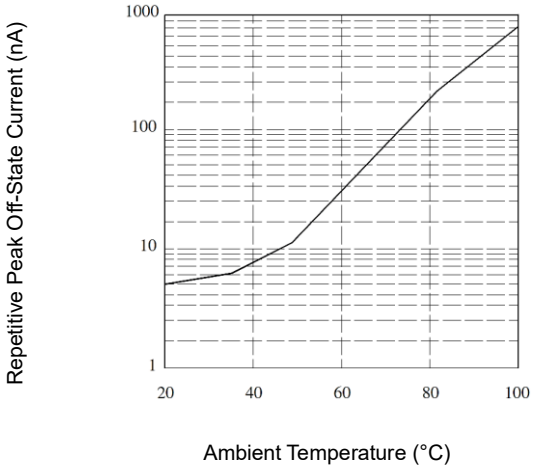
Turn-On Time vs. Forward Current



On-State Current vs. On-State Voltage

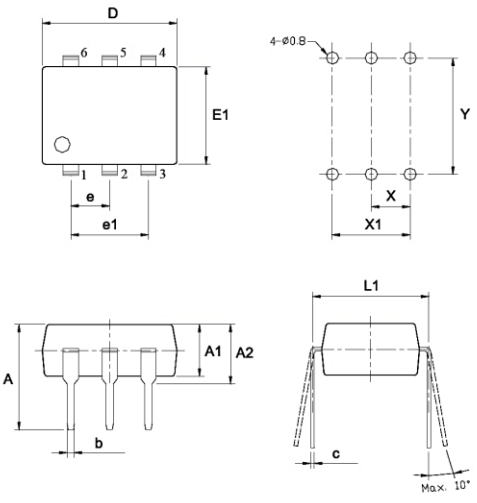


Repetitive Peak Off-State Current vs. Temperature



DIMENSIONS

Item	Min (mm)	Max (mm)
A	6.90	7.10
A1	3.40	3.60
A2	3.90	4.10
b	0.47	0.67
c	0.25	
D	8.80	9.00
E1	6.40	6.60
e	2.54	
e1	5.08	
L1	7.62	7.82
X	2.54	
X1	5.08	
Y	7.62	



Note:
1.LED Anode; 2.LED Cathode; 3.NC; 4.Main Terminal; 5.NC; 6. Main Terminal