

POWER COUPLER

MT5460G INFRARED LED+ PHOTO THYRISTOR

APPLICATIONS

- CONTROL 1A (RMS) of 120V_{AC} LINE
- MOTOR CONTROLS
- LIGHT CONTROLS
- COPIER
- TEMPERATURE CONTROLS
- SSR

FEATURES

- Trigger Led current: $I_{FT} = 10\text{mA}$ (Max.) ($R_{GK} = 15\text{k}\Omega$).
- R.M.S. on-state current: I_T (RMS) = 1A (single phase full wave, no heat sink, $T_a = 40^\circ\text{C}$).
- Repetitive peak on-state voltage: $V_{DRM} = 400\text{V}$.
- High isolation voltage: $BV_S = 2500\text{V AC/1 min}$.
- 9-lead DIP package.
- UL recognized.

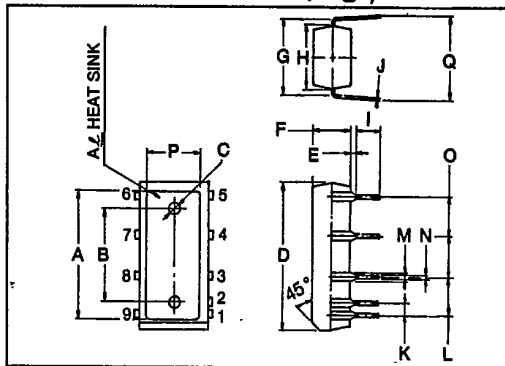
MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Forward Current	I_F	50	mA
Forward Current Derating ($T_a \geq 25^\circ\text{C}$)	$\Delta I_F / ^\circ\text{C}$	-0.55	A/ $^\circ\text{C}$
Reverse Voltage	V_R	5	V
Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage	V_{DRM} and V_{RRM}	400	V
R.M.S. On-State Current (Single Phase Full Wave $T_a = 40^\circ\text{C}$)	$I_T(\text{RMS})$	1 (No Heat Sink)	A
On-State Current Derating (Single Phase Full Wave $T_a = 40^\circ\text{C}$)	$\Delta I_T / ^\circ\text{C}$	-0.04	A/ $^\circ\text{C}$
Peak One Cycle Surge On-State Current	I_{TSM}	20	A
Operating Temperature Range	T_{opr}	-30 ~ 80	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 ~ 125	$^\circ\text{C}$
Isolation Voltage (Note)	BV_S	2500	V

Note: AC/1 min. R.H.=40~80%.

A - LED B - DETECTOR

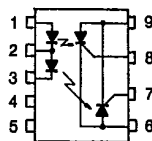
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1. ANODE
2. CATHODE, ANODE
3. CATHODE
- 4,5. N.C.
6. CATHODE, ANODE
- 7,8. GATE
9. ANODE, CATHODE

SYMBOL	INCHES	MM
A	0.992 MAX	25.2 MAX
B	0.701 ± 0.006	17.8 ± 0.15
C	0.079 - 0.110 ± 0.004	2 - 2.8 ± 0.10
D	1.161 MAX	29.5 MAX
E	0.020 MIN	0.5 MIN
F	0.236 ± 0.012	6 ± 0.3
G	0.600 ± 0.010	15.24 ± 0.25
H	0.520	13.2
I	0.098 MIN	2.5 MIN
J	0.016 ± 0.004	0.4 ± 0.10
K	0.100 ± 0.010	2.54 ± 0.25
L	0.300 ± 0.010	7.62 ± 0.25
M	0.059 ± 0.006	1.5 ± 0.15
N	0.020 ± 0.006	0.5 ± 0.15
O	0.300 ± 0.010	7.62 ± 0.25
P	0.394 MAX	10 MAX
Q	0.618 ~ 0.776	15.7 ~ 19.7

PIN CONFIGURATIONS (TOP VIEW)



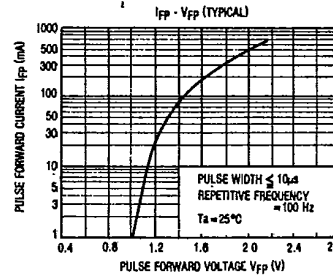
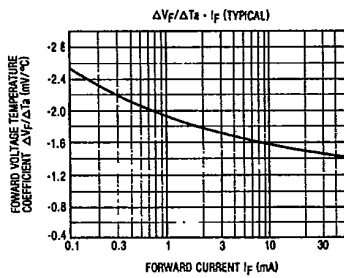
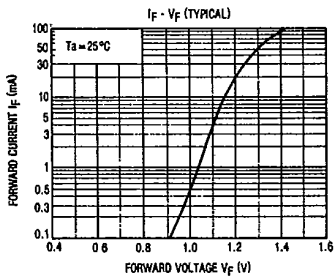
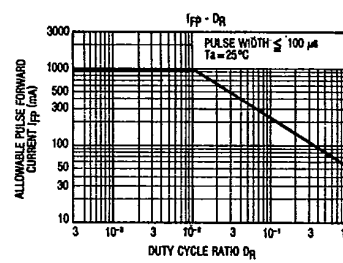
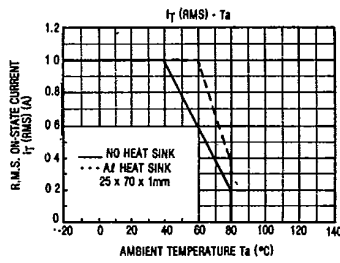
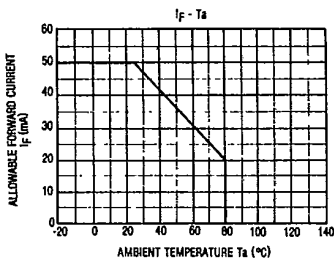
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OPTO-ELECTRICAL CHARACTERISTICS (Ta = 25°C)

	CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
A	Forward Voltage	V _F	I _F = 30mA (1 LED)	1.10	1.24	1.40	V
	Reverse Current	I _R	V _R = 5V	—	—	10	μA
B	Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage	V _{DRM} and V _{RRM}	V _{DRM} = Rated, T ₂ = 80°C R _{GK} = 15kΩ	—	—	100	μA
	Peak On-State Voltage	V _{TM}	I _{TM} = 2A, I _F = 15mA	—	—	1.6	V
	Holding Current	I _H	R _L = 100Ω, R _{GK} = 15kΩ	—	0.5	—	mA
	Critical Rate of Rise of Off-State Voltage	dv/dt	V _{DRM} = 2/3 Rated, R _{GK} = 15kΩ	5	—	—	V/μs
C	Trigger LED Current	I _{FT}	V _D = 6V, R _L = 100Ω, R _{GK} = 15kΩ	—	6	10	mA
	Isolation Resistance	R _S	R.H. = 40 ~ 60%, V = 1kV	—	10 ¹¹	—	Ω

A - LED B - DETECTOR C - COUPLED



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