CLM6000
CLM8000

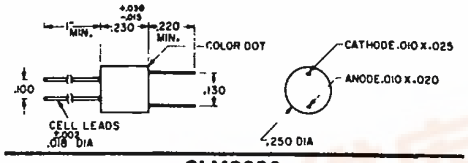
LED-Photoconductor Isolators

This PHOTOMOD® Series combines solid state lamps with Clairex® photoconductive cells in small, rugged axial-lead isolators.

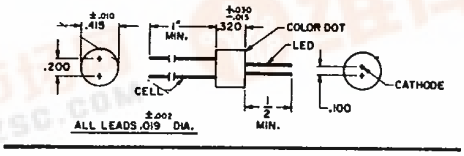
CLM6000 — Miniature, low power, low resistance, noiseless switching. Interfaces TTL to TTL providing complete isolation.

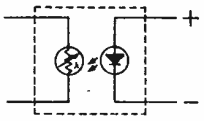
CLM8000 — High-reliability, hermetically-sealed cell and LED. Will operate on line voltage to drive SCR and Triacs from TTL output.

CLM6000



CLM8000





TECHNICAL DATA

LED	CHARACTERISTICS	TEST CONDITIONS	CLM6000 Min.	CLM6000 Typ.	CLM6000 Max.	CLM8000 Min.	CLM8000 Typ.	CLM8000 Max.	UNITS
I_F max.	Maximum forward current				40			50	mA
V_F	Forward voltage	I_F = 20 mA			2.0			2.5	volts
I_R	Reverse current	V_R = 4V			100			3	μA
PHOTOCELL V_{MAX}	Cell voltage				60			220	volts DC or PAC
P ①	Power dissipation	25°C			50			125	milliwatts
PHOTOMOD R_{ON} ②	On resistance	I_F=20 mA			500				ohms
		I_F = 40 mA						400	ohms
R_{OFF}	Off resistance	10 sec. after $I_F \rightarrow 0$ 4 VDC on cell	500K			500K			ohms
t_R ③	Rise time	Time to 63% of final condition at I_F = 40		3.5			3.5		milliseconds
t_D ④	Decay time	Time to 100K			500			500	milliseconds
V_{BD}	Isolation		2000			2500			volts DC or PAC
dRc/dt	Cell temperature coefficient	$I_F \geq 5$ mA			1			1	%/°C

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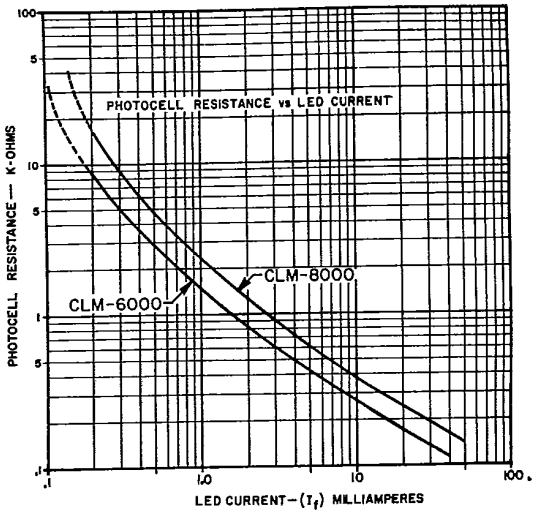
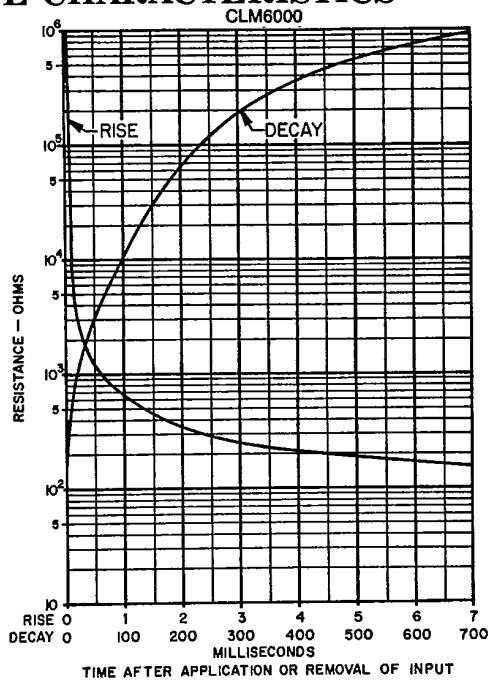
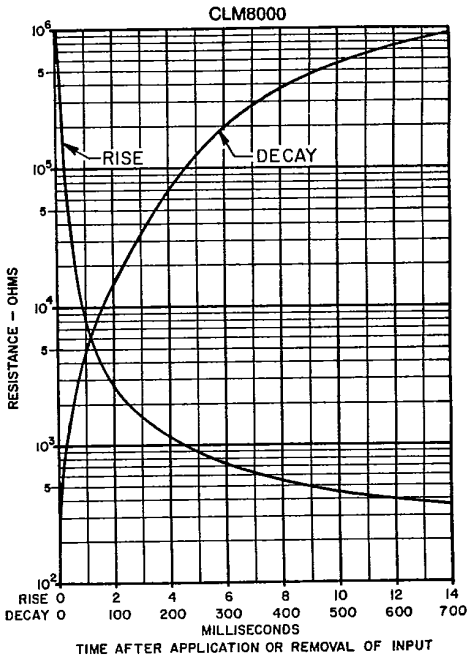
Absolute Maximum Ratings:

Temperature Storage — 10°C to 75°C Operating — Derate power to 0 at 75°C (SEE OTHER SIDE)

PC-LED PHOTOMOD SLOPE CHARACTERISTICS







RESPONSE TIME

The t_{RISE} and t_{DECAY} curve is the response time of the module when the lamp current is instantaneously varied from either zero to rated lamp current (t_{RISE}) or rated lamp current to zero (t_{DECAY}).

These curves are representative characteristics. For specific specifications, please contact the factory.

Notes:

(1) P.D. at 25°C case temperature. Derate linearly to 0 at 75°C.

Allowable PHOTOMOD dissipation is determined by the photocell temperature which must not exceed 75°C for continuous operation.

(2) After 24 hours on.

(3) Rise time measured after 24 hours on + 5 seconds off.

(4) Decay time measured from 24 hours on.