T-41-81

CLM8500
CLM8500/2

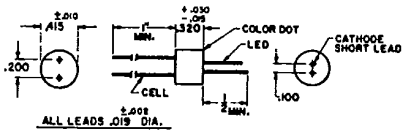
LED-Photoconductor Isolators

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

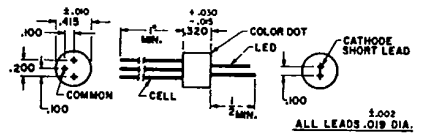
The CLM 8500 combines a CdS hermetically sealed cell with an LED for high reliability. The line voltage capability and fast response time of the photocell are ideally suited for Triac Switching circuitry.

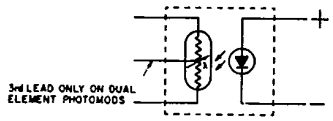
The CLM8500/2 combines a dual element CdS hermetically sealed photocell with an LED for high reliability. The dual output, balanced over a wide range of input currents, is ideally suited for applications requiring 2 channel control.

CLM8500



CLM8500/2





TECHNICAL DATA

LED	CHARACTERISTICS	TEST CONDITIONS	CLM8500 Min.	CLM8500 Typ.	CLM8500 Max.	CLM8500/2 Min.	CLM8500/2 Typ.	CLM8500/2 Max.	UNITS
I_F max.	Maximum forward current				40			40	mA
V_F	Forward voltage	I_F = 15 mA			2.8			2.8	volts
I_R	Reverse current	V_R = 4 V			3			3	µA
PHOTOCELL V_{MAX}	Cell voltage				220			100	volts DC or PAC
P (1)	Power dissipation	25°C			125			125	milliwatts
PHOTOMOD R_{ON} (2)	On resistance	I_F = 16 mA			2K			(5)(6) 1K	ohms
R_{OFF}	Off resistance	10 sec. after $I_F \rightarrow 0$ 4 VDC on cell	10 Meg			1 Meg			ohms
t_R (3)	Rise time	Time to 63% of final condition at I_F = 16		3.5			5		milliseconds
t_D (4)	Decay time	Time to RC 0 1 Meg.		20			150		milliseconds
V_{BD}	Isolation		2000			2000			volts DC or PAC
dRc/dt	Cell temperature coefficient	$I_F \geq 5$ mA			0 7			0 7	%/°C

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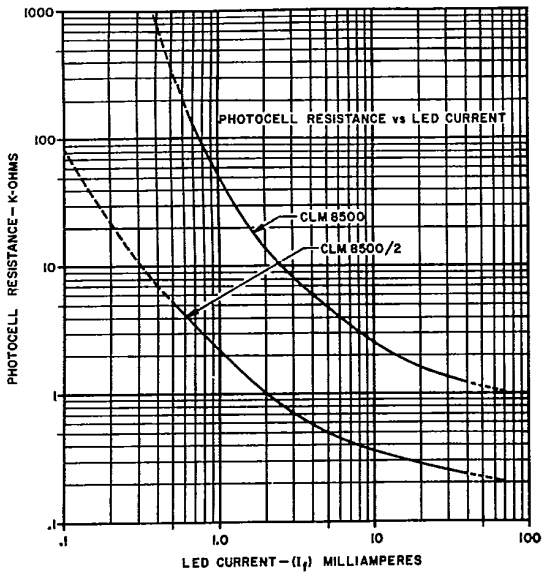
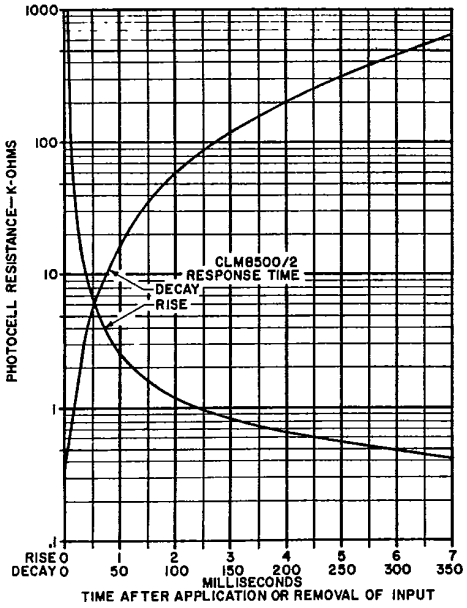
Absolute Maximum Ratings:

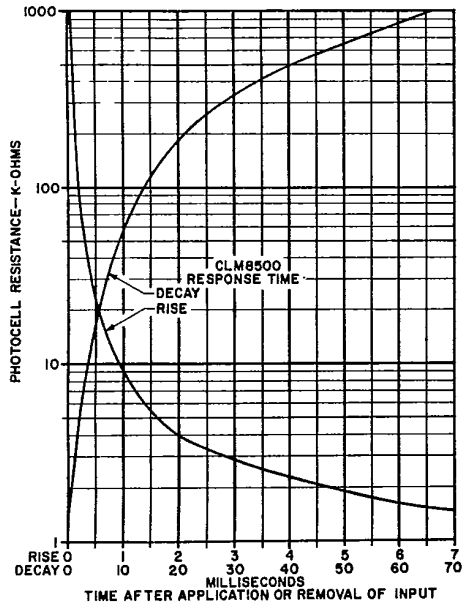
Temperature Storage — 10°C to 75°C

Operating — Derate power to 0 at 75°C

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.

(5) Each element.

(6) Inter-element balance ±25% from I_F = 1 - 40mA