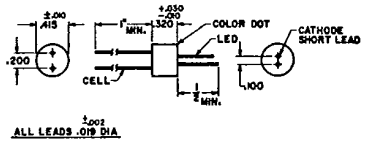
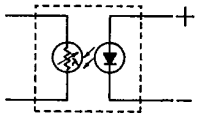
T-41-81

CLM8500HV CLM8600 LED-Photoconductor Isolators

CLM8500HV and CLM8600





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

The CLM8500HV utilizes a hermetic photocell output for stringent industrial applications. The isolator is ideal for triac control, and TTL interfacing. The 400V PAC cell rating provides line voltage protection.

The CLM8600 utilizes a plastic photocell output with a 500V PAC rating and 3.0KV PAC unit isolation rating. It is ideal for line voltage isolation, speed controls, triac control and interfacing for low level logic functions.

TECHNICAL DATA

LED	CHARACTERISTICS	TEST CONDITIONS	CLM8500HV Min.	CLM8500HV Typ.	CLM8500HV Max.	CLM8600 Min.	CLM8600 Typ.	CLM8600 Max.	UNITS
I_F max.	Maximum forward current				40			40	mA
V_F	Forward voltage	I_F = 16 mA			2.5			2.5	volts
I_R	Reverse current	V_R = 4 V			3			3	μA
PHOTOCELL V_{MAX}	Cell voltage				400			500	volts DC or PAC
P ①	Power dissipation	25°C			125			100	milliwatts
PHOTOMOD R_{ON} ②	On resistance	I_F = 16 mA			5K			2K	ohms
R_{OFF}	Off resistance	10 sec. after $I_F \rightarrow 0$ 400 VDC 10 VDC	10 Meg			10 Meg			ohms ohms
t_R ③	Rise time	Time to 63% of final condition at I_F = 16 mA		3.5			3.5		milliseconds
t_D ④	Decay time	Time to 100K		40			40		milliseconds
V_{BO}	Isolation		2000			3000			volts DC or PAC
dRc/dt	Cell temperature coefficient	$I_F \geq 5$ mA			.7			.7	%/°C

Absolute Maximum Ratings:

Temperature Storage — 40° to 75°C

Operating — Derate power to 0 at 75°C

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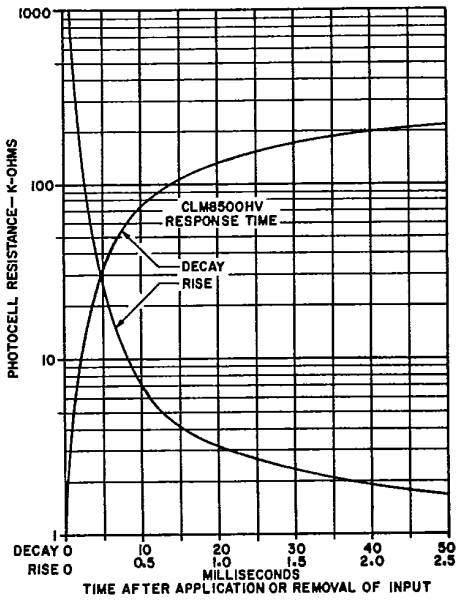
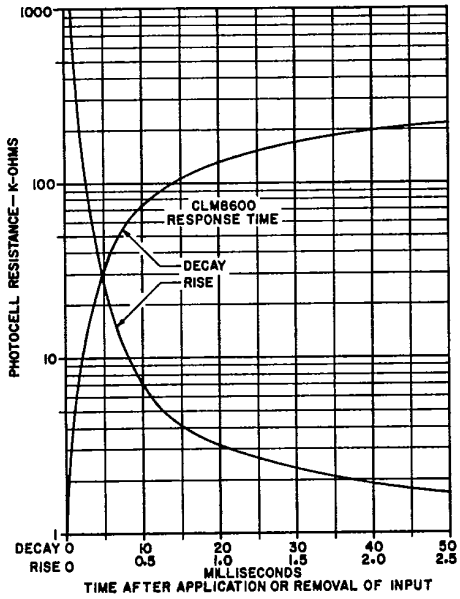
PC-LED PHOTOMOD SLOPE CHARACTERISTICS

CLM8500HV



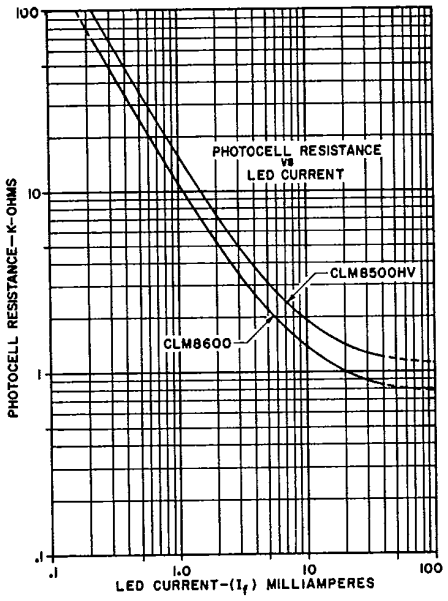
CLM8600



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.