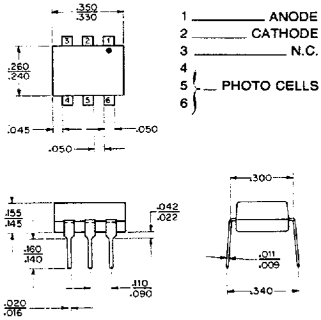
LED — DUAL
Photoconductor Dip Isolators

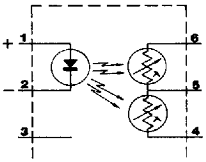
CLM50/2
CLM51/2

The CLM50/2 and CLM51/2 incorporate a GaP LED coupled with a dual photoconductive cell to provide a dual output opto-isolator. Both devices provide line voltage output capability of 250 PAC on each cell, isolation voltage of 2500V PAC and minimum OFF Resistances of 1 Megohm. Cell resistances are specified at 1 ma and 16 ma drive currents. These devices are particularly suitable for critical automatic gain controls in audio circuits. Both devices are recognized under the Component Program of Underwriters' Laboratories.

CLM50/2 - CLM51/2

1 ____ ANODE
2 ____ CATHODE
3 ____ N.C.
4 }
5 } ____ PHOTO CELLS
6 }





TECHNICAL DATA

Led	Characteristics	Test Conditions	CLM50/2 Min.	CLM50/2 Typ.	CLM50/2 Max.	CLM51/2 Min.	CLM51/2 Type.	CLM51/2 Max.	Units
$I_{F\,MAX}$	Maximum forward current				40			40	mA
V_F	Forward voltage	$I_F = 16$ mA		2.0	2.5		2.0	2.5	volts
I_R	Reverse current	$V_R = 3V$			10			10	μA
PHOTOCELL V_{MAX}	Cell voltage		250			250			volts DC or PAC
P ①	Power dissipation	25°C			50			50	milliwatts
M	Cell matching	$I_F = 1$ mA		1.5:1			1.5:1		
C	Cell capacitance	OV, 1MHZ		0.2			0.2		pf
PHOTOMOD ② R_{ON}	On resistance	$I_F = 1$ mA $I_F = 16$ mA		5K	 2.5K		 1.25K	4.5K	ohms
R_{OFF}	Off resistance	5 sec. after $I_F \rightarrow 0$ 4 VDC on cell	1 Meg.			1 Meg.			ohms
t_R ③	Rise time	Time to 63% of final condition at $I_F = 16$ mA		500			500		μsec
t_D ④	Decay time	Time to 100K		60			60		milliseconds
V_{BD}	Isolation		2500			2500			volts DC or PAC
C_{IO}	Input-Output capacitance	OV, 1MHZ		1.5			1.5		pf
dRc/dt	Cell temperature coefficient	> $I_F = 1$ mA		1			1		%/°C

Absolute Maximum Ratings:

Temperature Storage — 40°C to 75°C

Operating — Derate power to 0 at 75°C

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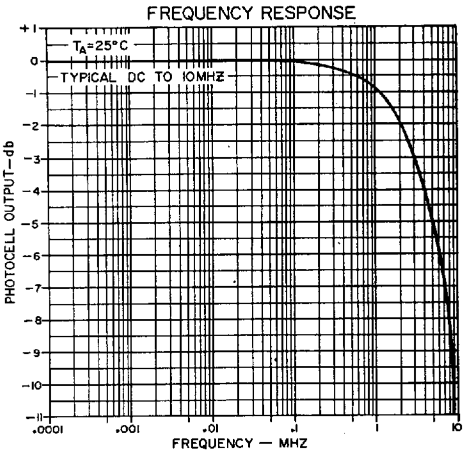

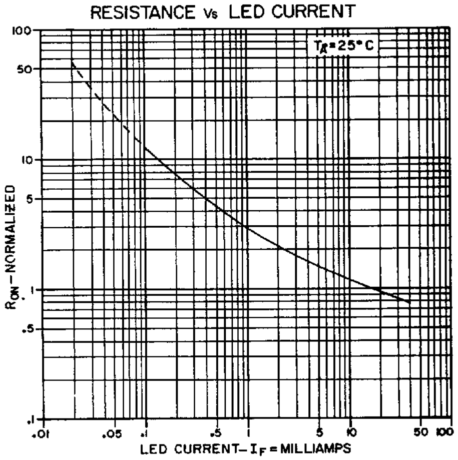

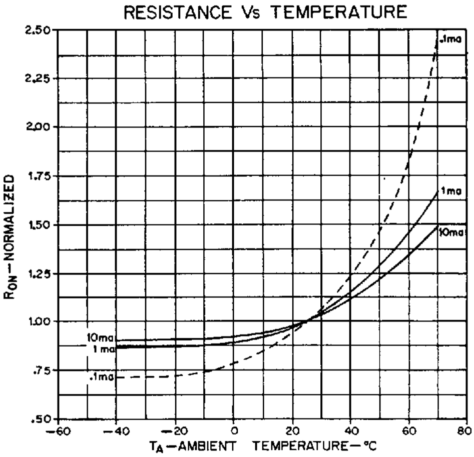

RESPONSE TIME

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.