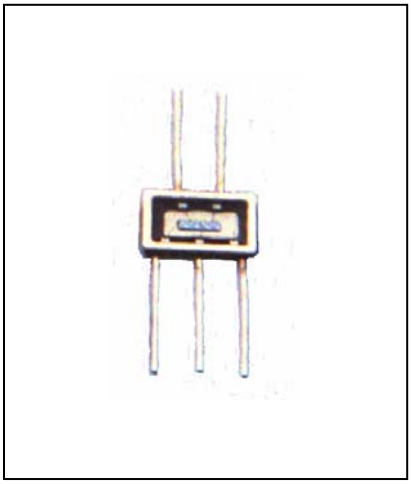
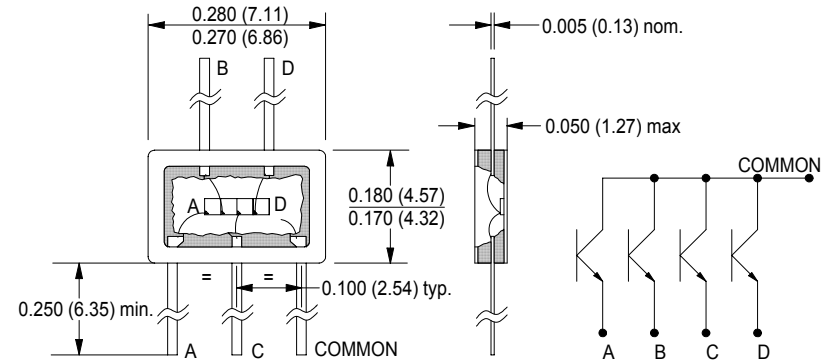
CLA101

Four Channel Phototransistor Array

Clairex® Technologies, Inc.

September, 2001





ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)

features

- Full range of sensor chips
- Full range of emitter chips
- Other package types available

description

The CLA101 four channel photo-transistor array can be designed with photodiode or photo-IC chips. Emitter versions are available using same or different wavelength chips. Also ceramic or PC board packages suitable for surface-mount are available. For additional information, call Clairex.

absolute maximum ratings (T_A = 25°C unless otherwise stated)

storage temperature..... -40°C to +100°C
operating temperature..... -40°C to +100°C
lead soldering temperature[1]..... 240°C
maximum continuous current[2]..... 50mA
peak forward current (10µs pulse width, 100pps)..... 1A
maximum power dissipation[3]..... 75mW
reverse voltage..... 5V

notes:

1. At the base of the header for 5 seconds maximum. Maximum temperature can be 260°C if reflow soldering.
2. Derate linearly 0.66mA/°C from 25°C free air temperature to T_A = +100°C.
3. Derate linearly 1.0mW/°C from 25°C free air temperature to T_A = +100°C.

electrical characteristics (T_A = 25°C unless otherwise noted)

symbol	parameter	min	typ	max	units	test conditions
I_L	Light current[1]	150	-	-	µA	E_e=1mW/cm^2, V_{CE}=5V
	Matching factor	-	-	0.4	-	$(I_{LHIGH}-I_{LLOW})/I_{LHIGH}$
I_D	Dark current	-	-	100	nA	V_{CE} = 10V, H=0
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	40	-	-	V	I_{CE} = 0.1mA
$V_{(BR)ECO}$	Emitter-collector breakdown voltage	5.0	-	-	V	I_{EC} = 0.1mA
$V_{CE(SAT)}$	Collector-emitter saturation voltage	-	-	0.4	V	E_e=20mW/cm^2, I_{CE}=.5mA
t_r, t_f	Rise and fall times	-	3.0	-	µs	R_L=100Ω, V_{CE}= 5V

Note: 1. Radiation source for light current testing is a 940nm IRED.

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