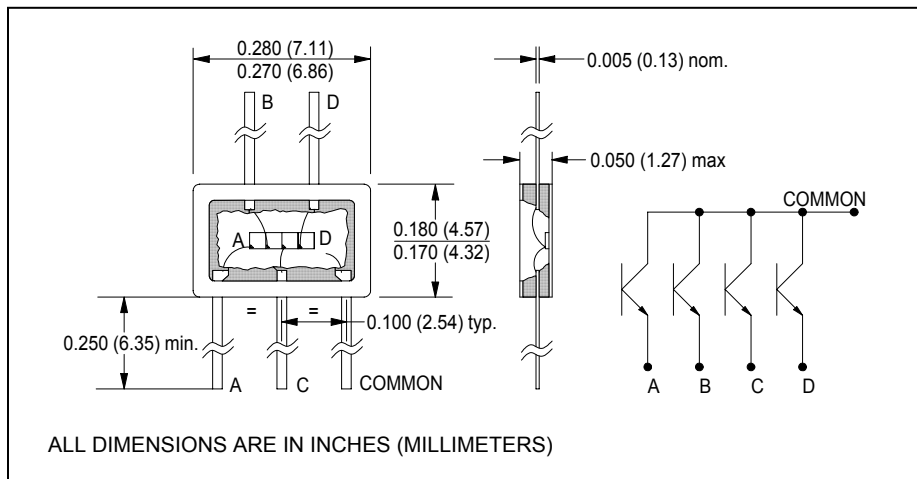
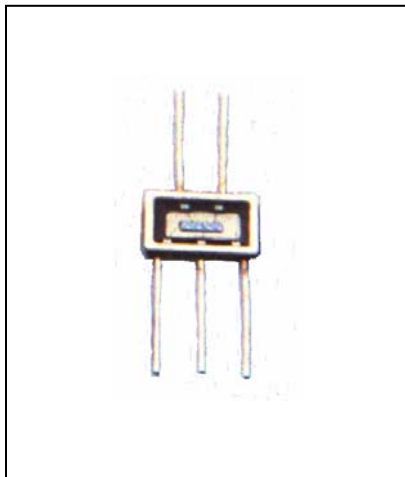


# CLA101

## Four Channel Phototransistor Array



September, 2001



### features

- Full range of sensor chips
- Full range of emitter chips
- Miniature surface mountable package

### description

The CLA101 four channel phototransistor array can be custom designed with photodiode or photo-IC chips. An emitter version is also available using same wavelength or different wavelength die. For additional information, call Clairex.

### absolute maximum ratings ( $T_A = 25^\circ\text{C}$ unless otherwise stated)

storage temperature	-40°C to +100°C
operating temperature	-40°C to +100°C
lead soldering temperature <sup>(1)</sup>	260°C
maximum continuous current <sup>(2)</sup>	50mA
peak forward current (1.0ms pulse width, 10% duty cycle)	1A
reverse voltage	5V
continuous power dissipation <sup>(3)</sup>	75mW

### notes:

1. At the base of the header for 5 seconds maximum.
2. Derate linearly 0.53mA/°C from 25°C free air temperature to  $T_A = +100^\circ\text{C}$ .
3. Derate linearly 0.80mW/°C from 25°C free air temperature to  $T_A = +100^\circ\text{C}$ .

### electrical characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

symbol	parameter	min	typ	max	units	test conditions
$I_L$	Light current <sup>(4)</sup>	150	-	-	$\mu\text{A}$	$E_e=1\text{mW}/\text{cm}^2$ , $V_{CE}=5\text{V}$
	Matching factor	-	-	0.4	-	$(I_{L\text{HIGH}}-I_{L\text{LOW}})/I_{L\text{HIGH}}$
$I_D$	Dark current	-	-	100	nA	$V_{CE} = 10\text{V}$ , $H=0$
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	40	-	-	V	$I_{CE} = 0.1\text{mA}$
$V_{(BR)ECO}$	Emitter-collector breakdown voltage	5.0	-	-	V	$I_{EC} = 0.1\text{mA}$
$V_{CE(SAT)}$	Collector-emitter saturation voltage	-	-	0.4	V	$E_e=20\text{mW}/\text{cm}^2$ , $I_{CE}=0.5\text{mA}$
$t_r, t_f$	Rise and fall times	-	3.0	-	$\mu\text{s}$	$R_L=100\Omega$ , $V_{CE}=5\text{V}$

Note: 4. Radiation source for light current testing is tungsten at 2854°K.

Clairex reserves the right to make changes at any time to improve design and to provide the best possible product.

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