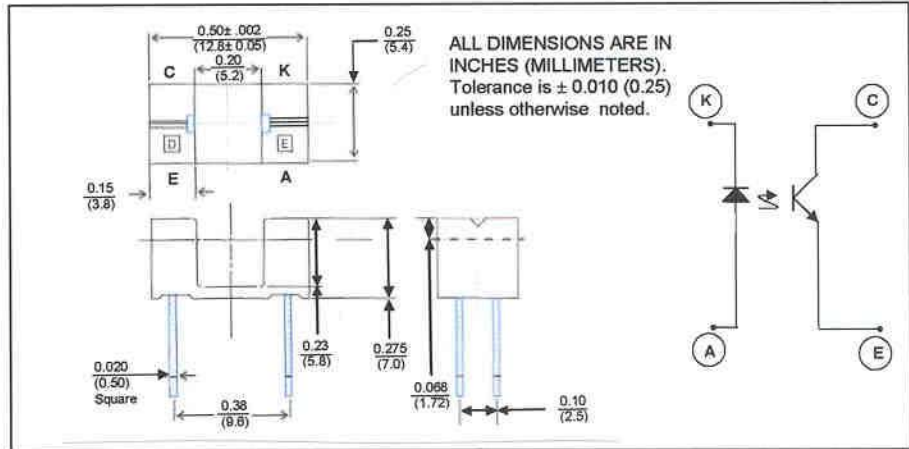
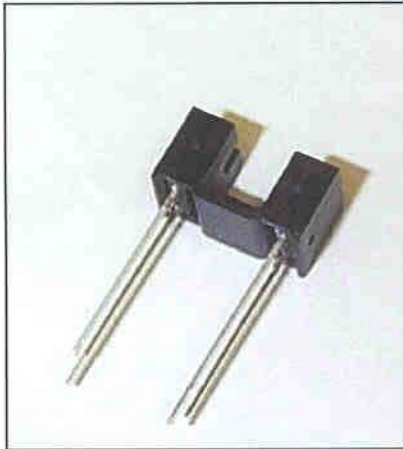


CLI400

IRED - Phototransistor Photointerrupter



October, 2002



features

- compact, low profile housing
- ideal for PC board mounting
- emitter and sensor apertures
- fast switching speed

description

The CLI400 consists of an IRED and a phototransistor mounted in a black plastic housing on opposite sides of a 0.20" (5.2mm) wide slot. There are 0.055" (1.4mm) wide apertures in front of the sensor and emitter. This device's small size makes it ideal for PC board mounting in confined spaces. For assistance, call Clairex.

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

storage temperature.....	-40°C to +100°C
operating temperature.....	-25°C to +85°C
lead soldering temperature.....	260°C for 3 seconds
total power dissipation.....	100mW

LED

continuous forward DC current.....	50mA
reverse DC voltage.....	5V
power dissipation ⁽¹⁾	75mW

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collector-emitter breakdown voltage.....	30V
collector power dissipation ⁽²⁾	75mW

notes:

1. Derate linearly 1.25mW/°C from 25°C free air temperature to $T_A = +85^\circ\text{C}$.
2. Derate linearly 1.25mW/°C from 25°C free air temperature to $T_A = +85^\circ\text{C}$.

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

symbol	parameter	min	typ	max	units	test conditions
Input IRED						
V_F	Forward voltage	-	1.2	1.4	V	$I_F = 20\text{mA}$
I_R	Reverse current	-	-	10	μA	$V_R = 3\text{V}$
Output Phototransistor						
I_D	Collector-emitter dark current	-	-	100	nA	$V_{CE} = 10\text{V}, E_b = 0$
Coupled						
$V_{CE(SAT)}$	Collector-emitter saturation voltage	-	-	0.4	V	$I_C = 0.1\text{mA}, I_F = 20\text{mA}$
$I_{C(ON)}$	Collector current	0.5	-	-	mA	$I_F = 20\text{mA}, V_{CE} = 5\text{V}$
t_r, t_f	Output rise and fall time	-	20	-	μsec	$I_C = 0.1\text{mA}, V_{CE} = 5\text{V}, R_L = 1\text{K}\Omega$

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

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