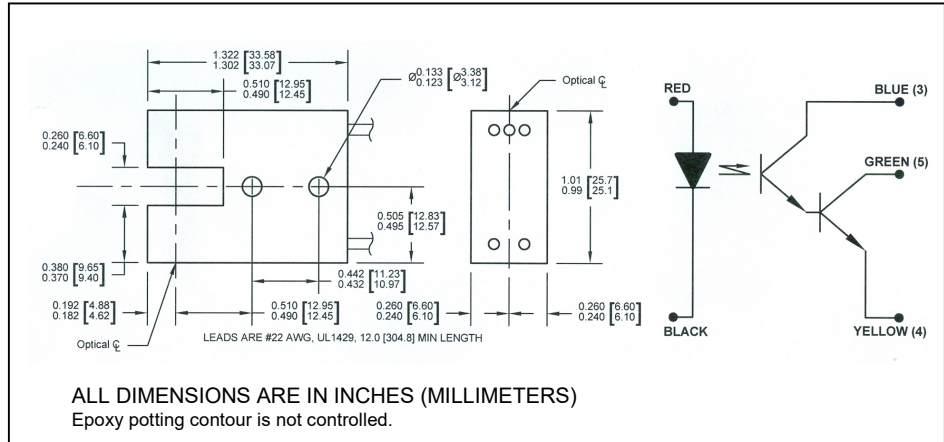


CLI305

IRED - Phototransistor

Photointerrupter



features

- rugged VALOX[®] package
- hermetic style discretes
- narrow beam alignment

description

The CLI305 consists of an IRED and a phototransistor mounted in a black plastic housing. It features 12 inch leads and two holes for bracket mounting in any position. Output is an emitter follower transistor providing high gain, fast switching speed and TTL interfacing. There is a 0.005" wide aperture in front of the phototransistor. For assistance, contact Clairex.

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

storage and operating temperature.....	-55°C to +100°C
LED	
continuous forward DC current.....	60 mA
reverse DC voltage.....	3 V
continuous power dissipation ⁽¹⁾	100 mW
OUTPUT TRANSISTOR	
collector-emitter voltage.....	30 V
continuous collector current ⁽²⁾	100 mA
continuous power dissipation ⁽³⁾	200 mW

notes:

1. Derate linearly 1.07 mW/°C from 25°C free air temperature to $T_A = +100^\circ\text{C}$.
2. 200 mA when pulsed at 1.0 ms, 10% duty cycle.
3. Derate linearly 2.13 mW/°C from 25°C free air temperature to $T_A = +100^\circ\text{C}$.
4. 2.2 kΩ resistor between leads 3 and 5.

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	-	-	1.5	V	$I_F = 16 \text{ mA}$
I_R	Reverse current	-	-	10	μA	$V_R = 3 \text{ V}$
Coupled						
V_O	Voltage between leads 4 and 5 ⁽⁴⁾	-	-	0.50	V	$I_F = 20 \text{ mA}, V_{CE} = 5 \text{ V}$
V_{OFF}	Voltage between leads 4 and 5 ⁽⁴⁾	4.7	-	-	V	$I_F = 0, V_{CE} = 5 \text{ V}, E_e = 0$
t_r	Output rise time ⁽⁴⁾	-	5	-	μsec	$I_C = 2.0 \text{ mA}, V_{CE} = 10 \text{ V}$
t_f	Output fall time ⁽⁴⁾	-	50	-	μsec	$I_C = 2.0 \text{ mA}, V_{CE} = 10 \text{ V}$

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