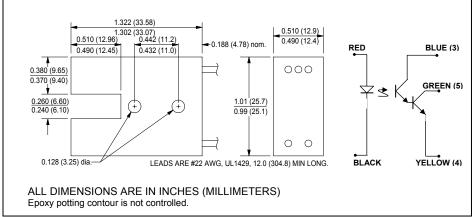
CLI305

IRED - Phototransistor Photointerrupter



September, 2001





features

- · rugged plastic package
- · hermetically sealed 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, call Clairex.

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

storage and operating temperature	
LED	
continuous forward DC current	60mA
reverse DC voltage	3V
reverse DC voltagepower dissipation ⁽¹⁾	100mW
OUTPUTTRANSISTOR	
collector-emitter voltage	30V
collector-emitter voltage	100mA
power dissipation ⁽³⁾	200mW

notes:

- 1. Derate linearly 1.33mW/°C from 25°C free air temperature to $T_A = +100$ °C.
- 2. 200mA when pulsed at 300μs, 2% duty cycle.
- 3. Derate linearly 2.66mW/°C from 25°C free air temperature to $T_A = +100$ °C.
- 4. $2.2k\Omega$ resistor between leads 3 and 5.

symbol	parameter	min	typ	max	units	test conditions
Input IRI	• • • • • • • • • • • • • • • • • • • •		- 76	111002		
V _F	Forward voltage	-	-	1.5	V	I _F = 16mA
I _R	Reverse current	-	-	10	μΑ	V _R = 3V
Output T	ransistor (leads 4 and 5)			•		
I _D	Collector-emitter dark current	-	-	100	nA	V _{CE} =10V, E _e =0
Coupled						
ΙL	Sensor current (lead 4)	20	-	-	mA	I _F =10mA, V _{CE} =5V
Vo	Voltage between leads 4 and 5 ⁽⁴⁾	-	-	0.50	V	I _F =20mA, V _{CE} =5V
V _{OFF}	Voltage between leads 4 and 5 ⁽⁴⁾	4.7	-	-	V	E _e =0
t _r	Output rise time ⁽⁴⁾	-	5	-	μsec	I _C =2.0mA, V _{CE} =10V
t _f	Output fall time ⁽⁴⁾	-	50	-	usec	I _C =2.0mA, V _{CE} =10V

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

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