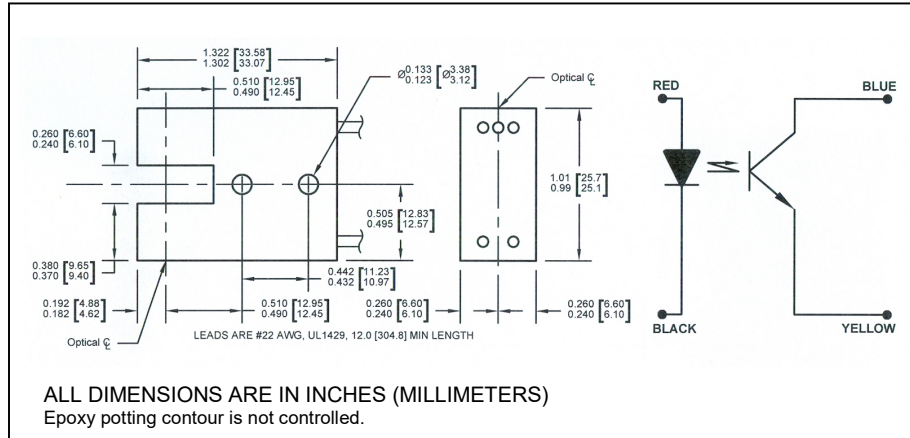
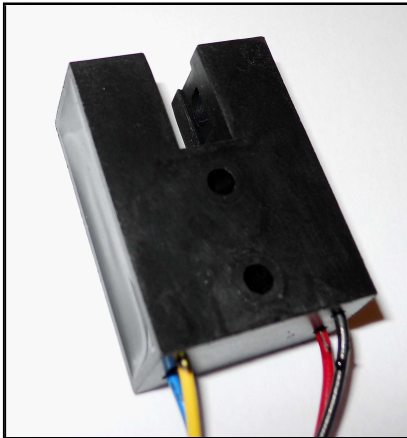


# CLI375

## IRED - Phototransistor Photointerrupter

18-3750B



### features

- rugged VALOX<sup>®</sup> housing
- narrow beam alignment
- fast switching speed

### description

The CLI375 consists of an IRED and a phototransistor secured in place with black epoxy backfill. This ensures maximum environmental protection and precise alignment when exposed to extreme conditions. Featured are 12 inch leads and two holes for bracket mounting in any position. Contact Clairex for assistance.

### absolute maximum ratings (T<sub>A</sub> = 25°C unless otherwise stated)

storage and operating temperature.....	-55°C to +100°C
<b>LED</b>	
continuous forward DC current.....	60 mA
reverse DC voltage.....	3 V
power dissipation <sup>(1)</sup> .....	100 mW
<b>PHOTOTRANSISTOR</b>	
collector-emitter voltage.....	30 V
maximum continuous collector current <sup>(2)</sup> .....	100 mA
power dissipation <sup>(3)</sup> .....	200 mW

### notes:

1. Derate linearly 1.20 mW/°C from 25°C free air temperature to T<sub>A</sub> = +100°C.
2. 200 mA when pulsed at 300 μs, 2% duty cycle.
3. Derate linearly 2.40 mW/°C from 25°C free air temperature to T<sub>A</sub> = +100°C.
4. I<sub>F</sub> = 0 indicates light path is blocked by an opaque object.

### electrical characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

symbol	parameter	min	typ	max	units	test conditions
<b>Input IRED</b>						
V <sub>F</sub>	Forward voltage	-	-	1.5	V	I <sub>F</sub> = 16 mA
I <sub>R</sub>	Reverse current	-	-	10	μA	V <sub>R</sub> = 3 V
<b>Output Phototransistor</b>						
I <sub>D</sub>	Collector-emitter dark current	-	-	50	nA	I <sub>F</sub> = 0 <sup>(4)</sup> , V <sub>CE</sub> = 10 V,
V <sub>BR(CEO)</sub>	Collector-emitter breakdown voltage	30	-	-	V	I <sub>F</sub> = 0 <sup>(4)</sup> , I <sub>C</sub> = 100 μA
<b>Coupled</b>						
V <sub>CE(SAT)</sub>	Saturation voltage	-	-	0.5	V	I <sub>F</sub> = 20 mA, I <sub>C</sub> = 1 mA
I <sub>L</sub>	Sensor current	1	-	-	mA	I <sub>F</sub> = 10 mA, V <sub>CE</sub> = 5 V
t <sub>r</sub> , t <sub>f</sub>	Output rise and fall time	-	5.0	-	μsec	I <sub>C</sub> = 2 mA, V <sub>CC</sub> = 10 V, R <sub>L</sub> = 100Ω

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