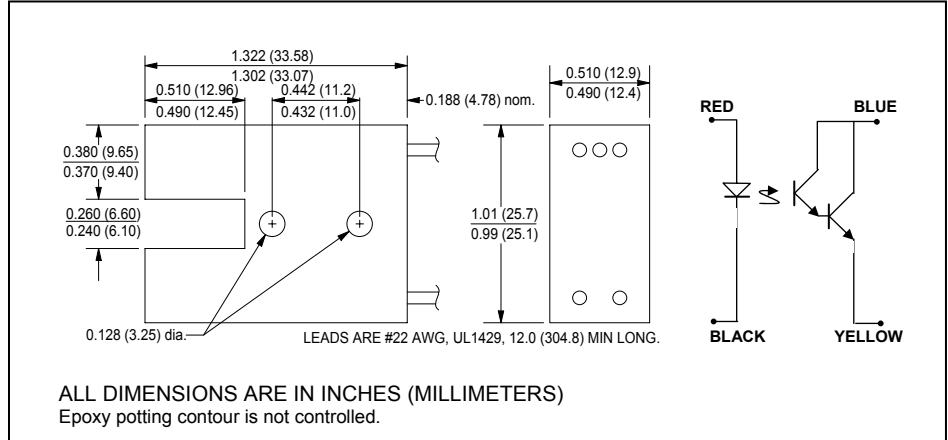


# CLI325

## IRED - Photodarlington Photointerrupter



December, 2001



### features

- rugged plastic package
- hermetically sealed discretes
- narrow beam alignment

### description

The CLI325 consists of an IRED and a photodarlington mounted in a black plastic housing. It features 12 inch leads and two holes for bracket mounting in any position. There are no internal biasing resistors which allows more design flexibility and utilization of the high output capability of the photodarlington. For assistance, call 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.....	60mA
reverse DC voltage.....	3V
power dissipation <sup>(1)</sup> .....	100mW
PHOTODARLINGTON	
collector-emitter voltage.....	30V
maximum continuous collector current <sup>(2)</sup> .....	100mA
power dissipation <sup>(3)</sup> .....	200mW

### notes:

1. Derate linearly 1.33mW/°C from 25°C free air temperature to  $T_A = +100^\circ\text{C}$ .
2. 200mA when pulsed at 300µs, 2% duty cycle.
3. Derate linearly 2.66mW/°C from 25°C free air temperature to  $T_A = +100^\circ\text{C}$ .

electrical characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)						
symbol	parameter	min	typ	max	units	test conditions
<b>Input IRED</b>						
$V_F$	Forward voltage	-	-	1.5	V	$I_F = 16\text{mA}$
$I_R$	Reverse current	-	-	10	µA	$V_R = 3\text{V}$
<b>Output Photodarlington</b>						
$I_D$	Collector-emitter dark current	-	-	100	nA	$V_{CE}=10\text{V}, E_e=0$
<b>Coupled</b>						
$I_L$	Sensor current	3.0	-	-	mA	$I_F=10\text{mA}, V_{CE}=5\text{V}$
$V_{CE(SAT)}$	Saturation voltage	-	-	1.2	V	$I_F=10\text{mA}, I_C=4\text{mA}$
$t_r, t_f$	Output rise and fall time	-	50	-	µsec	$I_C=2.0\text{mA}, V_{CE}=10\text{V}, R_L= 100\Omega$

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

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