CLI355

IRED - Photodarlington Photointerrupter

Clairex® Technologies, Inc.

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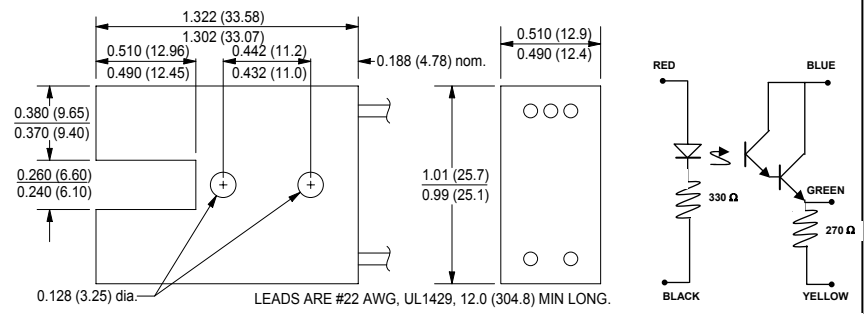

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
Epoxy potting contour is not controlled.

features

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

description

The CLI355 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. Also contained are a 330Ω resistor in the IRED circuit and a 270Ω emitter load resistor. The photodarlington provides a high output sensor current compatible with TTL input. For assistance, call Clairex.

absolute maximum ratings (T_A = 25°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[1].....100mW

PHOTODARLINGTON

collector-emitter voltage.....30V
maximum continuous collector current[2].....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.

electrical characteristics (T_A = 25°C unless otherwise noted)

symbol	parameter	min	typ	max	units	test conditions
Input IRED						
V_F	Forward voltage	-	-	1.5	V	I_F = 16mA
I_R	Reverse current	-	-	10	μA	V_R = 3V
Output Photodarlington						
I_D	Collector-emitter dark current	-	-	100	nA	V_{CE}=10V, E_e=0
Coupled						
V_{sat}	Saturation voltage	-	-	1.2	V	I_F=10mA, I_C=4mA
I_O	Sensor output current	12.0	-	-	mA	I_F=10mA, V_{CE}=5V
V_O	Voltage output across 270Ω resistor	3.2	-	-	V	I_F=10mA, V_{CE}=5V
V_{OFF}	Voltage output across 270Ω resistor	-	-	0.4	V	E_e=0
t_r, t_f	Output rise and fall time	-	300	-	μsec	I_C=2.0mA, V_{CE}=10V, R_L=100Ω

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