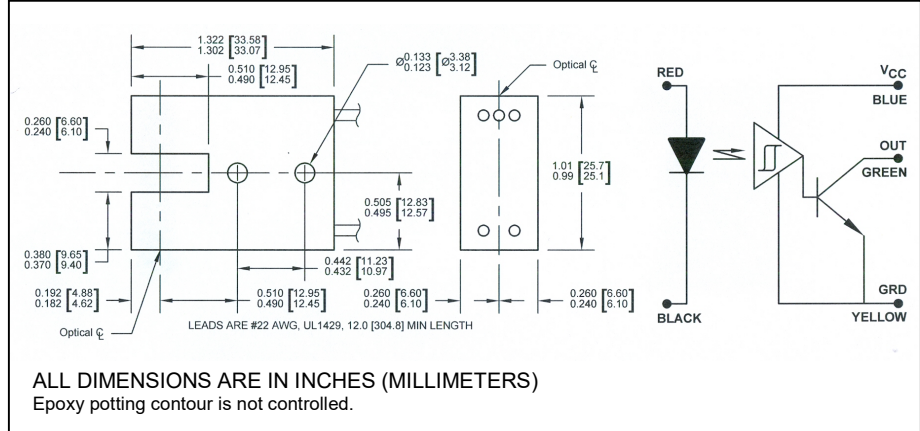
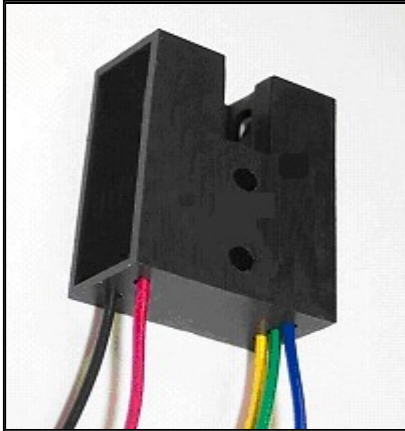


CLI385

IRED – Photo-IC Photointerrupter NPN, Buffer, Open Collector Output⁽¹⁾



features

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

description

The CLI385 consists of an IRED and a monolithic, digital output, photo-IC 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. See note 1. Contact Clairex for assistance.

absolute maximum ratings (T_A = 25°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
power dissipation ⁽²⁾	100 mW
PHOTO-IC	
common supply voltage	18 V
maximum sink current.....	25 mA
power dissipation ⁽³⁾	200 mW

notes:

1. Other output configurations are available. Contact Clairex.
2. Derate linearly 1.20 mW/°C from 25°C free air temperature to T_A = +100°C.
3. Derate linearly 2.40 mW/°C from 25°C free air temperature to T_A = +100°C
4. I_F = 0 indicates light path is blocked by an opaque object.

definition:

buffer – output is LOW when input radiation is below the threshold level.

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 = 10 mA
I _R	Reverse current	-	-	10	μA	V _R = 3 V
Output Photo-IC						
V _{CC}	Supply voltage	4	-	16	V	
I _{CC}	Supply current	-	-	12	mA	V _{CC} = 4.5 V – 16 V
Coupled (V _{CC} = 5 V unless otherwise noted)						
V _{OL}	Low level output voltage	-	-	0.4	V	I _F = 0 ⁽⁴⁾ , I _{OL} = 15 mA,
I _{OH}	High level output leakage	-	-	5	μA	I _F = 15 mA, V _{OH} = 18 V
I _{F+}	IRED positive going threshold	-	-	10	mA	
I _{F+} /I _{F-}	Hysteresis ratio	-	1.2	-		
t _r , t _f	Output rise and fall time	-	75	-	ns	I _F = 0 ⁽⁴⁾ or 15 mA, V _{CC} = 5 V f = 10 kHz, dc = 50%, R _L = 240Ω, C _L = 15 pF
t _{PLH}	Propagation delay, low to high	-	6	-	μs	
t _{PHL}	Propagation delay, high to low	-	6	-	μs	

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