

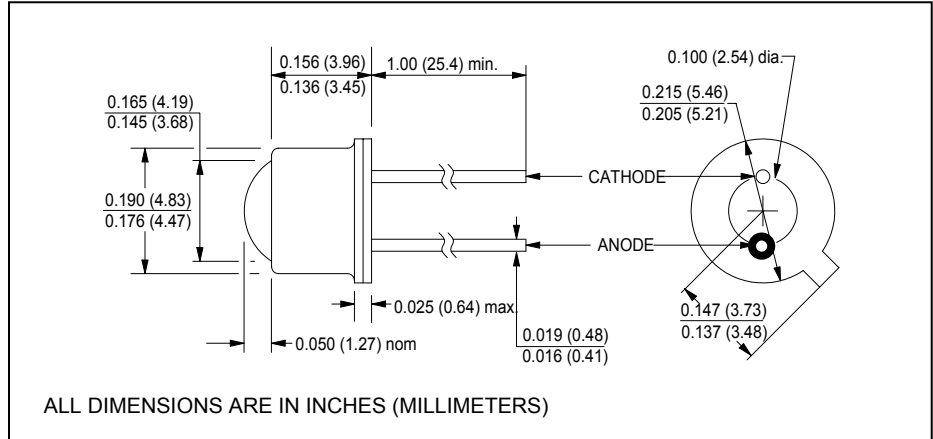
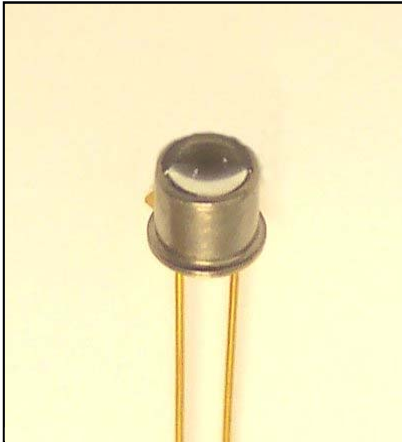
# CLE539

## High Power GaN White LED Dome Lens Can, Hermetically Sealed

Preliminary



October, 2004



### features

- Dome lens TO-46 package
- $\pm 11^\circ$  emitting angle
- High luminous intensity
- High luminous flux
- Cathode connected to case

### description

The CLE539 contains a GaN, high power output, blue LED bonded to a ceramic substrate and mounted on a TO-46 header. A phosphor coating is applied to the die which, when excited, emits white light. The TO-46 header provides the thermal environment for reliable operation over a wide temperature range. For additional information, call Clairex.

### absolute maximum ratings ( $T_A = 25^\circ\text{C}$ unless otherwise stated)

storage temperature.....	$-65^\circ\text{C}$ to $+150^\circ\text{C}$
operating temperature.....	$-65^\circ\text{C}$ to $+125^\circ\text{C}$
lead soldering temperature <sup>(1)</sup> .....	$260^\circ\text{C}$
continuous forward current <sup>(2)</sup> .....	55mA
reverse voltage.....	5V
peak forward current (1.0ms pulse width, 10% duty cycle).....	0.25A
continuous power dissipation <sup>(3)</sup> .....	200mW

### notes:

1. 0.06" (1.5mm) from the header for 5 seconds maximum.
2. Derate linearly 0.44mA/ $^\circ\text{C}$  from  $25^\circ\text{C}$  free air temperature to  $T_A = +125^\circ\text{C}$ .
3. Derate linearly 1.60mW/ $^\circ\text{C}$  from  $25^\circ\text{C}$  free air temperature to  $T_A = +125^\circ\text{C}$ .

### electrical characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

symbol	parameter	min	typ	max	units	test conditions
$I_V$	Luminous intensity	-	5.5	-	cd	$I_F = 20\text{mA}$
$\Phi_V$	Luminous flux	-	635	-	mlm	$I_F = 20\text{mA}$
$V_F$	Forward voltage	-	3.2	3.6	V	$I_F = 20\text{mA}$
$I_R$	Reverse current	-	-	5.0	$\mu\text{A}$	$V_R = 5.0\text{V}$
$\Theta_{HP}$	Total angle at half power points	-	22	-	deg.	$I_F = 20\text{mA}$

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

Revised 3/20/06