

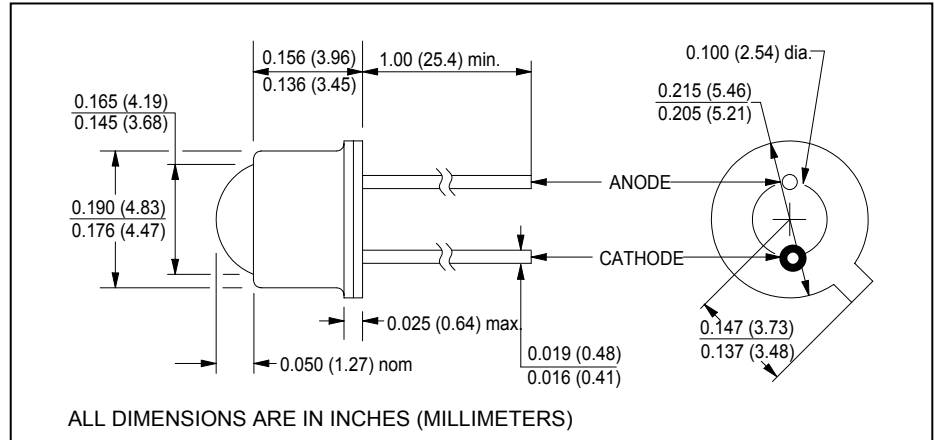
CLE435

Red LED, Aluminum Gallium Arsenide Dome Lens Can, Hermetically Sealed

Preliminary



March, 2001



features

- exceptionally high power output
- 660nm wavelength
- TO-46 hermetic package
- narrow radiation pattern
- RoHS compliant

description

The CLE435 is an advanced, high-efficiency, high speed, AlGaAs light emitting diode. The TO-46 header provides the thermal environment for reliable operation over an extremely wide temperature range. Call Clairex for applications assistance.

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

storage temperature.....	-65°C to $+150^\circ\text{C}$
operating temperature.....	-65°C to $+125^\circ\text{C}$
lead soldering temperature ⁽¹⁾	260°C
continuous forward current ⁽²⁾	60mA
peak forward current(1.0ms pulse width, 10% duty cycle).....	1A
reverse voltage.....	5V
continuous power dissipation ⁽³⁾	200mW

notes:

1. 0.06" (1.5mm) from the header for 5 seconds maximum.
2. Derate linearly 0.48mA/ $^\circ\text{C}$ from 25°C free air temperature to $T_A = +125^\circ\text{C}$.
3. Derate linearly 1.60mW/ $^\circ\text{C}$ from 25°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	-	650	-	mcd	$I_F = 20\text{mA}$
Φ_V	Luminous flux	-	72	-	mlm	$I_F = 20\text{mA}$
V_F	Forward voltage	-	1.8	2.4	V	$I_F = 20\text{mA}$
I_R	Reverse current	-	-	10	μA	$V_R = 5\text{V}$
λ_P	Peak emission wavelength	650	660	670	nm	$I_F = 20\text{mA}$
Θ_{HP}	Emission angle at half power points	-	22	-	deg.	$I_F = 20\text{mA}$
t_r, t_f	Radiation rise and fall time	-	70	-	ns	$I_{F(PK)} = 50\text{mA}$, $f = 1\text{kHz}$, Duty Cycle = 50%

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

Revised 3/20/06