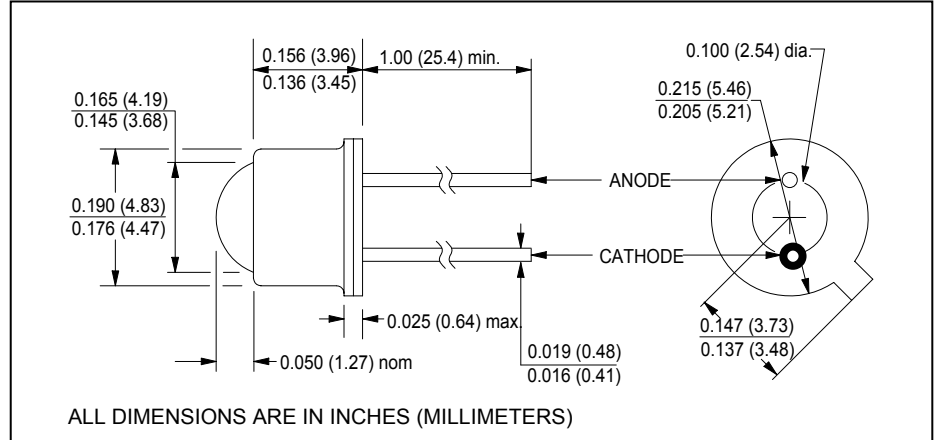
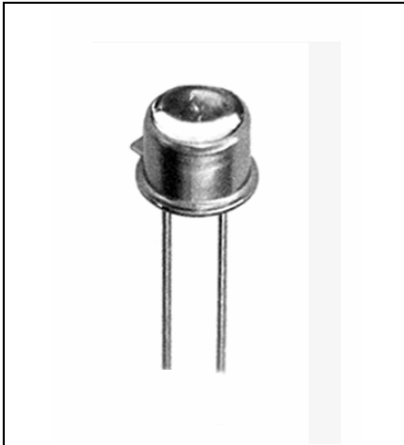


# CLE435

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



March, 2001



### features

- 660nm wavelength
- TO-46 hermetic package
- narrow collimated beam
- 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. The lens is designed to provide a highly collimated radiation pattern from 0.10" to 0.20" from the lens tip. Call Clairex for applications assistance.

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

storage temperature	-65°C to +150°C
operating temperature	-65°C to +125°C
lead soldering temperature <sup>(1)</sup>	260°C
continuous forward current <sup>(2)</sup>	60mA
peak forward current (1.0ms pulse width, 10% duty cycle)	1A
reverse voltage	5V
continuous power dissipation <sup>(3)</sup>	200mW

### notes:

1. 0.06" (1.5mm) from the header for 5 seconds maximum.
2. Derate linearly 0.48mA/°C from 25°C free air temperature to  $T_A = +125^\circ\text{C}$ .
3. Derate linearly 1.60mW/°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	-	300	-	mcd	$I_F = 20\text{mA}$
$\Phi_V$	Luminous flux	-	35	-	mlm	$I_F = 20\text{mA}$
$V_F$	Forward voltage	-	1.8	2.1	V	$I_F = 20\text{mA}$
$I_R$	Reverse current	-	-	10	$\mu\text{A}$	$V_R = 5\text{V}$
$\lambda_P$	Peak emission wavelength	650	660	670	nm	$I_F = 20\text{mA}$
$\Theta_{HP}$	Emission angle at half power points	-	22	-	deg.	$I_F = 20\text{mA}$
$t_r, t_f$	Radiation rise and fall time	-	40	-	ns	$I_{F(PK)} = 100\text{mA}$ , $f = 1\text{kHz}$ , Duty Cycle = 50%

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

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