CLE230,CLE231,CLE232,CLE233

High Power Aluminum Gallium Arsenide IREDs

Clairex® Technologies, Inc.

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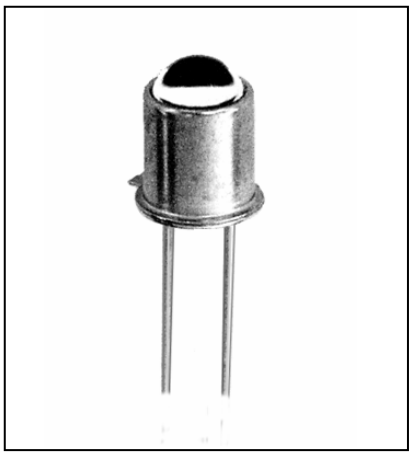

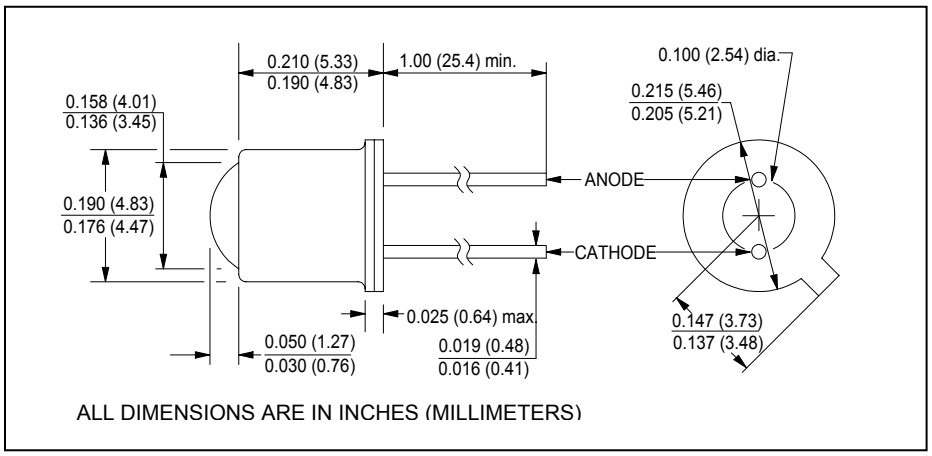

features

- narrow emission angle
- TO-46 hermetically sealed package
- excellent heat dissipation
- high power output

description

The CLE230 series are AlGaAs infrared emitting diodes mounted in TO-46 hermetic packages. The narrow emission angle provides high on-axis intensity. The series are spectrally and mechanically matched to the CLT130 phototransistor series. For additional information, call Clairex.

absolute maximum ratings (T_A = 25°C unless otherwise stated)

storage temperature	-55°C to +150°C
operating temperature	-55°C to +125°C
lead soldering temperature[1]	240°C
maximum continuous current[2]	100mA
peak forward current (10μs pulse width, 100pps)	10A
maximum power dissipation[3]	170mW
reverse voltage	3V

notes:

1. 0.06" (1.5mm) from the header for 5 seconds maximum. Maximum temperature can be 260°C if wave soldering.
2. Derate linearly 1.0mA/°C from 25°C free air temperature to T_A = +125°C.
3. Derate linearly 1.7mW/°C from 25°C free air temperature to T_A = +125°C.

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

symbol	parameter		min	typ	max	units	test conditions
E_e	Irradiance[1]	CLE230	1.0	-	-	mW/cm^2	I_F = 100ma
		CLE231	1.5	-	-		
		CLE232	2.6	-	-		
		CLE233	3.5	-	-		
V_F	Forward voltage		-	-	1.8	V	I_F = 100ma
I_R	Reverse current		-	-	10	μA	V_R = 3.0V
λ_P	Peak emission wavelength		-	880	-	nm	I_F = 100ma
BW	Spectral bandwidth at half power points		-	80	-	nm	I_F = 20ma
Θ_{HP}	Emission angle at half power points		-	40	-	deg.	I_F = 20ma
t_r	Output rise time		-	700	-	ns	I_F = 100ma
t_f	Output fall time		-	700	-	ns	I_F = 100ma

note: 1. Measured into a 0.25" aperture, 1.20" from device lens.

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