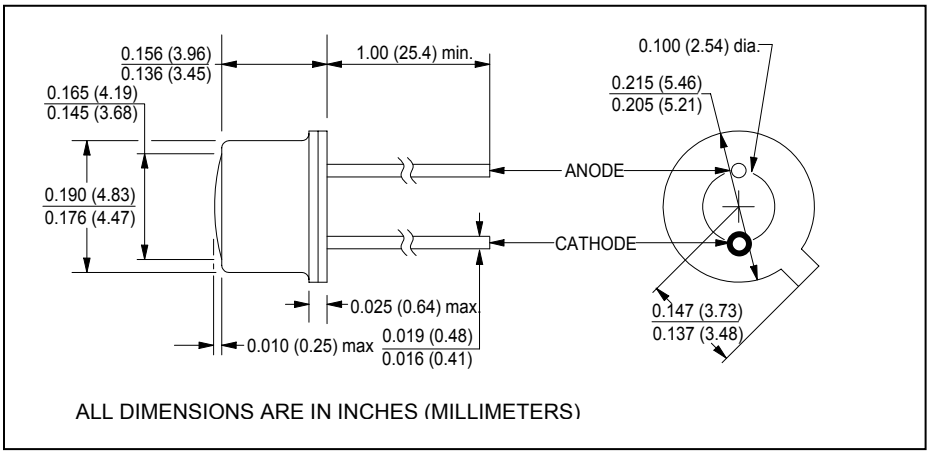
CLE230W, CLE231W, CLE232W

High Power Aluminum Gallium Arsenide IREDs

Clairex® Technologies, Inc.

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features

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

description

The CLE230W series are AlGaAs infrared emitting diodes mounted in flat window TO-46 hermetic packages. The wide emission angle provides even illumination over a large area. The series are spectrally and mechanically matched to the CLT130W 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]	200mW
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 0.80mA/°C from 25°C free air temperature to T_A = +125°C.
3. Derate linearly 1.6mW/°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[4,5]	CLE230W	1.5	-	-	mW/cm^2	I_F = 100mA
		CLE231W	3.5	-	-		
		CLE232W	5.0	-	-		
V_F	Forward voltage[4,5]		-	-	2.0	V	I_F = 100mA
I_R	Reverse current		-	-	10	µA	V_R = 3.0V
λ_P	Peak emission wavelength		-	890	-	nm	I_F = 100mA
BW	Spectral bandwidth at half power points		-	80	-	nm	I_F = 100mA
Θ_{HP}	Emission angle at half power points		-	70	-	deg.	I_F = 100mA
t_r	Output rise time		-	500	-	ns	I_F = 100mA
t_f	Output fall time		-	250	-	ns	I_F = 100mA

note: 4. E_e is a measure of irradiance (power/unit area) within a .25" (6.35mm) diameter area, centered on the mechanical axis of the device and spaced .466" (11.8mm) from the lens side of the tab. This is geometrically equivalent to a 30° cone.

5. Measurement taken at trailing edge of 100µs pulse with a duty cycle of 0.1%.

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

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