CLE130W,CLE131W,CLE132W

High Power Gallium Arsenide IREDs

Clairex® Technologies, Inc.

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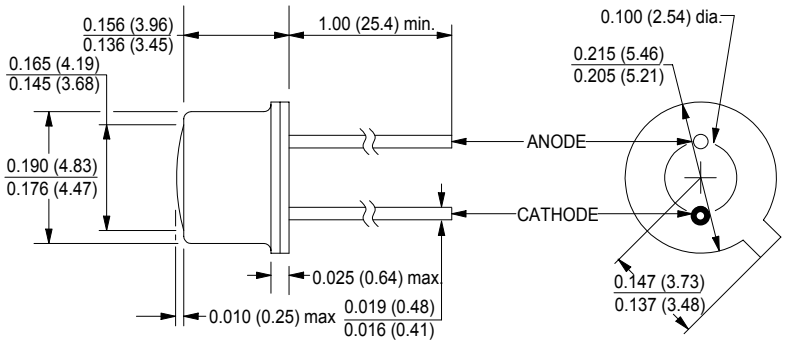

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)

features

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

description

The CLE130W series are GaAs 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] 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 0.80mA/°C from 25°C free air temperature to T_A = +125°C.
3. Derate linearly 1.36mW/°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]	CLE130W	0.3	-	-	mW/cm^2	I_F = 100ma
		CLE131W	0.5	-	-		
		CLE132W	1.0	-	-		
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		-	940	-	nm	I_F = 100ma
BW	Spectral bandwidth at half power points		-	50	-	nm	I_F = 20ma
Θ_{HP}	Emission angle at half power points		-	70	-	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, 0.33" from device lens.

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