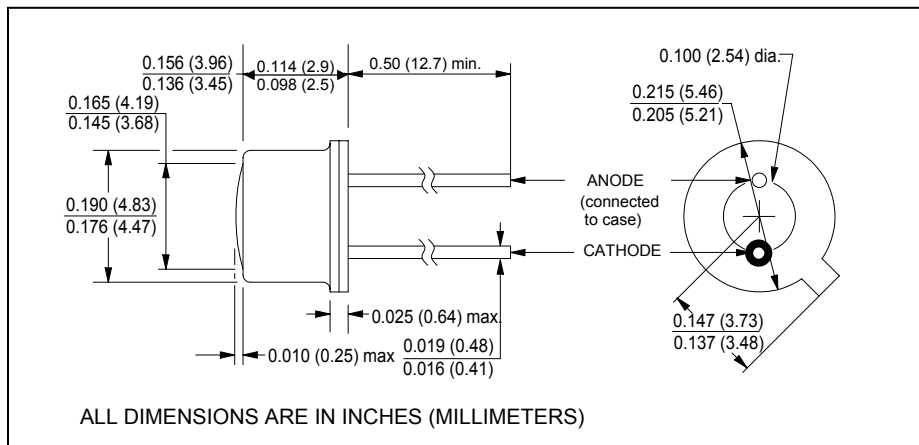


CLE320W

High Power Aluminum Gallium Arsenide 810nm IRED



July, 2004



features

- anode connected to case
- wide emission angle
- excellent heat dissipation
- high speed operation
- $\pm 35^\circ$ emission angle
- RoHS compliant

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⁾	100mA
peak forward current (1.0ms pulse width, 10% duty cycle)	1A
reverse voltage	5V
continuous power dissipation ⁽³⁾	200mW

description

The CLE320W contains a double heterojunction AlGaAs infrared emitting diode mounted in a low profile, flat window, TO-46 hermetic package. The wide emission angle provides even illumination over a large area. For additional information, call Clairex.

notes:

1. 0.06" (1.5mm) from the header for 5 seconds maximum.
2. Derate linearly 0.80mA/ $^\circ\text{C}$ from 25°C free air temperature to $T_A = +125^\circ\text{C}$.
3. Derate linearly 1.6mW/ $^\circ\text{C}$ 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
P_O	Total power output	-	25	-	mW	$I_F = 100\text{mA}$
V_F	Forward voltage	-	-	2.5	V	$I_F = 100\text{mA}$
I_R	Reverse current	-	-	10	μA	$V_R = 5.0\text{V}$
λ_p	Peak emission wavelength	800	810	820	nm	$I_F = 100\text{mA}$
BW	Spectral bandwidth at half power points	-	50	-	nm	$I_F = 100\text{mA}$
θ_{HP}	Emission angle at half power points	-	70	-	deg.	$I_F = 100\text{mA}$
C_J	Junction capacitance	-	30	-	pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$
t_r , t_f	Output rise and fall time	-	10	-	ns	$I_F = 50\text{mA}$

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

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