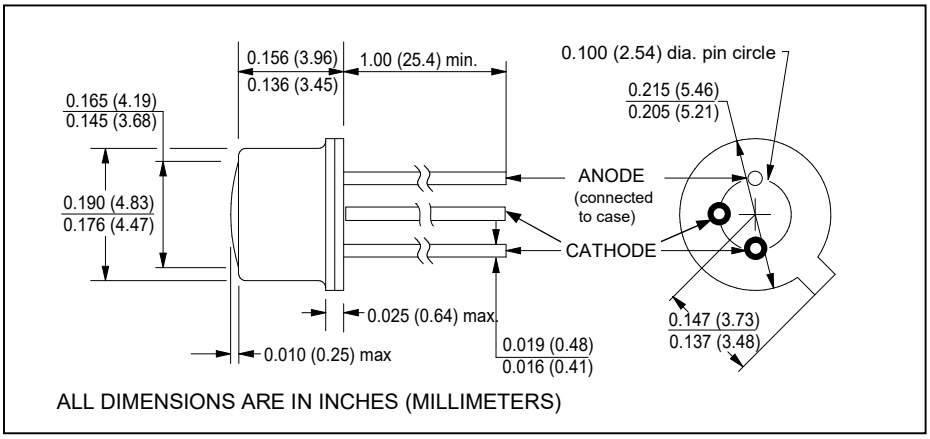
CLE234W

Very High Output Aluminum Gallium Arsenide Quad chip IRED Array

CLAIREX® SEMICONDUCTOR

12-234WA



features

- wide emission angle
- 880nm wavelength
- TO-46 header with flat lens can
- High power output
- RoHS compliant

description

The CLE234W is an advanced, high efficiency, high speed, AlGaAs infrared-emitting diode. It consists of four IRED elements on one chip with anodes internally connected in parallel. Cathodes are bonded in pairs, each pair bonded to a separate lead. Chip size is 0.030" by 0.030". The TO-46 header provides reliable operation over a wide temperature range.

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]	260°C
continuous forward current[2][5]	500mA
peak forward current[3]	1A
reverse voltage	5V
continuous power dissipation[4]	500mW

notes:

1. 0.06" (1.5mm) from the header for 5 seconds maximum.
2. Derate linearly 4.0mA/°C from 25°C free air temperature to T_A = +125°C.
3. Pulsed conditions only. Maximum pulse width is 1.0ms at 10% duty cycle
4. Derate linearly 4.0mW/°C from 25°C free air temperature to T_A = +125°C.
5. Unit must be properly heat sinked to be operated at this level.
6. Cathode leads must be externally connected together.
7. Other ranges of power output and test conditions can be specified. Call Clairex for applications assistance.

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

symbol	parameter	min	typ	max	units	test conditions
P_O	Total power output[7]	8.0	10	-	mW	I_F = 100mA
V_F	Forward voltage	-	1.65	1.8	V	I_F = 100mA
I_R	Reverse current	-	-	10	µA	V_R = 5V
λ_p	Peak emission wavelength	-	880	-	nm	I_F = 100mA
BW	Spectral bandwidth at half power	-	45	-	nm	I_F = 100mA
θ_{HP}	Emission angle at half power points	-	70	-	deg.	I_F = 100mA
t_r, t_f	Radiation rise and fall time	-	700	-	ns	$I_{F(PK)}$ = 100mA, f = 1kHz, D.C. = 50%

Clairex Technologies, Inc.
dba Clairex Semiconductor
1000 Jupiter Road, Ste. 100
Phone: 972-265-4900
Plano, Texas 75074-3727
www.clairex.com