CLE334W

Very High Output Aluminum Gallium Arsenide Quad chip IRED Array

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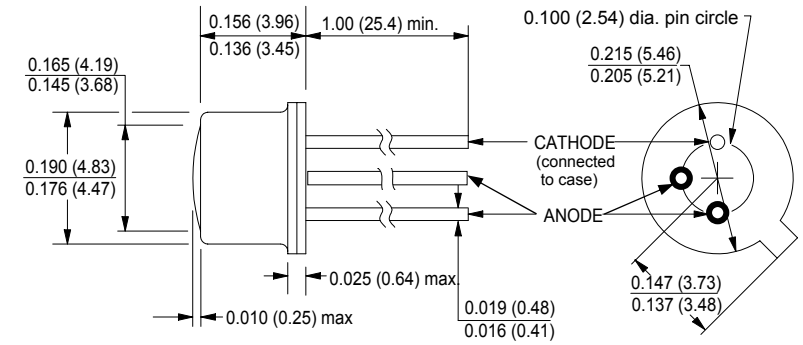

Anode leads must be externally connected together.
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)

features

- 850nm wavelength
- wide emission angle
- cathode connected to case
- TO-46 header with flat window can
- > 10MHz operation
- RoHS compliant

description

The CLE334W is an advanced, high efficiency, high speed, AlGaAs infrared-emitting diode with four times the emitting surface of the typical AlGaAs emitter. High power output is achieved with four equally spaced anode contacts for higher current distribution. Anodes contacts are bonded in pairs, each pair bonded to a separate lead. Chip size is 0.030" by 0.030". The TO-46 header provides the thermal environment for reliable operation over a wide temperature range.

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

storage temperature	-65°C to +150°C
operating temperature	-65°C to +125°C
lead soldering temperature[1]	260°C
continuous forward current[2][4]	500mA
peak forward current (1.0ms pulse width, 10% duty cycle)	4A
reverse voltage	5V
continuous power dissipation[3]	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. Derate linearly 4.0mW/°C from 25°C free air temperature to T_A = +125°C.
4. Operation at this level requires a proper heat sink.

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

symbol	parameter	min	typ	max	units	test conditions
P_O	Total power output	-	10	-	mW	I_F = 100mA
V_F	Forward voltage	-	1.0	1.9	V	I_F = 100mA
I_R	Reverse current	-	-	10	µA	V_R = 5V
λ_p	Peak emission wavelength	-	850	-	nm	I_F = 100mA
BW	Spectral bandwidth at half power	-	35	-	nm	I_F = 100mA
θ_{HP}	Emission angle at half power points	-	60	-	deg.	I_F = 100mA
t_r	Radiation rise time	-	20	-	ns	$I_{F(PK)}$ =100mA, f = kHz,D.C.= 50%
t_f	Radiation fall time	-	40	-	ns	$I_{F(PK)}$ =100mA, f = kHz,D.C.= 50%

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