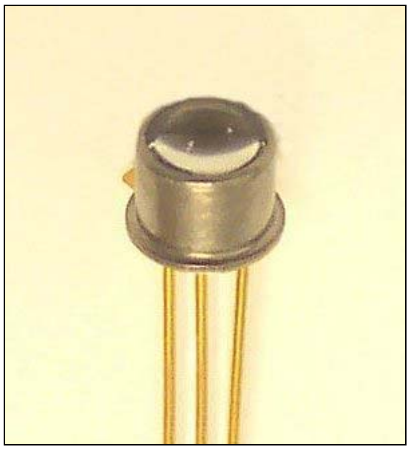
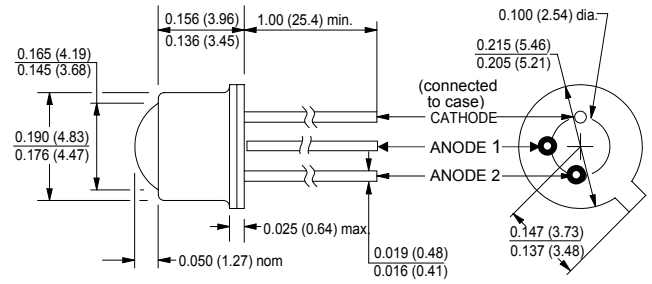
CLE509

Preliminary

Nine Element, 390nm UV LED Array
Dome Lens Can, Hermetically Sealed

February, 2006





ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
For proper operation, ANODE 1 and ANODE 2 must be externally connected.

features

- 390nm wavelength
- ±35° emission angle
- Cathodes connected to case
- RoHS compliant

applications

- identifying petroleum deposits in down-hole drilling operations
- currency validation
- security
- water purification
- UV epoxy curing

description

The CLE509 contains nine, parallel connected, 390nm LED die mounted on a TO-46 header. Custom variations are available which can contain from one to nine elements. Special lenses and multiple lead packages are also available. Call Clairex for more information.

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

storage temperature	-40°C to +150°C
operating temperature	-40°C to +125°C
lead soldering temperature[1]	260°C
continuous forward current, each diode[2]	20mA
peak forward current, each diode (1.0ms pulse width, 10% duty cycle)	0.5A
reverse voltage	5.0V
continuous power dissipation[3]	350mW

notes:

1. 0.06" (1.5mm) from case for 5 seconds maximum.
2. Derate linearly 0.21mA/°C from 25°C free air temperature to T_A = +125°C.
3. Derate linearly 3.73mW/°C from 25°C free air temperature to T_A = +125°C.

Exercise caution when applying power to this unit.
It emits high amounts of UV radiation.

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

symbol	parameter	min	typ	max	units	test conditions
P_O	Total power output [4]	13.5	-	-	mW	I_F = 180mA[5]
V_F	Forward voltage	-	3.0	3.9	V	I_F = 180mA[5]
I_R	Reverse current (per diode)	-	-	10	µA	V_R = 5.0V
λp	Peak emission wavelength	375	390	405	nm	I_F = 180mA[5]
θ_{HP}	Emission angle at half power points	-	70	-	deg.	I_F = 180mA[5]

note: 4. Measured with both anode leads connected together.
5. This equates to 20mA per diode.

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

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