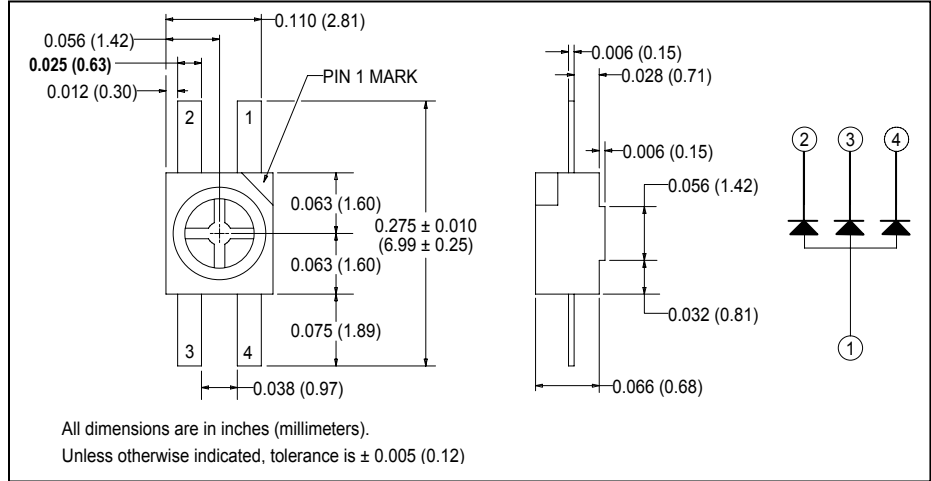


CLE400F- 850

Four leaded Multiple Emitter Chip Surface Mount Package



March, 2002



features

- ±70° emission angle
- wide variety of chip combinations
- wide variety of lenses and apertures

description

The CLE400F-850 contains three 850 nm IRED chips which feature double/double heterojunction (DDH) construction for increased quantum efficiency and reliability. This device is one example of a very broad line of devices made possible by four leaded package configuration. One to three chips can be attached. Multiple chip devices can be series or parallel connected. Wavelengths can range from ultra-violet (400nm) through the visible spectrum into the near infrared (940nm). Also different lenses, apertures and lead configurations are available. The standard lensing is clear epoxy.

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

| | |
|--|-----------------|
| storage temperature..... | -40°C to +100°C |
| operating temperature..... | -40°C to +100°C |
| lead soldering temperature ⁽¹⁾ | 240°C |
| maximum continuous current ⁽²⁾ | 20mA/per chip |
| peak forward current (10µs pulse width, 100pps)..... | 1A |
| reverse voltage..... | 3V |
| maximum power dissipation ⁽³⁾ | .80mW |

notes:

1. For 5 seconds maximum. Maximum temperature can be 260°C if reflow soldering.
2. Derate linearly 0.213mA/°C from 25°C free air temperature to T_A = +100°C.
3. Derate linearly 0.85mW/°C from 25°C free air temperature to T_A = +100°C.

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

| symbol | parameter | min | typ | max | units | test conditions |
|-----------------|---|-----|------|-----|-------|--|
| P _O | Total power output ⁽⁴⁾ | 9.0 | 13.0 | - | mW | I _F = 60mA (total cathode current) |
| V _F | Forward voltage | - | - | 1.4 | V | I _F = 20mA per chip |
| I _R | Reverse current | - | - | 10 | µA | V _R = 3V |
| λ _p | Peak wavelength emission | - | 850 | - | nm | I _F = 20mA |
| BW | Spectral bandwidth at half power points | - | 60 | - | nm | I _F = 20mA |
| θ _{HP} | Emission angle at half power points | - | 140 | - | deg. | I _F = 20mA |

note: 4. Power output is measured in an integrating sphere.

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

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