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Data Sheet Power Series

EOC-IRE-2000R-C-CAF

Thermal Infrared Emitter

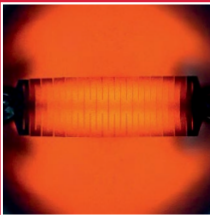
Power Series

Thermal Infrared Emitters

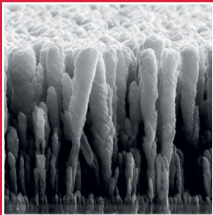
EOC's infrared radiation sources are pulsable thermal emitters with a near black-body emittance. Based on a patented nanotechnology and a patented emitter set-up made of a high-melting metal, the free-standing monolithic radiating element and the nanostructured emitter surface offer numerous advantages in many applications.

The Power Series emitters have an integrated reflector that directs the radiation emitted from the rear to the front through the housing window in order to achieve maximum efficiency. Infrasolid's advanced packaging technology allows soldered sapphire, CaF₂ and BaF₂ windows for use in a wide temperature range of -25 °C up to +85 °C.

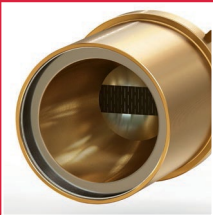
Key features



High radiant power



High efficiency



Hermetic housing

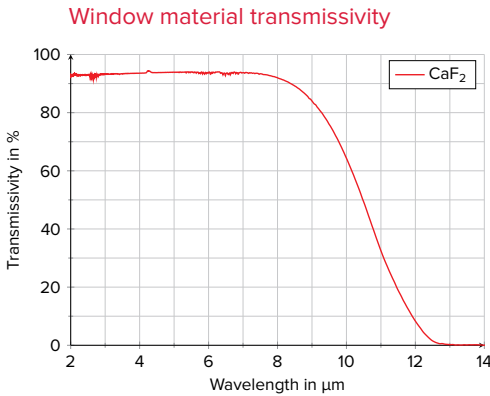
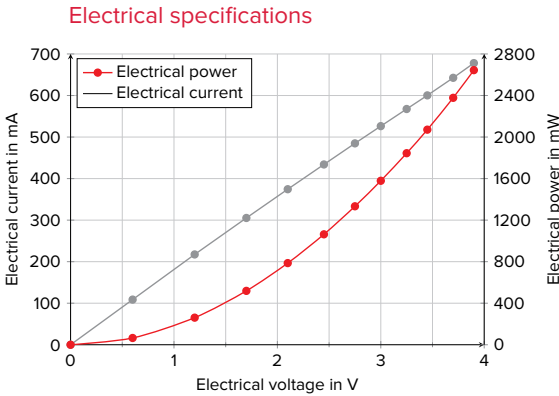
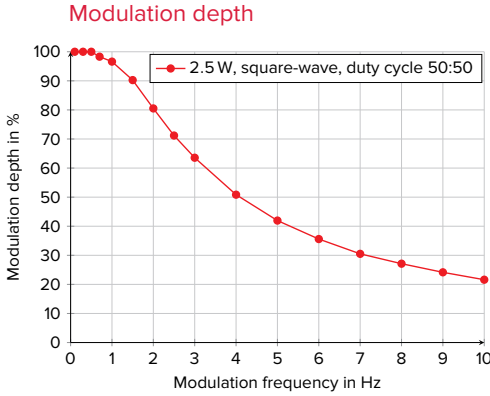
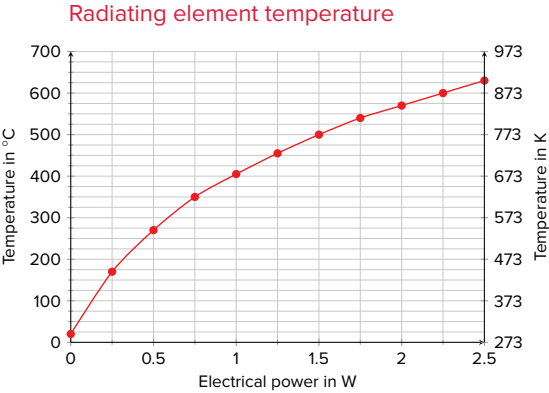
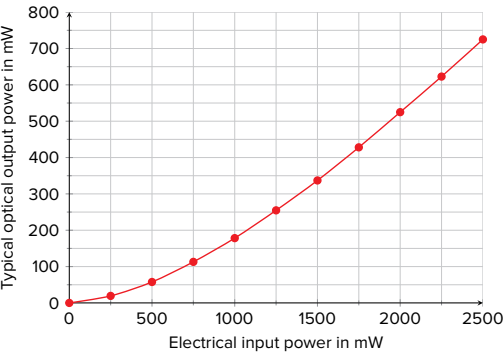
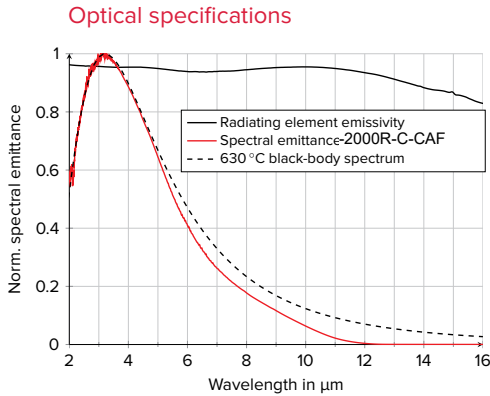
- ✓ Pulsable thermal black-body infrared source mounted in an industry standard TO-8 package.
- ✓ Patented nanostructured radiating element achieves up to 500% more detection signal!
- ✓ Lower radiating element temperature of 630 °C increases lifetime!
- ✓ Soldered, high-quality filter windows guarantee considerably less drift. Leakage tested!
- ✓ Wide wavelength range enables a broad range of applications.

innovative infrared sources for gas detection & spectroscopy

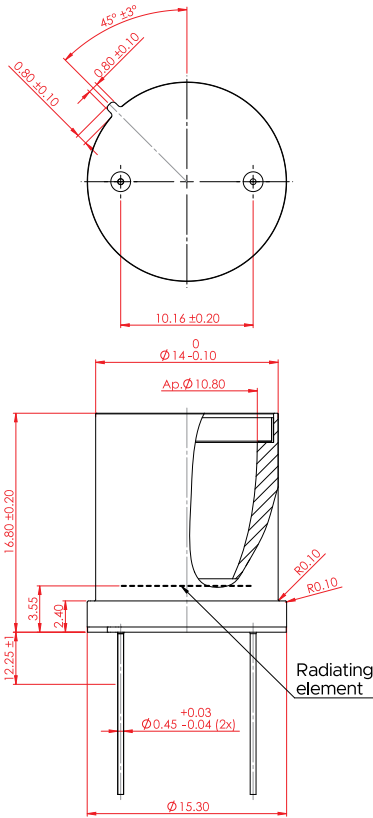
Main specifications

Parameter	EOC-IRE-2000R-C-CAF
Package	TO-8
Radiating element area	40 mm ²
Radiating element emissivity	> 0.9
Radiating element temperature	630 °C at 2.5 W
Optical output power	up to 725 mW
Max. electrical power (DC)	2.5 W
Max. electrical voltage	3.8 V
Max. electrical current	660 mA
Electrical resistance	5...6 Ω
Modulation frequency*	4 Hz
Filter (soldered window)	CaF ₂
Wavelength range	2 to 11 μm
Filling gas (other gases possible):	N ₂

* 50 % modulation depth, square wave signal, 50 % duty cycle



EOC-IRE-2000R-C-CAF



Angular radiation distribution

