



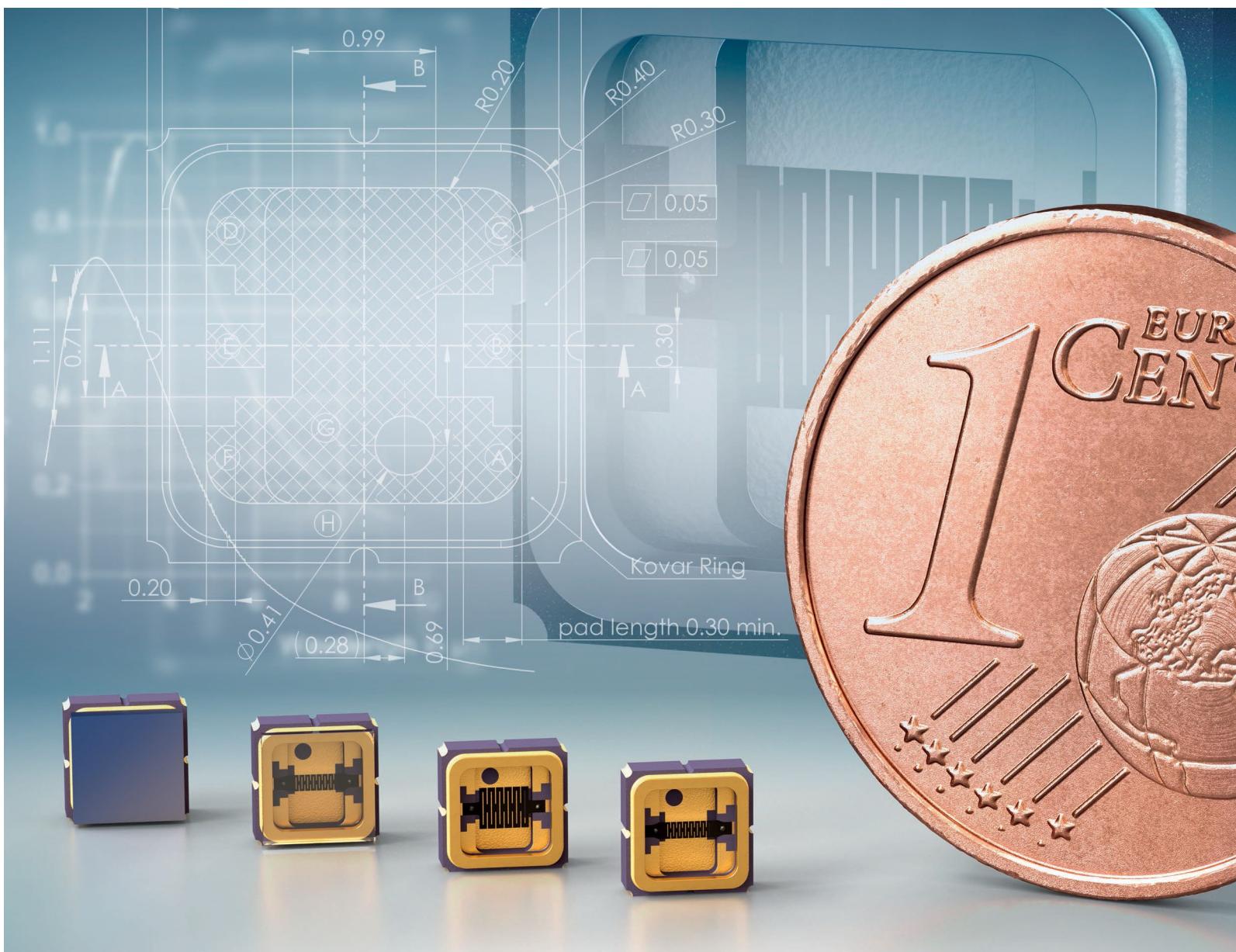
Electro Optical Components, Inc.

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Data Sheet SMD Series
EOC-IRE-100SMD

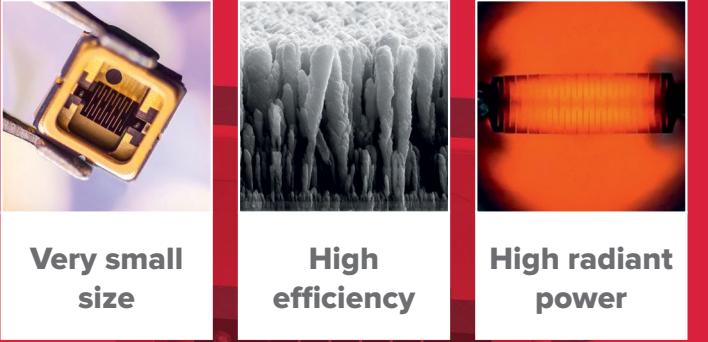
Thermal Infrared Emitters

SMD Series

Thermal Infrared Emitters

The SMDSeries emitters are small, powerful infrared radiation sources that meet the demands for reliable miniaturized gas sensors and offer a wide range of new application scenarios. The low energy consumption, the high efficiency and the small size allow the use in portable, battery-powered, and mobile applications. These innovative infrared light sources are used, for instance, in respiratory gas analysis, e.g. for the detection of CO₂ and breath alcohol, and in Smart Home and Smartphone applications.

Key features



*innovative infrared sources for
gas detection & spectroscopy*

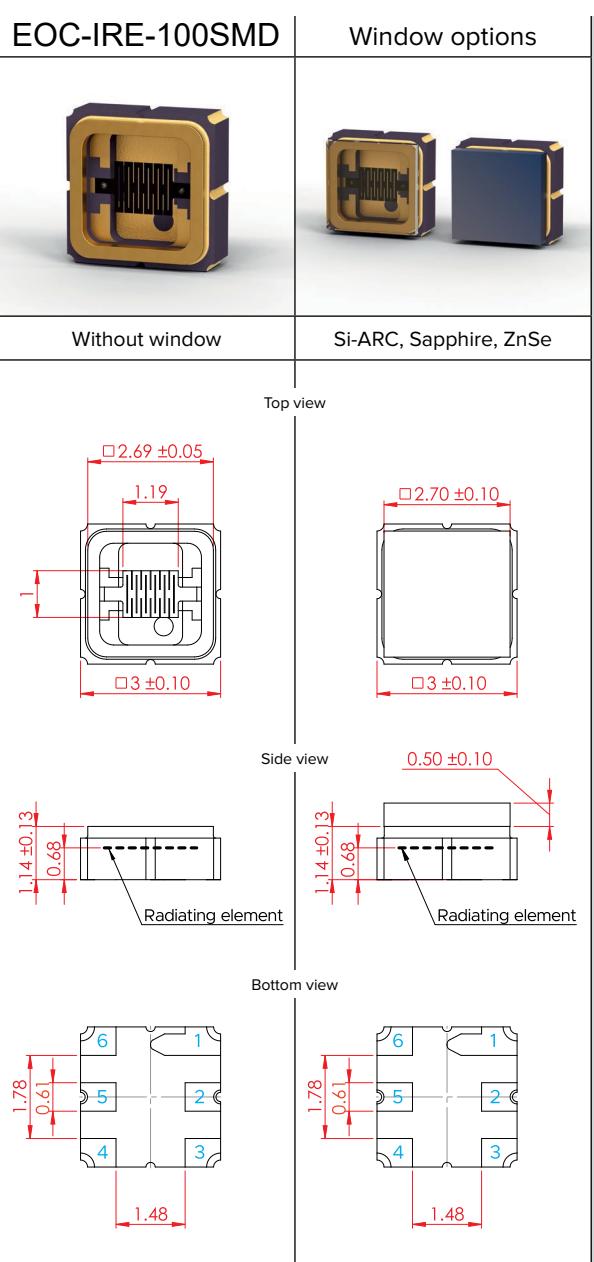
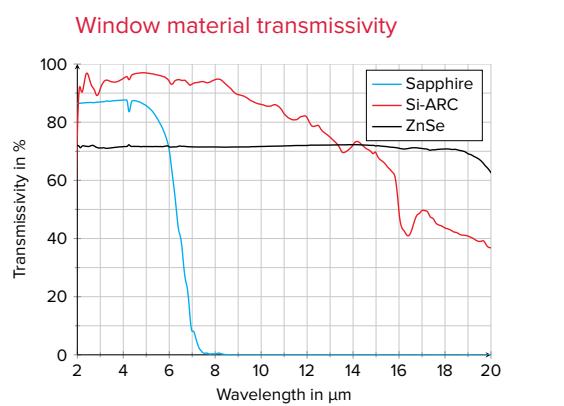
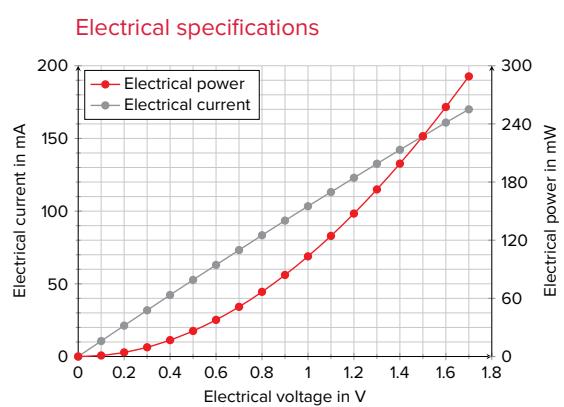
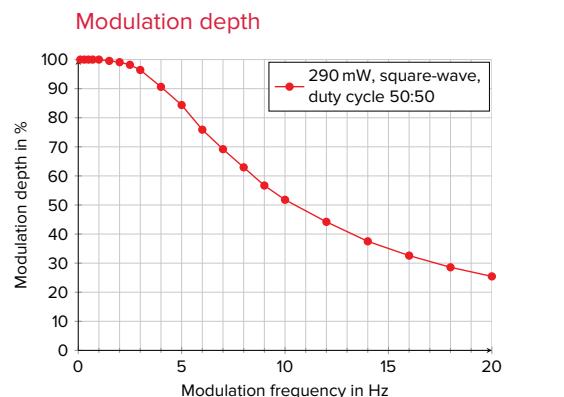
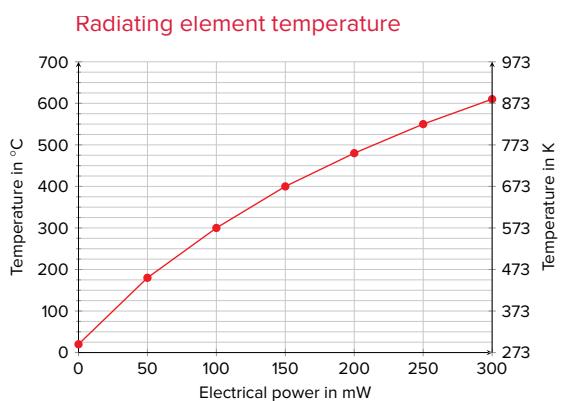
Main specifications

Parameter	EOC-IRE-100SMD
Package	SMD3
Radiating element area	1 mm ²
Radiating element emissivity	> 0.9
Radiating element temperature	600 °C at 290 mW
Optical output power	up to 30 mW
Max. electrical power (DC)	290 mW
Max. electrical voltage	1.7 V
Max. electrical current	170 mA
Electrical resistance	9..10 Ω
Modulation frequency*	10 Hz
Filter (glued window)	Si-ARC, Sapphire, ZnSe
Wavelength range**	2 to 20 μm

* 50 % modulation depth, square wave signal, 50 % duty cycle
** depending on filter transmissivity

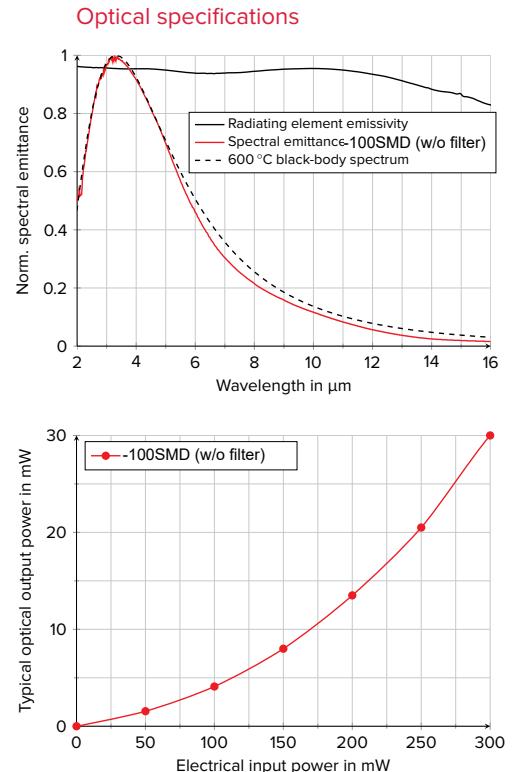
The pioneering SMD package enables a fully automated production in high-volume markets.

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.



Connection table

Lead	1	2	3	4	5	6
Connection	Case	Power 1	Case	Case	Power 2	Case



Angular radiation distribution (without window)

