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Data Sheet

Power Series

Thermal Infrared Emitters

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near black-body emittance. Based on a patented nanotechnology and a patented emitter set-up made of a high-melting metal, the freestanding monolithic radiating element and the nanostructured emitter surface offer numerous advantages in many applications.

These infrared radiation sources are pulsable thermal emitters with a 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. The 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







efficiency



housing

Pulsable thermal black-body infrared source mounted in an industry standard TO-8 package.

- Patented nanostructured radiating element \checkmark 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	HISpower series
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 1 W
Max. electrical power (DC)	2.5 W
Max. electrical voltage	3.8 V
Max. electrical current	660 mA
Electrical resistance	56 Ω
Modulation frequency*	2.5 Hz
Filter (soldered window)	Sapphire, CaF ₂ , BaF ₂
Wavelength range**	2 to 16 μm

* 70 % modulation depth, square wave signal, 50 % duty cycle ** depending on filter transmissivity

Optical specifications





