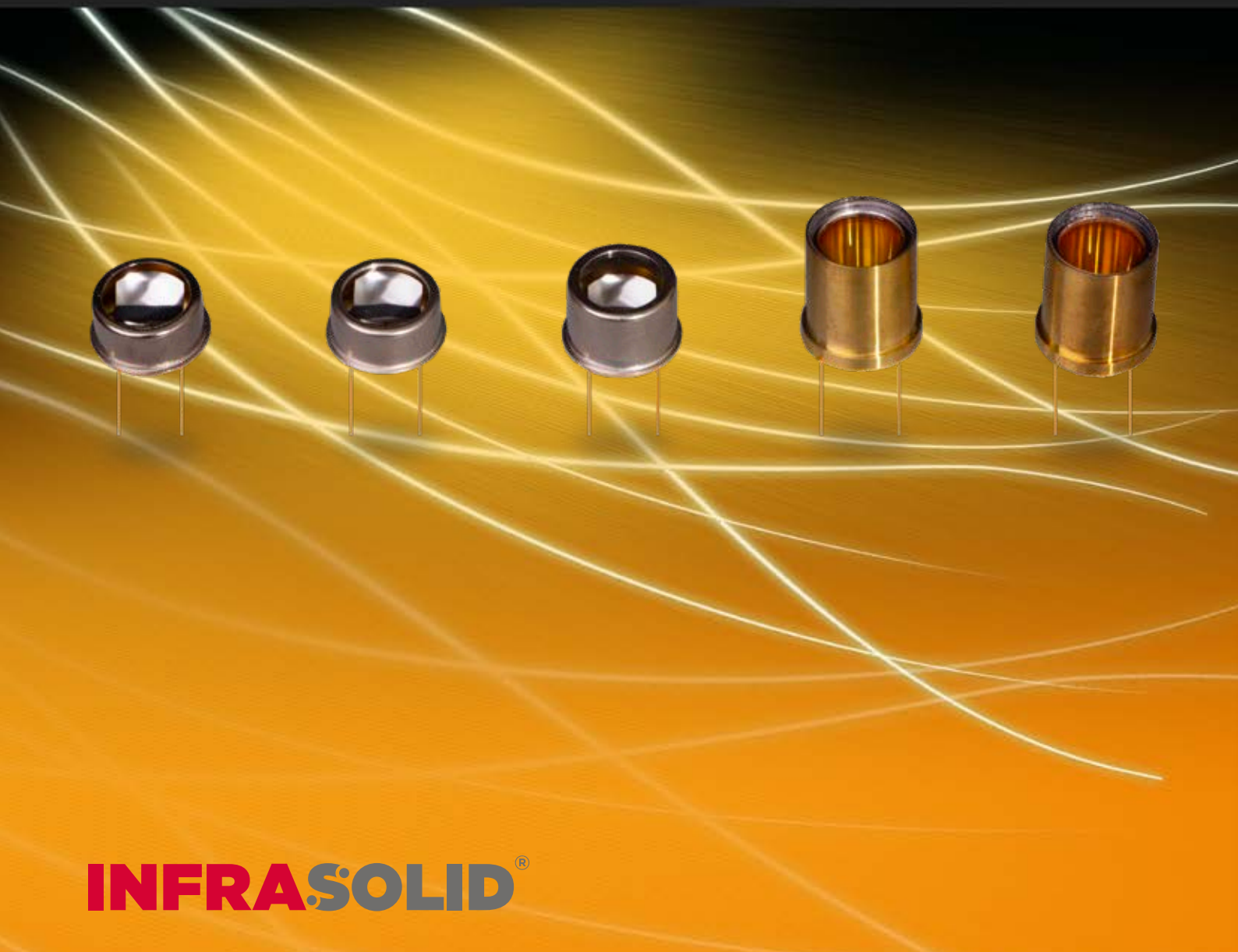
DIAS Infrared Systems

Thermal Infrared Emitters

HIS*power* Serie

For Gas Detection and Spectroscopy



INFRASOLID®

HIS*power* Series

Thermal Infrared Emitters for Gas Detection and Spectroscopy

The infrared radiation sources of HIS*power* series 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.

HIS*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, CaF_2 and BaF_2 windows for use in a wide temperature range of –25 °C up to +85 °C.

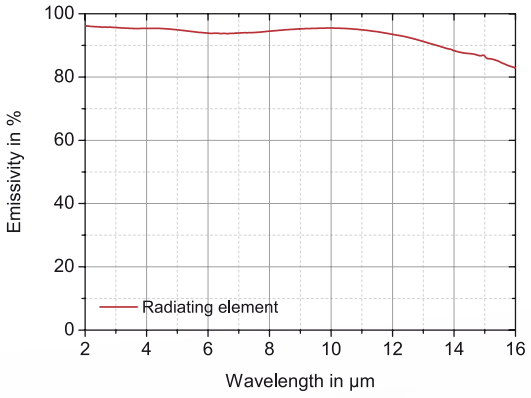
Key Features

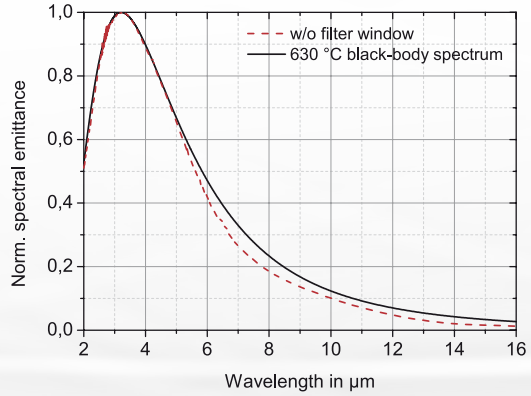
- ☑ Pulsable thermal black-body infrared source mounted in an industry standard TO8 package
- ☑ Patented nanostructured radiating element achieves up to 500 % more detection signal
- ☑ Lower radiating element temperature of 630 °C increases lifetime
- ☑ Soldered, high-quality filter windows guarantee considerably less drift. Leakage tested
- ☑ Wide wavelength range enables a broad range of applications

Parameter	HISpower Series
Package	TO8
Radiating element area	40 mm²
Radiating element emissivity	> 0.9
Radiating element temperature	approx. 630 °C
Max. electrical power (DC)	2.5 W
Max. electrical voltage	approx. 3.8 V
Max. electrical current	approx. 660 mA
Electrical resistance	approx. 5 ... 6 Ω
Modulation frequency[1]	2.5 Hz
Filter (soldered window)	Sapphire, CaF_2, BaF_2
Wavelength range[2]	1 µm to 16 µm

[1] 70 % modulation depth, square wave signal, 50 % duty cycle
[2] Depending on filter transmissivity

Optical Specifications





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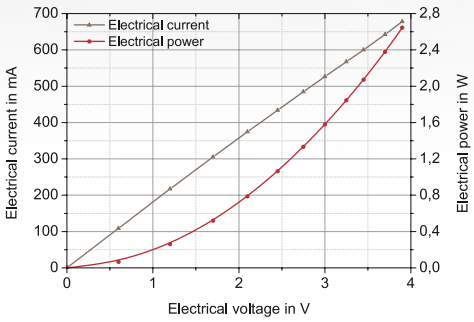
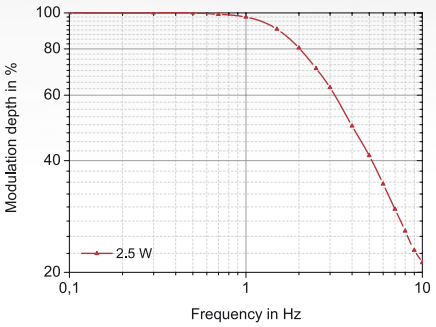
DIAS Infrared Systems

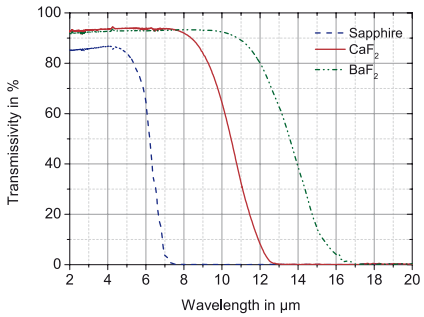
Electrical Specifications



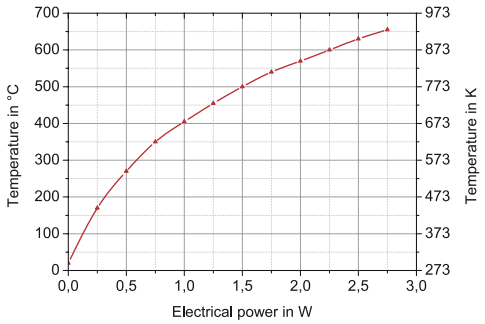
Modulation Depth

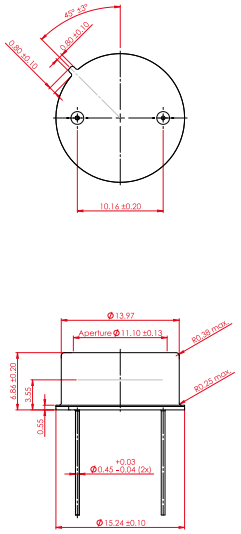
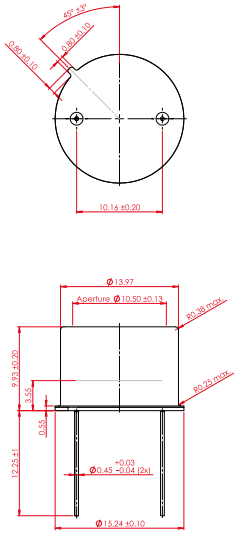
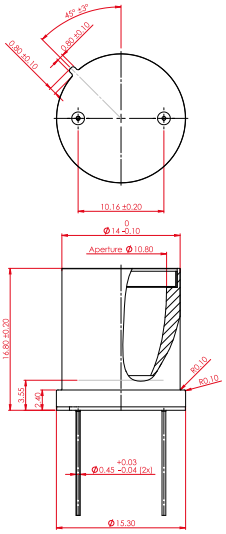


Window Material Transmissivity



Radiating Element Temperature



HIS2000R-0/-A300-6		HIS2000R-A300-9	HIS2000R-BWC300/-CWC300	
				
HIS2000R-0 Without window (open version)	HIS2000R-A300-6 Soldered sapphire window	HIS2000R-A300-9 Soldered sapphire window	HIS2000R-BWC300 Soldered BaF_2 window	HIS2000R-CWC300 Soldered CaF_2 window
No collimator	No collimator	No collimator	Winston Cone collimator	
No gas filling	N_2 gas filling (other gases possible)	N_2 gas filling (other gases possible)	N_2 gas filling (other gases possible)	
				

ISO 9001
Certified
Quality Management System

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