



EMIRS Series

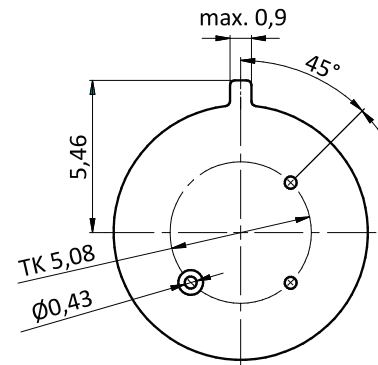
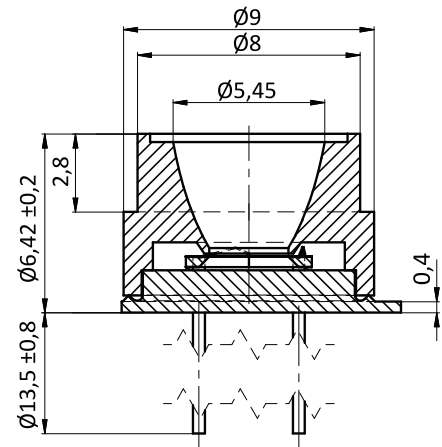
High performance IR Sources for broad range gas analysis

The HSL EMIRS Series is an electrically modulated, long-term stable thermal black body source with wide wavelength range and low power consumption.

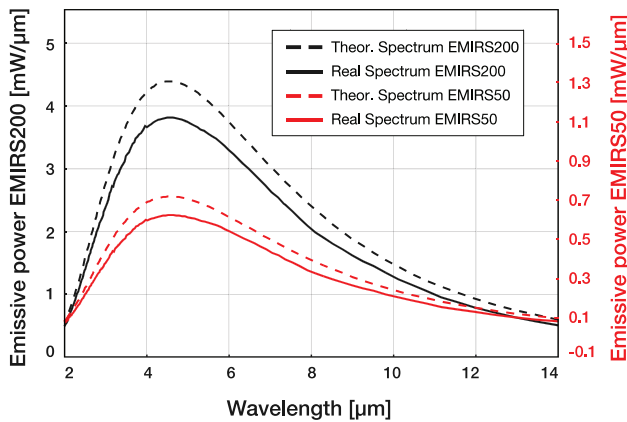
It consists of a thin resistive heating element integrated in a thin dielectric membrane. This allows fast modulation due to the low thermal mass of the element.

It can be used for IR gas detection and monitoring of e.g. CO, CO₂, NO_x or SO_x, or as a calibration source. The EMIRS series is provided in cooperation with Axetris AG, Switzerland.

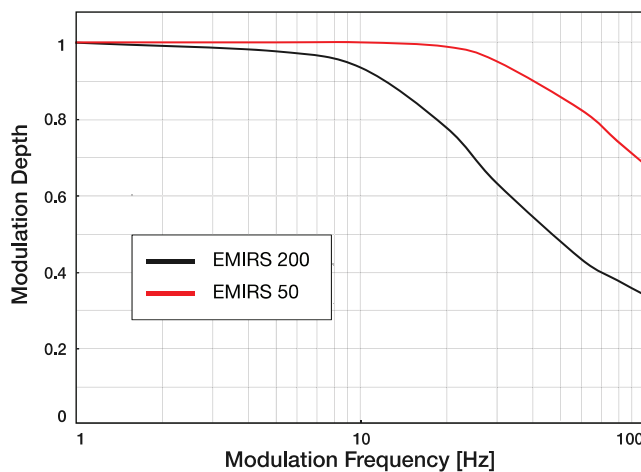
Dimensions (Example)



Spectral Emission



Modulation Depth vs. Frequency



Characteristics

	EMIRS 200	EMIRS 50	Unit
Housing	TO-39	TO-46	
Cold resistance	45 ± 10	29 ± 7	Ω
Hot resistance	72 ± 18	42 ± 11	Ω
Electrical input power	450	187	mW
Operating voltage	5.6	2.7	V
Heating time constant^{a)}	18	10	ms
Cooling time constant^{b)}	8	5	ms
Working temperature	450	463	°C
Emissivity^{c)}	>0.85	>0.85	
Lifetime (measured)^{d)}	10	10	years
Heating area	2.1 x 1.8	0.8 x 0.8	mm ²
Case temperature^{e)}	40..85	40..85	°C

a) Resistance rise time 10% to 90%
 b) Resistance cooling time 90% to 10%
 c) 2 µm to 14 µm
 d) Mean time to failure (MTTF)
 e) Tamb = 22°C

Ordering Information

HSL EMIRS Heimann Sensor Lamp - EMitting InfraRed Source
 50, 200 Power rating and package size
 R Reflector (optional)
 Fx Filter type (Sapphire, CaF₂, BaF₂, GeArc)
 FV, BV Front vented (standard), back vented

E.g.: HSL EMIRS 200 R_CaF_FV