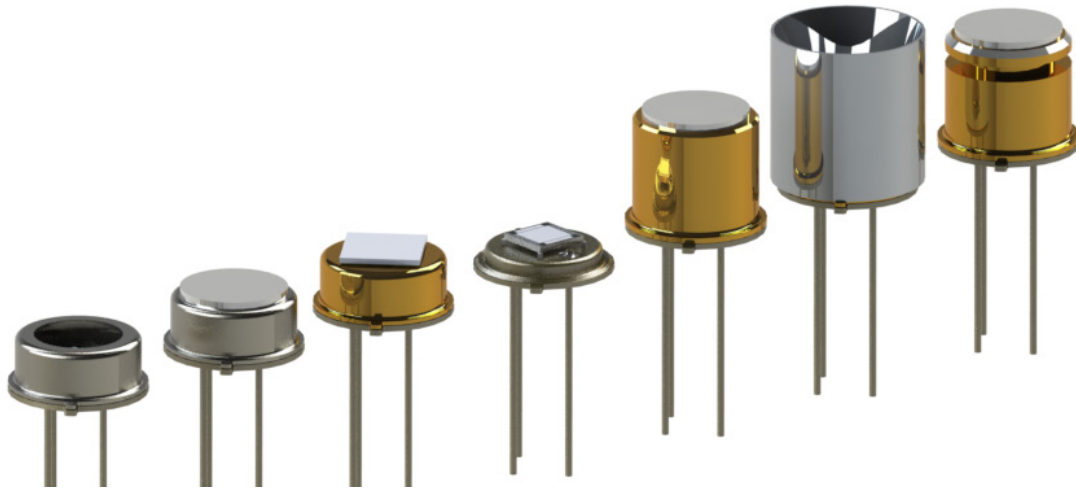
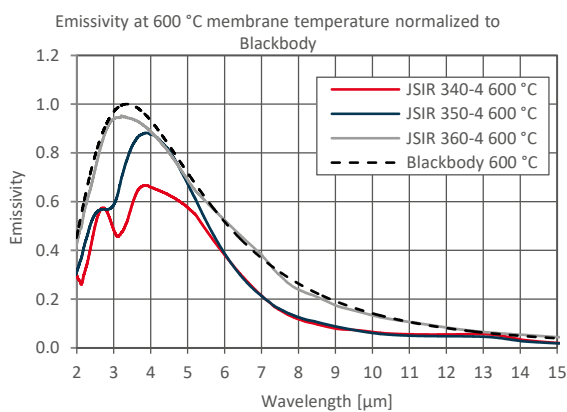


IR emitter overview

Get all information at a glance



Our IR emitters ensure reliable and precise measurement results in NDIR gas analysis. Customers may choose from many options to find an emitter to meet their individual requirements.



Micro-Hybrid JSIR emitters are NAC or C-MOSI® MEMS-based infrared emitters with low power consumption, high emissivity and long lifetime with true blackbody radiation properties.

From economy IR emitters for mass applications to high-end radiation sources for demanding measurement tasks, our JSIR emitters cover all application areas for measuring and monitoring gas concentrations.

Depending on the application, emitters can be selected according to various parameters such as package, chip type, active area, backfilling and filter.

Visit us at www.microhybrid.com or call us at +49 36601 5920

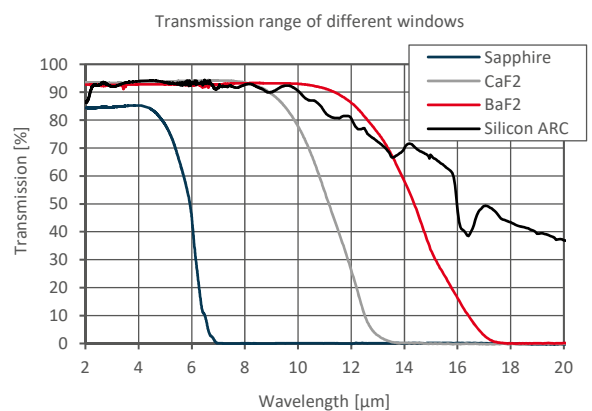
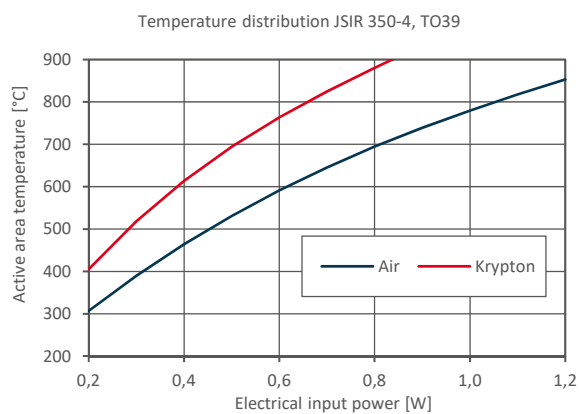
All rights reserved. All information in this data sheet are based on latest knowledge, results of practical experience and tests carried out. Earlier specifications are hereby invalid. All specifications – technical included – are subject to change without notice.

It is the customer's responsibility to ensure that the performance of the product is suitable for customer's specific application. No liability is accepted for indirect damage, in particular for the use or inability to use the product. Any liability we may have is limited to the value of the product itself.

Keyfacts JSIR 340/ 350/ 360

	JSIR 340-x	JSIR 350-x	JSIR 360-x
Classification	Economy	High performance	High end
	High quantities ≥ 10000 p.a	Mid range quantities ≤ 15000 p.a.	Low quantities ≤ 1000 p.a
Lower power consumption	✓	✓	✓
Long lifetime	✓	✓	✓
Low resistance tolerance	✓		✓
Short time constant	✓	✓	
Robust	✓	✓	
Spectral emission	Improved spectrum > 5 μm	Close to black body spectrum	Black body spectrum
Bare dies available	✓		
HermeSEAL®		✓	✓
Full customization		✓	✓

Typical operating characteristics of JSIR sources



Technical data in comparison

Technical parameter T039	340-4	350-4	360-4	Unit
Spectral output range	2 ... 15	2 ... 15	2 ... 15	µm
Active area	2.2 x 2.2	2.2 x 2.2	2.2 x 2.2	mm ²
Hot resistant	19 ± 5	40 ± 20	18 ± 5	Ω
Time constant _{0-63 %}	typ. 15	typ. 17	typ. 26	ms
Nominal power consumption ¹	650	650	650	mW
Operation voltage ²	typ. 3.5	typ. 4.9	typ. 3.42	V
Operation current ²	typ. 185	typ. 132	typ. 190	mA
Recommended driving mode	Power mode	Power mode	Power mode	
Active area temperature ^{3,4}	650 ± 30	610 ± 30	600 ± 30	°C
Estimated lifetime ^{4,5}	> 100000	> 100000	100000	h
Max. input power ^{1,4}	1000	1200	850	mW
Max. active area temperature	850	850	700	°C

Technical parameter T046	340-5	350-5	Unit
Spectral output range	2 ... 15	2 ... 15	µm
Active area	1.0 x 1.0	0.65 x 0.65	mm ²
Hot resistant	25 ± 5	40 ± 20	Ω
Time constant _{0-63 %}	typ. 8	typ. 8	ms
Nominal power consumption ¹	250	175	mW
Operation voltage ²	typ. 2.5	typ. 2.6	V
Operation current ²	typ. 100	typ. 66	mA
Active area temperature ^{3,4}	610 ± 30	610 ± 30	°C
Estimated lifetime ^{4,5}	> 100000	> 100000	h
Max. input power ^{1,4}	320	300	mW
Max. active area temperature	700	850	°C

¹ at power on-state

² with nominal hot resistance

³ DC power (nominal power)

⁴ at T_{amb} = 25 °C

⁵ at 1 Hz, 50 % duty cycle, MTTF 63 % (membrane fracture, preliminary results)

Micro-Hybrid-Shop



IR sources are available at www.microhybrid.com/en/shop/ir-emitter/. For further questions, please mail your request to [Matthias Günther](mailto:Matthias.Guether@microhybrid.com), Key Account Manager IR components and systems.