Your Source For InfraRed
HAWKEYE TECHNOLOGIES

IR-Si311 EMITTER

DATASHEET



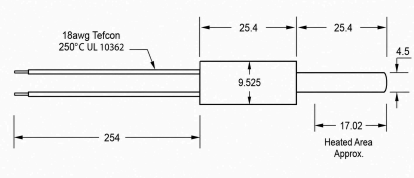
Infrared Emitter provides high temperature and high radiation output

General Information

Key Features: Stable characteristics (bare minimum resistance drift over life)

Emitter Type	Silicon Carbide-Based
Operation Mode	Steady State
ROHS	Conformed
Active Area	4.5 × 17 mm
Recommended Voltage	11V
Operation Life At 62.4 W Power*	≥ 5,000 H

*Max/Recommended. Higher input will impact emitter's life.



*All dimensions in mm

Application Notes

This emitter is designed to operate at elevated temperatures, with the radiating element reaching up to approximately 1025 °C. Such high operating temperatures must be carefully considered in system design and thermal management.

The heating element can operate in air. A neutral atmosphere (like nitrogen, argon, or vacuum) is also acceptable. During operation, the package temperature may rise to approximately 150 °C or higher, depending on operating conditions.

The emitter produces infrared radiation primarily within the wavelength range of 2 to 15 µm, with a peak emission around 3.5 µm.

This device is suitable for use in a wide range of infrared spectroscopic applications, including as a radiation source in IR spectrometers.

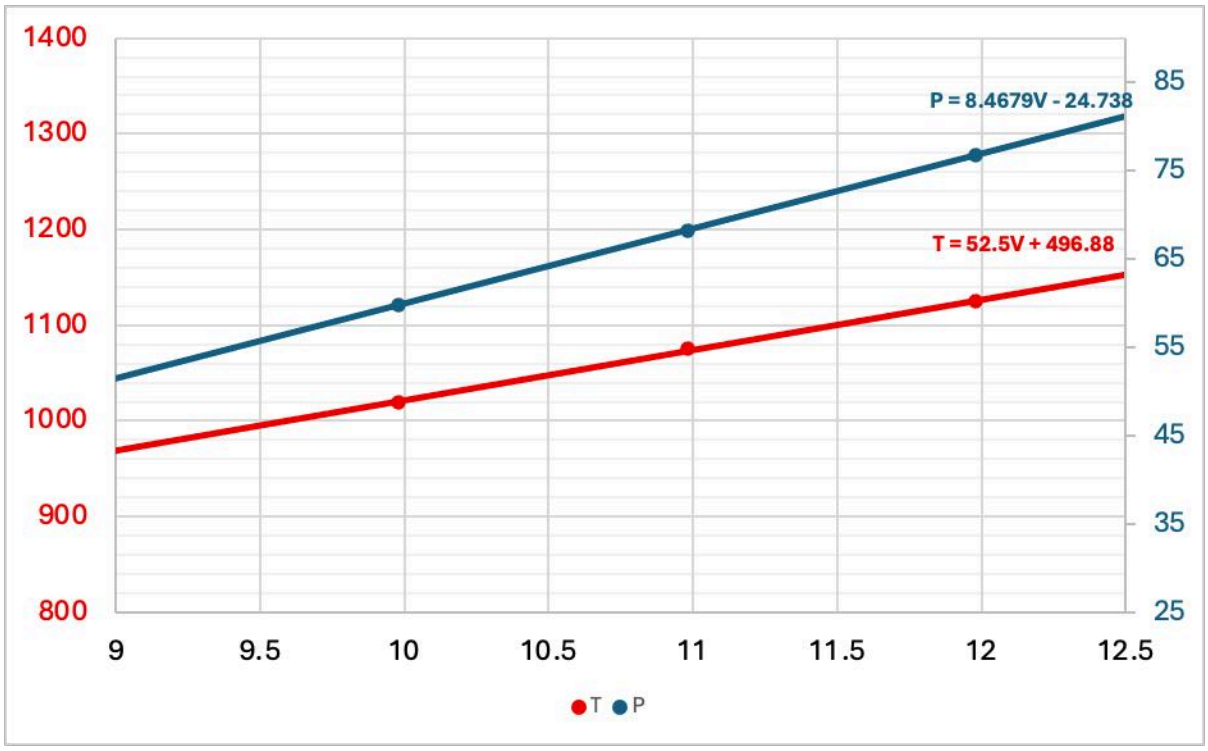
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Specifications subject to change without notice.
Please visit our website for the most up to date information.

Emitter Ratings

Parameter	Symbol	Value, Typical	Unit	Notes
Cold Resistance	Rc	0.4	Ohm	At room temp
Input Power	P	70	W	-
Input Voltage	V	12	V	-
Input Current	I	5.8	A	-
Operating Resistance	Rop	2.1	Ohm	-
Active Area Temp	T	1025	°C	Environment at 25°C

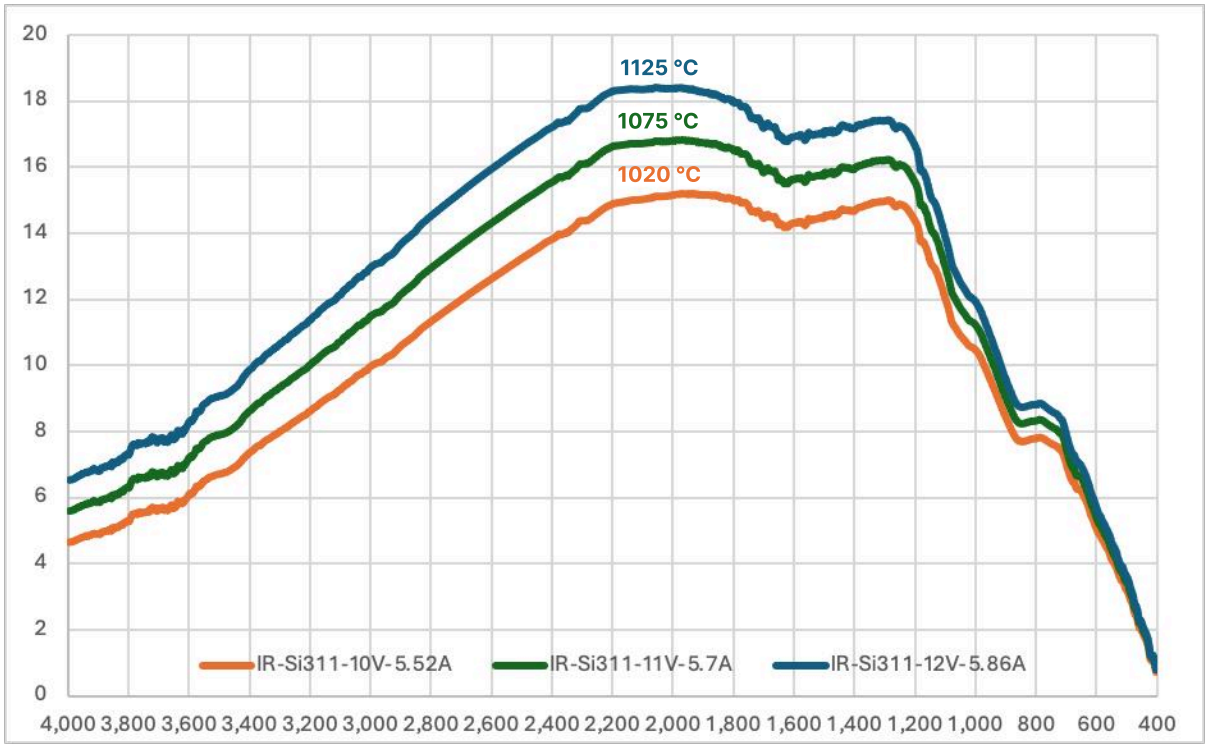
IR-Si311. Power (W) and Temperature (°C) vs Voltage (V)



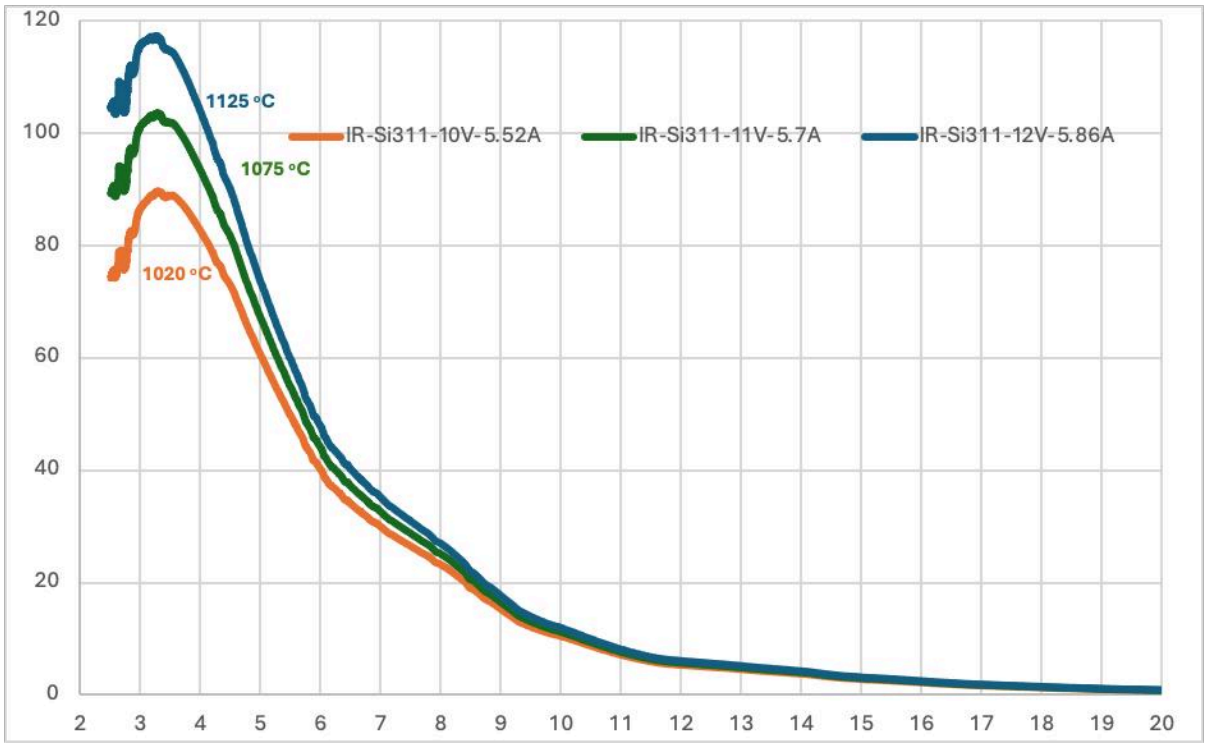
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IR-Si311. Emission (a.u.) vs Wavenumber (cm^-1)



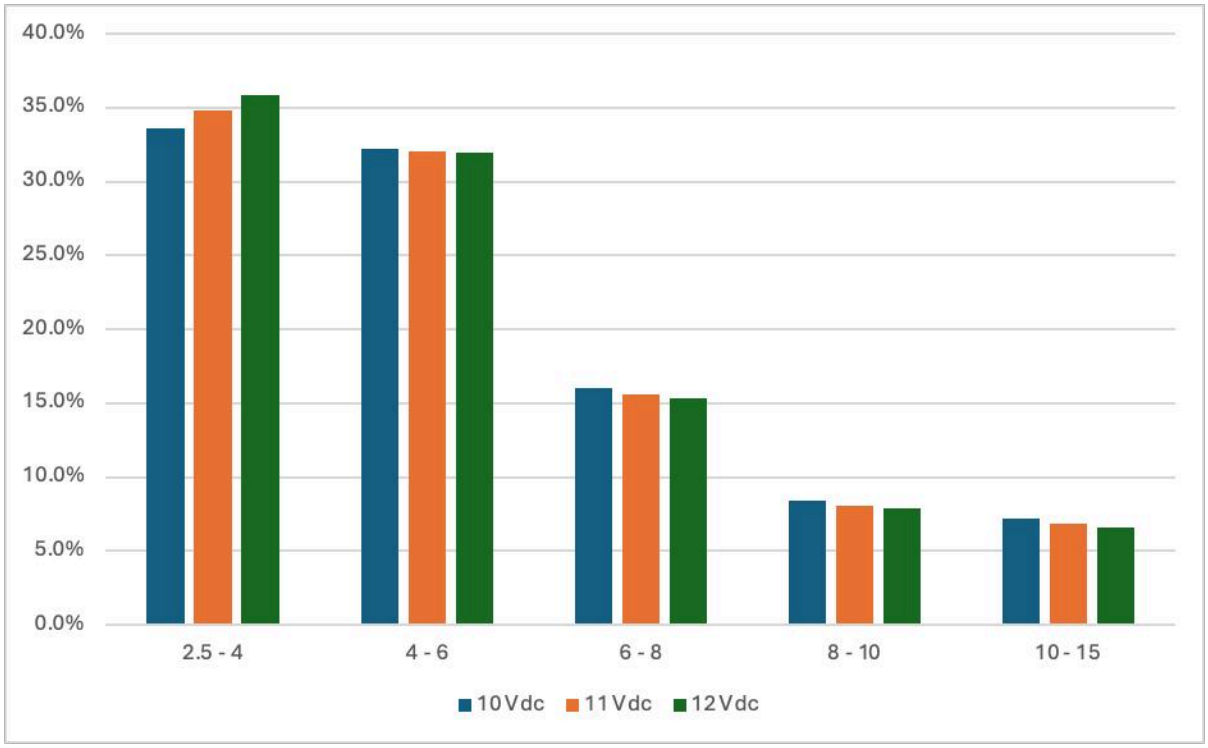
IR-Si311. Emission (a.u.) vs Wavelength (um).



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IR-Si311. Radiance Distribution over Wavelengths.



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