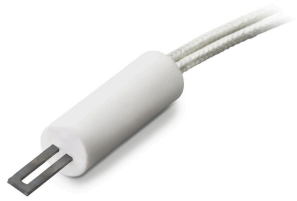
Your Source For InfraRed
HAWKEYE TECHNOLOGIES

# IR-Si207 EMITTER

## DATASHEET



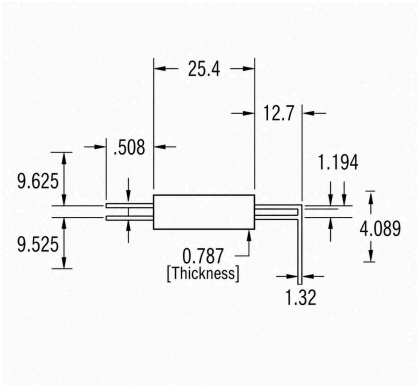
Infrared Emitter provides high temperature and high radiation output

## 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** | 3 × 4.4 mm |
| **Recommended Voltage** | 12V |
| **Operation Life At 24 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 1375 °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 µm.

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

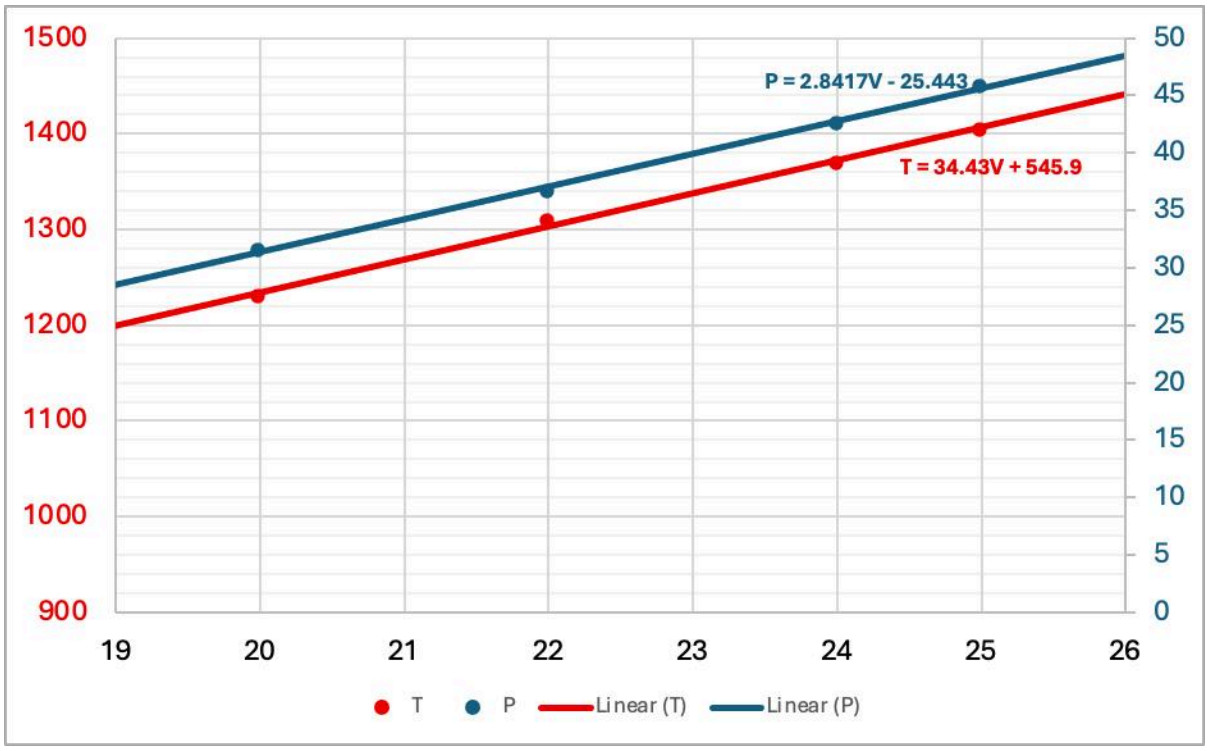
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## Emitter Ratings

| Parameter | Symbol | Value, Typical | Unit | Notes |
|---|---|---|---|---|
| Cold Resistance | Rc | 1.3 | Ohm | At room temp |
| Input Power | P | 24 | W | - |
| Input Voltage | V | 12 | V | - |
| Input Current | I | 2 | A | - |
| Operating Resistance | Rop | 6 | Ohm | - |
| Active Area Temp | T | 1375 | °C | Environment at 25°C |

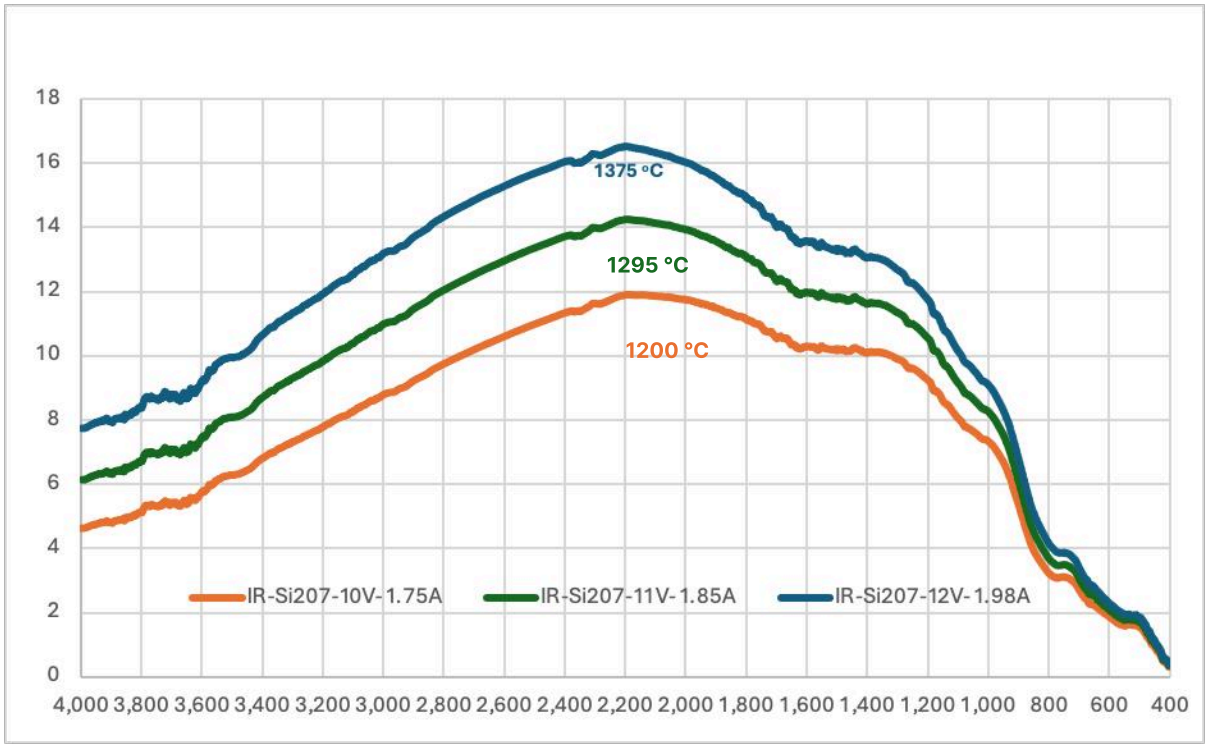
## IR-Si207. Power (W) and Temperature (°C) vs Voltage (V)



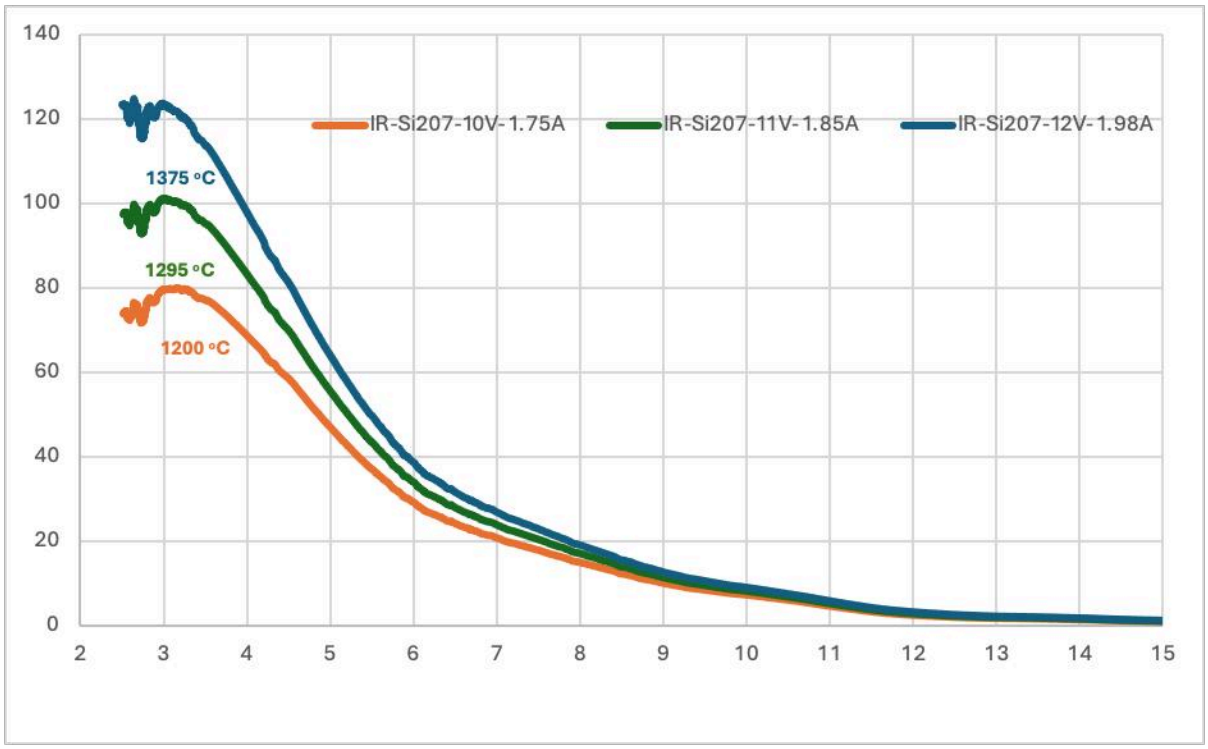

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## IR-Si207. Emission (a.u.) vs Wavenumber (cm^-1)



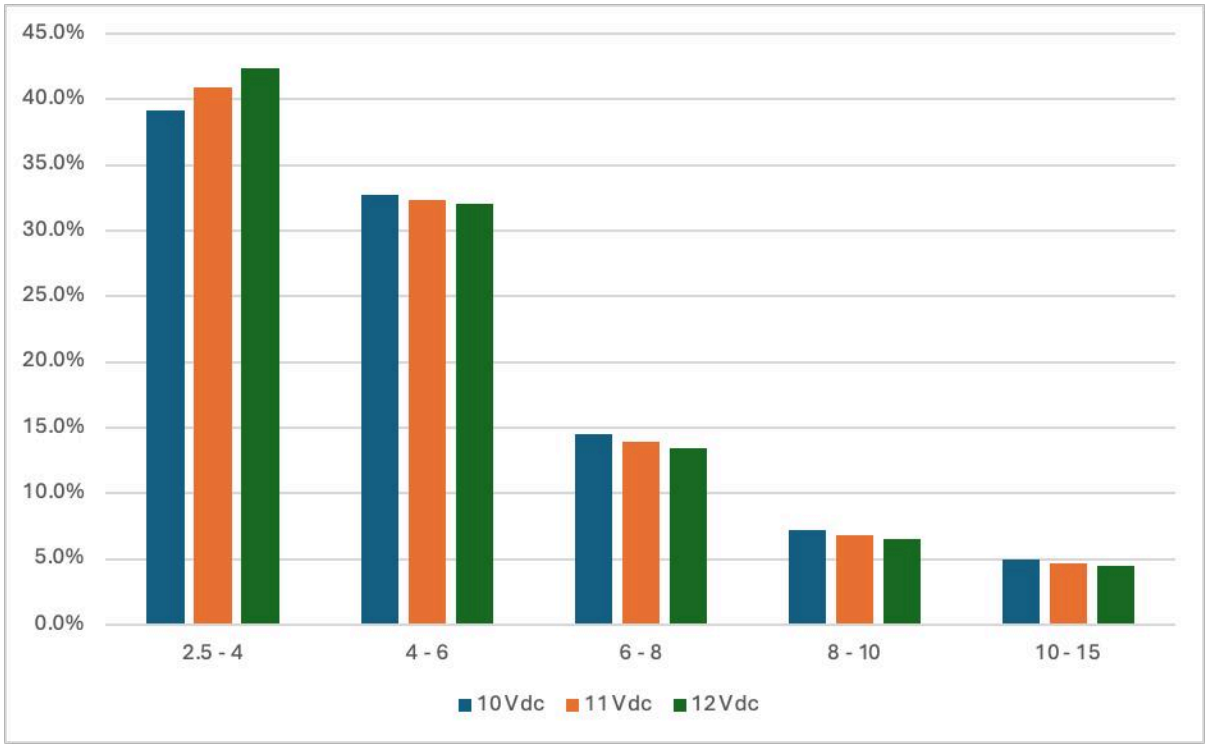

## IR-Si207. Emission (a.u.) vs Wavelength (um).




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## IR-Si207. Radiance Distribution over Wavelengths.




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