# Infrared-Emitter HIS550R-C



Thermal infrared emitter with $CaF_2$ window and Nitrogen gas filling, hermetically sealed

HIS550R-C is a NiCr filament based thermal infrared emitter in a hermetically sealed TO-39 package with a glued $CaF_2$ window and Nitrogen noble gas filling. This guarantees best long-term stability. The standard cap allows a simple replacement in existing applications.

**Product Name:** HIS550R-C
**Package:** TO-39 / TO-5
**Radiating element area:** 11 $mm^2$
**Radiating element emissivity:** > 0.9
**Radiating element temperature:** 600 °C at 650 mW
**Max. electrical power (DC):** 700 mW
**Max. electrical voltage:** 4.0 V
**Max. electrical current:** 175 mA
**Electrical resistance:** 21…23 Ω
**Modulation frequency:** 6 Hz

**Filter/Window:** CaF2 (glued)
**Wavelength range:** 2 to 11 µm
**Filling gas:** Nitrogen
**Product code:** 155746

# Product details

## HISbasic series

## Black-body infrared sources in TO39/TO5 package

**HIS***basic* series emitters have an integrated gold plated reflector that directs the radiation emitted from the rear to the front in order to achieve maximum efficiency. All our emitters offer minimum drift at a constant electrical resistance. Infrasolids IR emitters are characterized by a very low temperature coefficient of electrical resistance. Therefore the hot resistance and the cold resistance are almost identical which eases the electrical control of the IR sources.

Infrasolid’s infrared radiation sources 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.

## Key features HISbasic series

- Pulsable thermal black-body infrared source mounted in an industry standard TO-39/TO-5 package
- Patented nanostructured radiating element achieves up to 500% more detection signal!
- Lower radiating element temperature of 600 °C increases lifetime!
- Wide wavelength range enables a broad range of applications

## INFRASOLID® nanostructure technology

Infrasolid’s patented nanostructure technology allows the fabrication of extremely thin and very heat-resistant black optical coatings. They are already used in our thermal infrared light sources but also in optical detector technologies and for stray light absorption in optical measurement systems. The broad spectral range of high

absorption extends from UV up to far infrared wavelengths. A structuring of the black coatings can be done by photolithography to realize very small structures or local areas of blackening. The deposition is done on flat substrates. Temperature-sensitive materials, such as plastics, can be coated using our low temperature black coating process.

## The online shop

| Quantity (pieces) | Price (per piece) |
|---|---|
| 1-4 | CHF 65.52 |
| 5-9 | CHF 57.12 |
| 10-24 | CHF 53.76 |

Stock: **4**