

## Linear Stirling Cooler SL070

The AIM 3/4W cryocooler SL070 is a state-of-the-art Linear Stirling cooler, which is designed for high performance IR applications.

The SL070 is compact, lightweight and provides a cooling capacity of 0.6W @ 80K at +71°C ambient temperature.

The resulting performance margin allows detector temperatures down to 65K.

Due to the sleeve design of the coldfinger (Titanium or optional Inconel®) the expander can be integrated and exchanged by the customer.

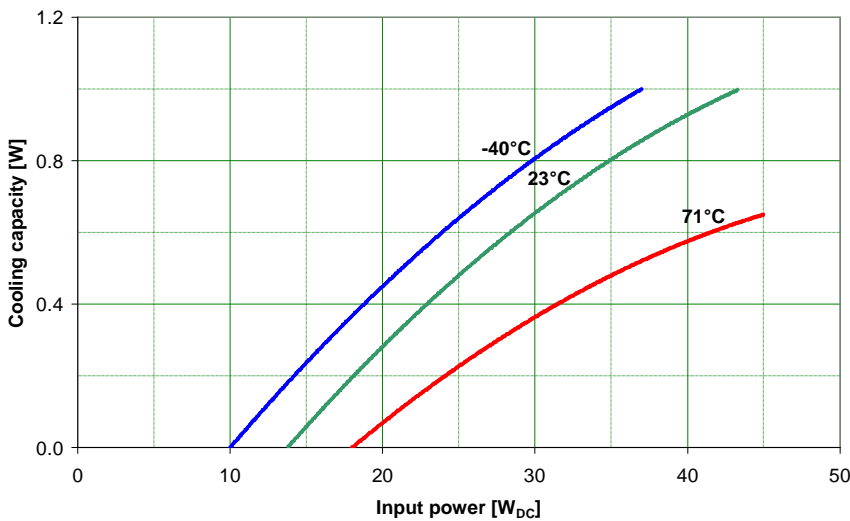
- High MTTF (>8,000h)
- Compact and lightweight
- High cooling capacity
- Sleeve Coldfinger suitable for IDCAs solutions
- Optional with integrated electronic (B-version)

The cooler is available as:

- A-version for use with external control electronics like the AIM's AM7X or alternatively with customer's electronics.
- B-version, a compact solution including miniaturized high precision control electronics, integrated inside the compressor housing. Excellent temperature stability  $<\pm 20\text{mK}$ .



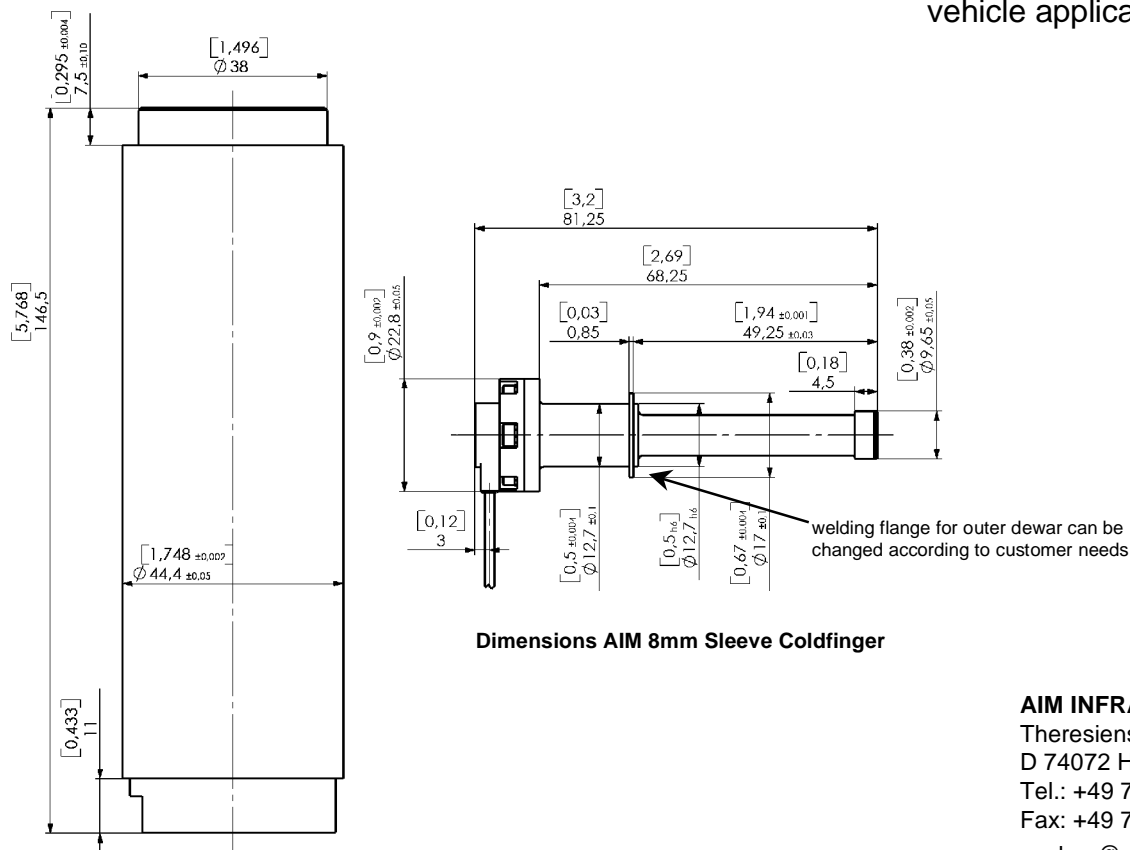
**Typical Performance Data**  
SL070B @ 77K



	SL070A	SL070B
<b>Control electronics</b>	ext.	int. AM7
<b>Compressor length [mm]</b>	128.5	146.5
<b>Compressor weight [g]</b>	940	1000
<b>Supply voltage</b>	6 - 20 V <sub>AC</sub>	24 - 32 V <sub>DC</sub>
<b>Coldtip outer diameter [mm]</b>	8.25, Top 9.65	
<b>Max. length of transferline [mm]</b>	250	
<b>Ambient temperature range [°C]</b>	-40 ... +80	

## Applications

- High performance IDCAs
- Applications with highest temperature stability
- IR detectors operated at 65 - 120K (ambient temperature up to 80°C)
- Qualified for various military programs. Cooler in serial production for airborne and vehicle applications



**Outline Dimensions of B-Version**  
(integrated control electronics)

**AIM INFRAROT-MODULE GmbH**  
Theresienstraße 2  
D 74072 Heilbronn / Germany  
Tel.: +49 7131 6212 - 310  
Fax: +49 7131 6212 - 399  
coolers@aim-ir.com  
www.aim-ir.com