FLEXURE BEARING STIRLING COOLER SF070

- Flexure Bearing and Moving Magnet Technology
- High MTTF (>30,000h)
- Compact and lightweight
- High cooling capacity of 0.6W (@ 80K; 23°C)
- Modular Cooler Concept
  - Several coldfinger options available

The AIM SF070 is a Stirling cryocooler based on Moving Magnet Technology and Flexure Bearing suspension on both ends of the driving mechanism. A computerized alignment process combined with an optimized material composition inside the helium vessel results in lifetimes exceeding 30,000h.

The cooler is designed for high performance IR-detectors. The SF070 is compact, lightweight and provides a cooling capacity of more than 0.4W @ 80K at 71°C ambient temperature.

The resulting performance margin allows detector temperatures down to 70K.

The SF070 can be operated with AIM’s digital cooler electronics (µDCE050, DCE100) or alternatively with customers’ electronics.
FLEXURE BEARING STIRLING COOLER SF070

Applications

- High performance IDCAs
- IR-detectors operating at 70 - 140K
- Ambient temperature up to 80°C
- Applications requiring high cryocooler reliability and reduction in maintenance costs

Typical Performance Data
SF070 with 8mm coldfinger

<table>
<thead>
<tr>
<th>SF070</th>
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<tbody>
<tr>
<td>Compressor diameter</td>
<td>[mm/in]</td>
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<tr>
<td>Compressor length</td>
<td>[mm/in]</td>
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<tr>
<td>Compressor weight</td>
<td>[g/lb]</td>
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<tr>
<td>Supply voltage</td>
<td>[VAC]</td>
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<tr>
<td>Cooler Controller</td>
<td>µDCE050 / DCE100</td>
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<tr>
<td>Ambient temperature range</td>
<td>°C</td>
</tr>
<tr>
<td>Suitable coldfinger / dewar diameter</td>
<td>6mm, 8mm, 9mm</td>
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</tbody>
</table>

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Dimensions SF070 compressor

Dimensions 6mm Generic coldfinger long

Dimensions 6mm coldfinger

Dimensions 8mm coldfinger