



## Datasheet

## Cri/oFlex<sup>®</sup> 3

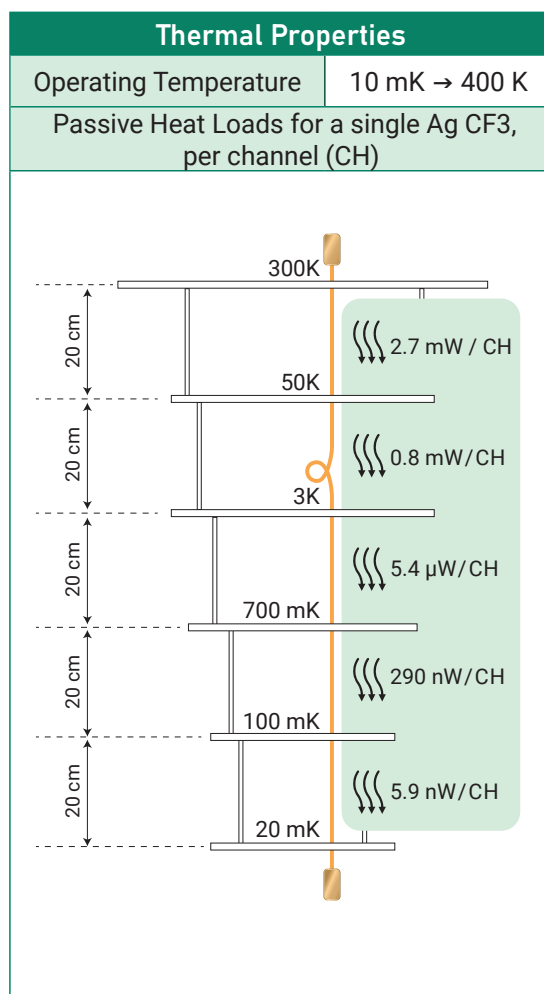
### Tackle your cryogenic cabling challenge!

Cri/oFlex<sup>®</sup> 3 (CF3) is our multi-channel solution specifically designed as end-to-end i/o, providing high-density uninterrupted lines from room temperature down to millikelvin. It is especially well-suited for situations where small form factor, low thermal load and excellent microwave performance are critical. To fit your specific needs, options are available such as: vacuum feedthroughs, thermal clamps and a choice between SMA or SMP connectors. Cri/oFlex<sup>®</sup> 3 addresses your cryogenic cabling scaling challenges!

### Features

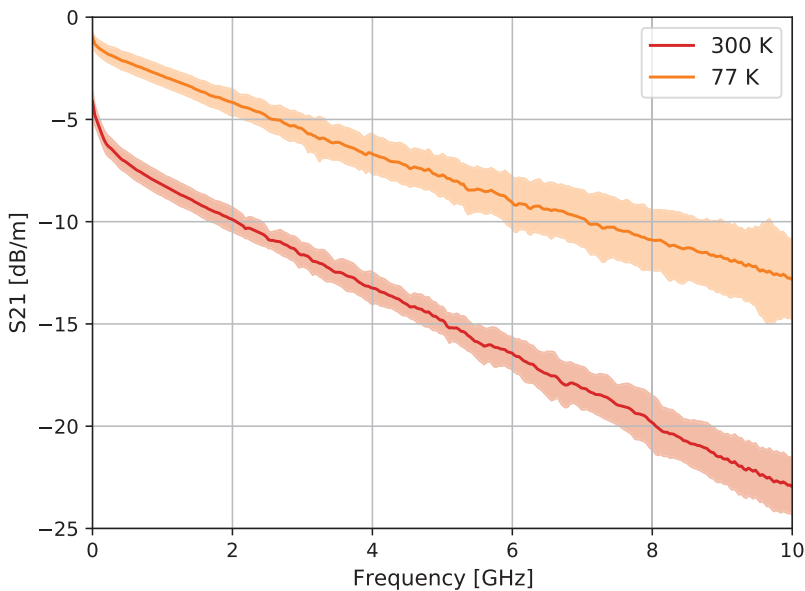
- High-density microwave channels
- Monolithic design from RT to millikelvin
- Resilient against thermal cycling
- Optional filtering & signal conditioning
- Integrated vacuum feedthrough
- Low thermal load

General Properties	
Connector	
Connector Type	Right-angle SMA (f/m) & SMP(m)
Connector Material	Goldplated Brass/BeCu PEEK/PTFE
Housing	Goldplated ETP Copper
Flex	
Flex length	200 to 1100 mm
Amount of Channels	8 Channels
Thickness	0.3 mm
Materials	Polyimide & Silver (Ag) or NbTi
Transmission-line type	Stripline
Min. Bending Radius	5 mm
Required Length for Longitudinal Rotation	10 cm / 180° rotation
Vacuum Feedthrough	
Leak-rate	$<10^{-9}$ mbar L s <sup>-1</sup>
Compatible Vacuum Connections	KF-25/40/50, Entropy System plates
Electrical Properties	
Impedance	Designed for 50 $\Omega$
Operating Frequency	DC to 10 GHz
Maximum Crosstalk (channel-to-channel), L=200 mm	$< -60$ dB



## Microwave Properties


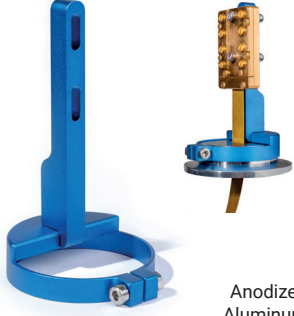


The figure below shows the typical roll-off (S21) that can be expected from a DC-10 GHz bandwidth CF3. The solid line shows the average attenuation of 32 channels from a collection of several CF3 cables. From these channels, 90% (1.28  $\sigma$ ) fall within the semi transparent area around the solid lines.



## Peripherals

The CF3 platform doesn't just stop at the flexible cabling, we aim to provide a complete solution for your cryogenic i/o needs. Our current stock includes;

- Thermal Clamps for proper thermalization at every stage in your cryogenic system, we can supply different footprints based on your requests, do not hesitate to contact us!
- Vacuum Feedthroughs, a massively scalable solution to transfer a multitude of lines into the vacuum environments, currently based on KF flanges, but can be customized upon request.
- Brackets to properly secure the cables for your experiments we offer a variety of brackets for cryogenic, room temperature and vacuum environments.

Peripherals	
Vacuum Feedthrough KF-40-VAC-FT	Bracket KF-40-Bracket
 Stainless steel with Stycast	 Anodized Aluminum
Thermal Clamp TH-CL-40.20	Bracket Fridge stages
 Gold plated OF-Copper	 Gold plated OF-Copper

