



Datasheet

Cri/oFlex® 2



Tackle your cryogenic cabling challenge!

Cri/oFlex® 2 (CF2) cabling combines the robustness and compatibility of standard SMA and SMP connectors with the versatility of a in-house developed transmission line platform on flexible substrates. Cri/oFlex® is specifically designed for cryogenic environments where thermal load, microwave performance, small form factor and phase stability are critical. Cri/oFlex® 2 comes as a standardized cable setup as described below, but can be highly customized upon request. Cri/oFlex® products are ideally suited for very compact and densely packed cryogenic environments. Providing very sturdy cables that can be bent countless times, Cri/oFlex® addresses your cryogenic cabling challenges!

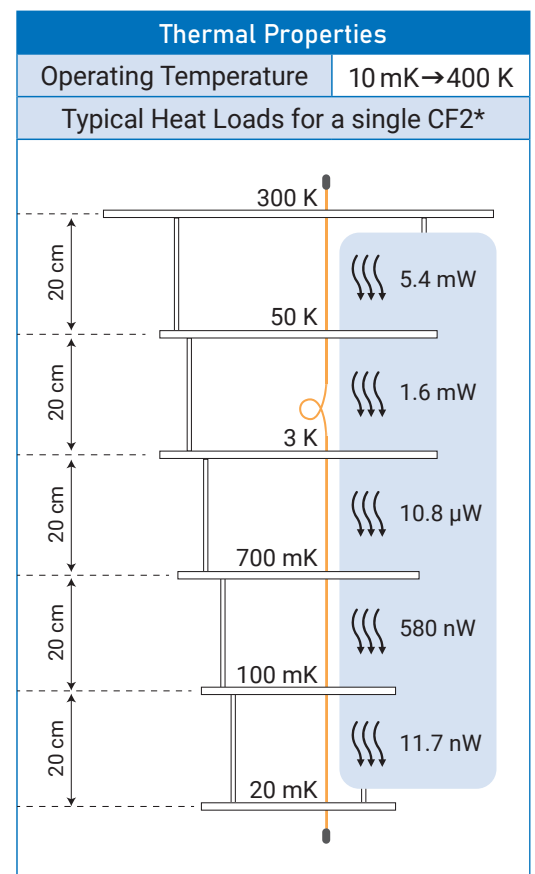
Features

- Extremely flexible
- Excellent phase stability
- Small form factor
- Countless bending and straightening cycles
- Resilient against thermal cycling
- Low thermal load

General Properties	
Connector	
Connector Type	SMA, SMP, SMPM (all male)
Connector Configuration	Straight and Right-angle
Connector Material	Goldplated Brass/BeCu PEEK/PTFE
Housing	Stycast 2850
Flex	
Length	150 to 1000 mm
Width	2 mm
Thickness	0.3 mm
Materials	Polyimide & Silver (Ag)
Transmission-line type	Stripline
Min. Bending Radius	1 mm
Required Length for Longitudinal Rotation	5 cm / 180° rotation

Electrical Properties	
Impedance	Designed for 50 Ω
Operating Frequency	DC to 26 GHz (dependent on connector type)
Signal Isolation (Crosstalk)	< -60 dB, flex to flex, for connector data contact us
Maximum power	7 W @ 2 GHz *

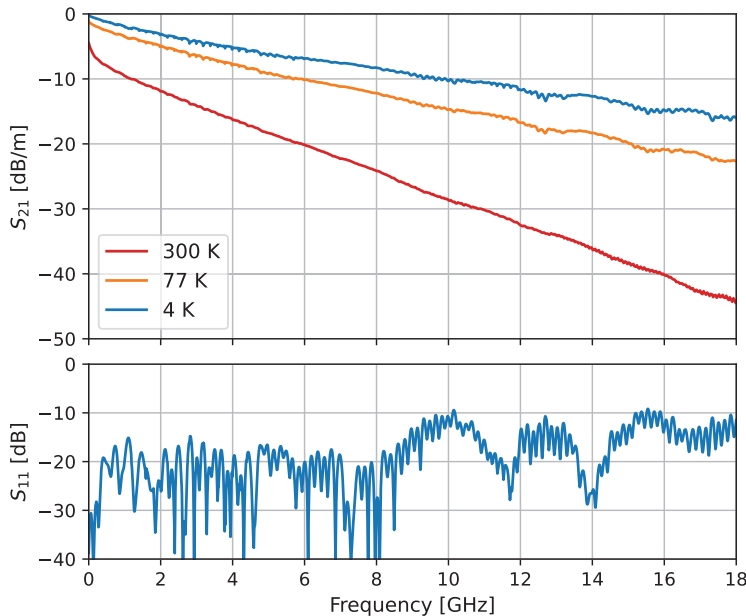
* Maximum tested power and frequency.



*Multi-channel (CF3) significantly reduces heat load per channel

Microwave Properties

The figure below shows the transmission (S_{21}) and reflection (S_{11}) of a typical DC-18 GHz bandwidth flex cable. Depending on connector type the overall S-parameters may vary slightly.

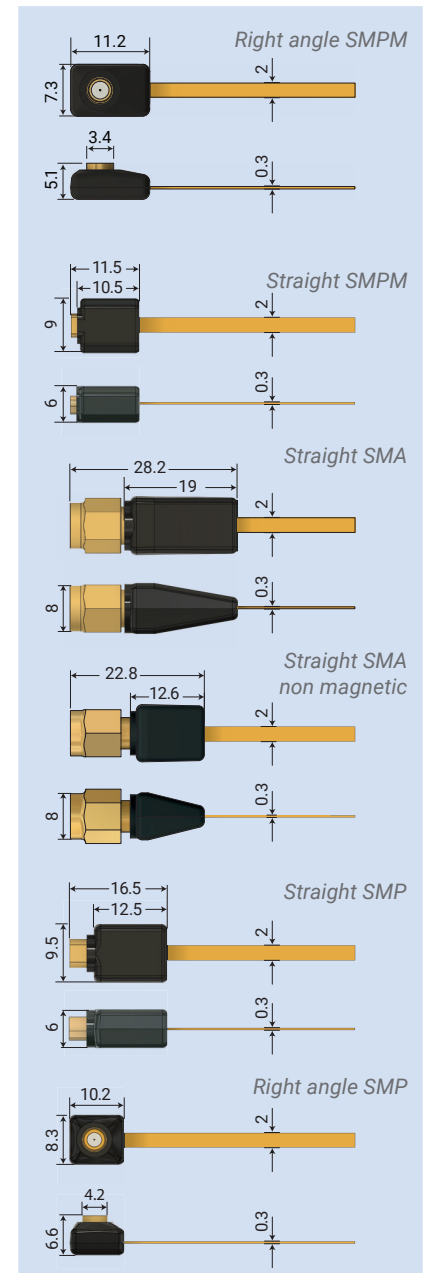


Non-Magnetic

For customers with stringent demands on non-magnetic components in their setups we offer specialized non-magnetic products. The standard Cri/oFlex® products can, in most cases, already be considered as low-magnetic and sufficient for most applications involving magnetic fields. For all materials used in our products please consult the respective datasheets. In case of the non-magnetic options, the goldplated brass is replaced for goldplated beryllium copper.

Connectors

The table below shows the available connector options and corresponding frequency bandwidths; ✓ readily available, ✗ under development. All shown connectors are male. Cri/oFlex® cables can be configured with different connectors at each end.



		Right angle SMP	Straight SMP	Straight SMA non magn.	Straight SMA	Straight SMPM	Right angle SMPM
Bandwidth options	0-6 GHz	✓	✓	✓	✓	✓	✓
	0-12 GHz	✓	✓	✓	✓	✓	✓
	0-18 GHz	✓	✓	✓	✓	✓	✓
	0-20 GHz	✓	✓	✓	✗	✓	✓