

K527

Low Power Split Stirling Linear Micro-Miniature Cryocooler



Model K527 is a new member of RICOR's expanding family of cryogenic coolers. This model is the smallest and lightest in the range of linear split Stirling cryogenic cooler having nominal heat lift 1/2W @95K @71°C and MTTF well in excess of 30,000 hours. The K527 is an ultimate solution for demanding infrared applications, where weight, size, power consumption, heat sinking, reliability, flexibility in system design, vibration export and aural stealth are of concern. The cooler comply fully with MIL-STD-810 meeting the stringent environmental requirements for mission-critical applications. A K527 derivative based on short cold finger (named "Shorty"), designed for novel IR detectors operating at 150K and above for compact payloads requiring exceptionally fast cooldown times.

Detectors	Applications
Small Format Array	Hand Held Thermal Imagers
Mid Format Array	Thermal Weapon Sights
HOT FPA ≥95K	Miniature Gyro Stabilized Payloads
	Border Surveillance



RICOR
Cryogenic & Vacuum Systems



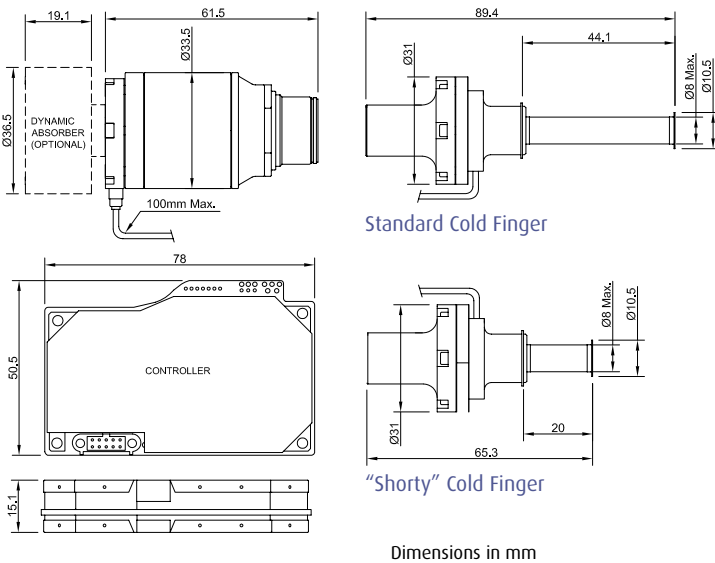
K527

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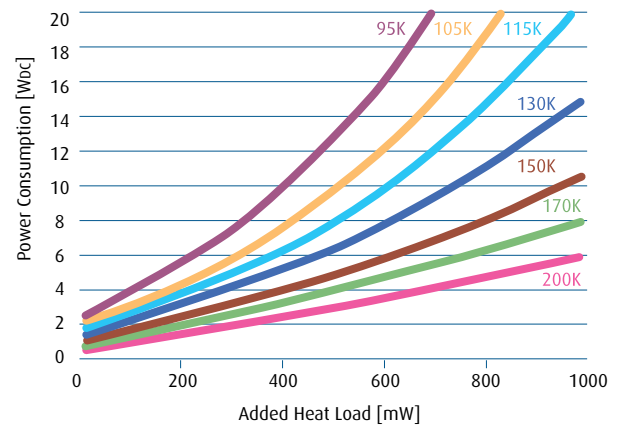


Specifications

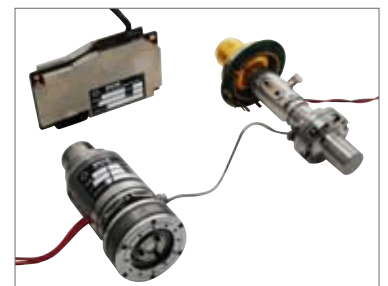
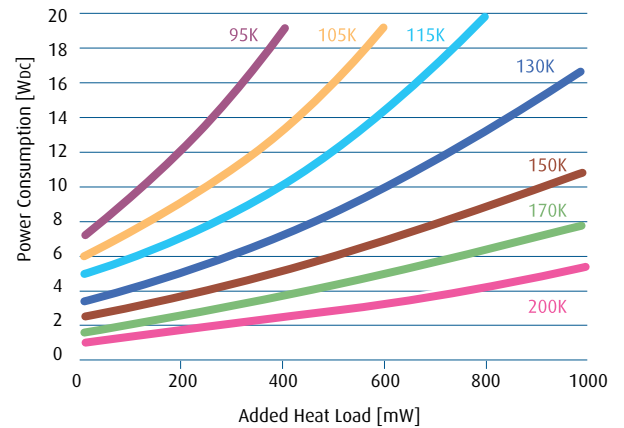
	Standard Cold Finger	Short Cold Finger
Weight (without controller, electrical harness and dynamic absorber)	< 345 gr.	
Input Voltage	5 ÷ 12 Vdc	
Typical Steady State Input Power @50mW Active Load	3.8Wdc @95K Dewar Heat Load 130mW @77K @23°C	2.5Wdc @150K Dewar Heat Load 265mW @77K @23°C
Maximum Power Consumption	20 Wdc	
Ambient Temp. Range	-40°C ÷ +71°C	
Cooldown Time @23°C	< 3 min. Typ. to 95K @250J	< 0.5 min. Typ. to 150K @200J
Nominal Cooling Capacity @ 71°C	500 mW @95K	750 mW @150K
MTTF	> 30,000 hours (Goal)	
Meets Environmental Conditions per MIL STD-810		



K527 With Standard Cold Finger
Dewar Heat Load 130mW @77K @23°C



K527 With "Shorty" Cold Finger
Dewar Heat Load 265mW @77K @23°C



Specifications are subject to changes without prior notice.

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