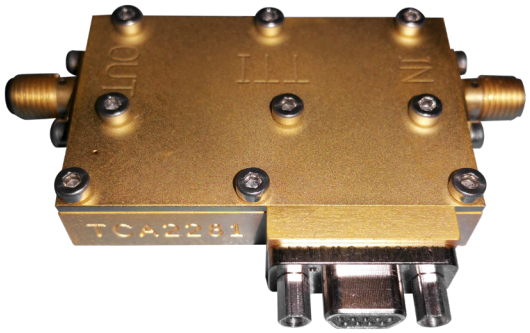
CELESTIA | TTi

C band Cryo LNA
4-8 GHz
2.5 K

C BAND CRYO-LNA RANGE FOR RADIOASTRONOMY & QUANTUM COMPUTING

Using **cutting-edge technology**, the new cryo-LNA family offers outstanding performance in cryogenic operations



INNOVATIVE TECHNOLOGY

A combination of Indium Phosphide (InP) and Gallium Arsenide (GaAs) technologies to deliver outstanding low Noise Temperature (NT).

Each unit is fully tested in cryogenic operating temperatures and delivered with a complete factory acceptance test report at 295 K and 12 K.

KEY FEATURES

* InP/GaAs technology
* Extremely low temperatures operation (4 to 15 K)
* Superior performance
* High reliability & efficiency
* Ultra-low noise figure
* High gain & low ripple
* Compact size & lightweight

TECHNICAL SPECIFICATIONS

ELECTRICAL

Operating frequency range	4-8 GHz
Noise temperature	<3.5 K at 12 K
	<2.5 K at 4 K
Input return loss (50 Ω)	<-6 dB
Output return loss (50 Ω)	<-13 dB
Gain	40 to 44 dB
Gain flatness	1 dB pp max
Reverse isolation	<-60 dB

POWER SUPPLY

Drain voltage range	0.4 V to 0.8 V
Drain current range	<16 mA
Gate voltage range	-2 to +2 V
Power consumption	<10 mW
Power biasing	2 wires (one for V_D and one for V_G)

INTERFACES & PHYSICAL

Dimensions (L x W x H)	46 x 29 x 9 mm (with DC nano connector)
Weight	36 gr
Interfaces	RF input: SMA (f) / SMA (m)
	RF output: SMA (f) / SMA (m)
	DC: Nano D 9-P / Micro D 9-P

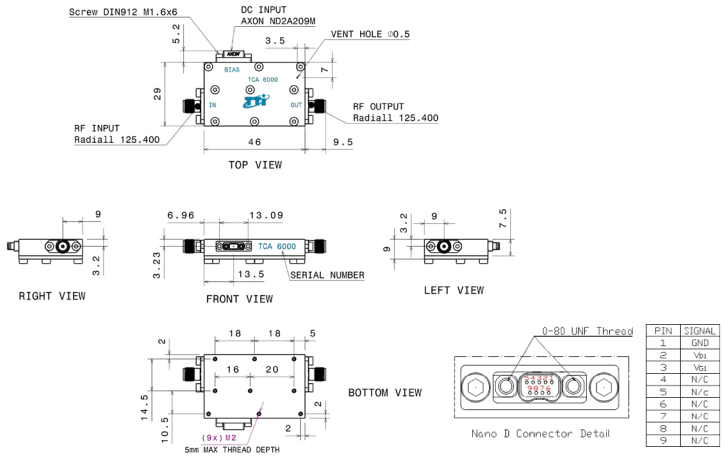
ENVIRONMENTAL

Operating temperature	2 K to 15 K

OPTIONS

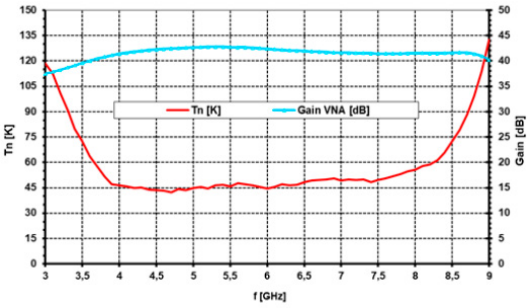
* Micro or Nano DC connector
* Servo-controlled power supply unit

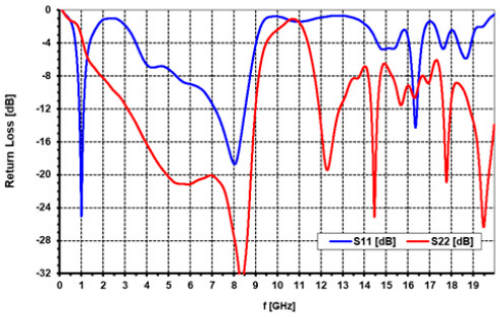
OUTLINE DRAWING



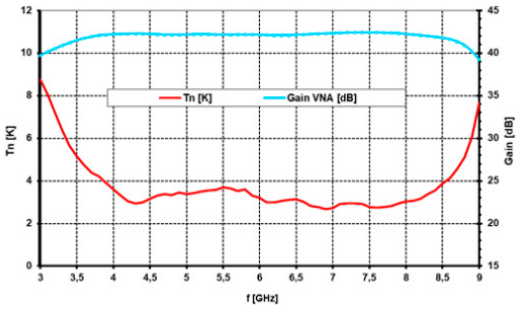
TYPICAL MEASURED DATA

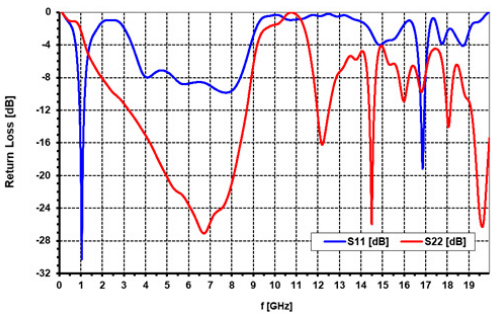
Gain & Noise variation at 295 K



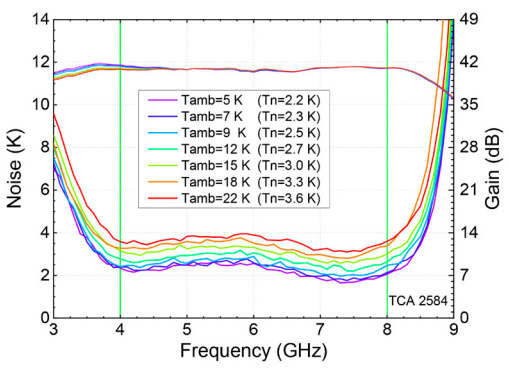


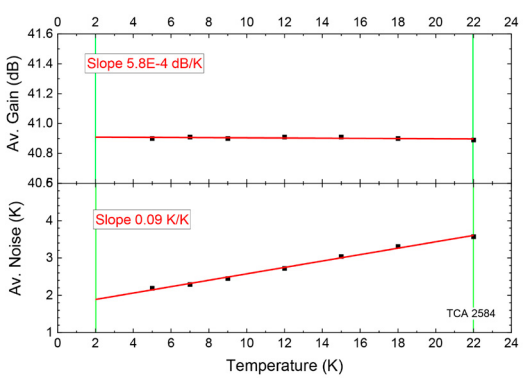
Gain & Noise variation at 12 K





Gain & Noise variation with temperature





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