

X 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.

TECHNICAL SPECIFICATIONS

ELECTRICAL

Operating frequency range	8.4-8.5 GHz
Noise temperature	<3 K at 12 K
Input/output return loss (50 Ω)	<-15 dB
Coupled port	30 dB (typ)
Gain	40 to 41 dB
Gain flatness	0.3 dB pp max
Output P1dB	>5 dBm
Output IP3	>15 dBm
Reverse isolation	<-45 dB

POWER SUPPLY

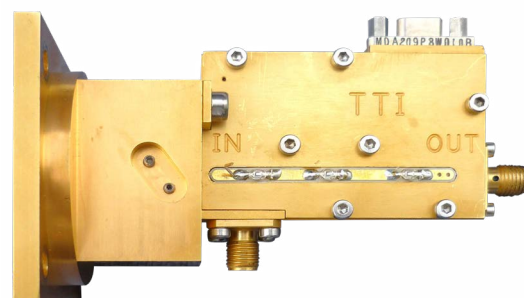
Drain voltage range	0 V to 3.5 V
Drain current range	≤30 mA
Gate voltage range	-3 to +3 V
Power consumption	≤65 mW @P1dB 5 dBm (lower for less P1dB)
Power biasing	6 wires

INTERFACES & PHYSICAL

Dimensions (L x W x H)	48 x 48 x 77 mm
Weight	108 gr
Interfaces	RF input: WR112 (UBR84) RF sample: SMA (f) / SMA (m) RF output: SMA (f) / SMA (m) DC: Micro D 9-P

ENVIRONMENTAL

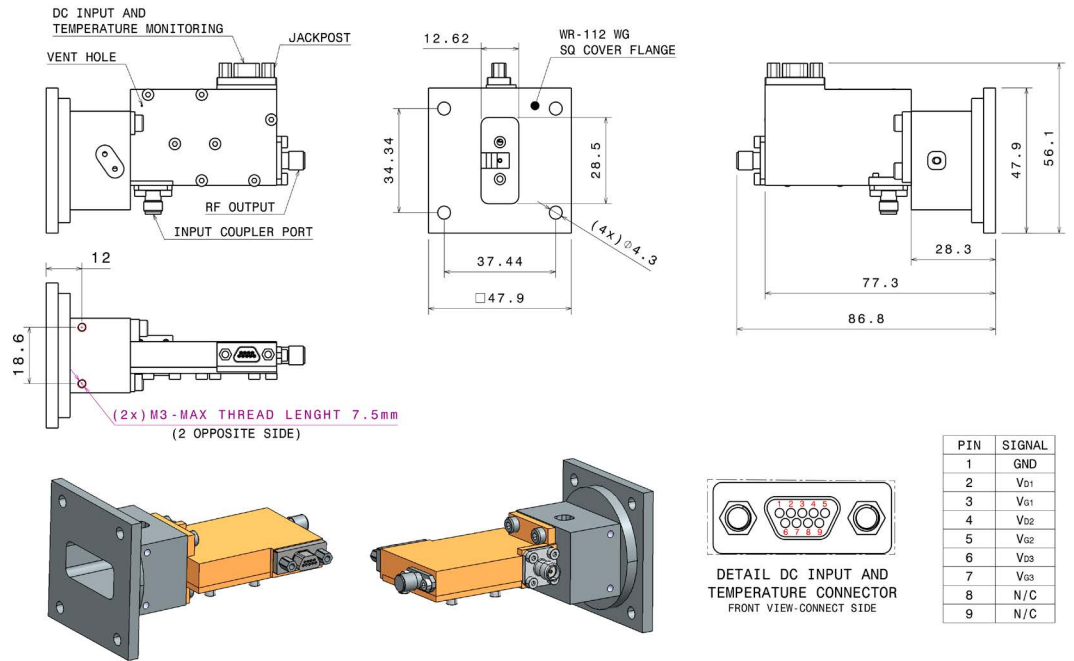
Operating temperature	2 K to 15 K
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KEY FEATURES

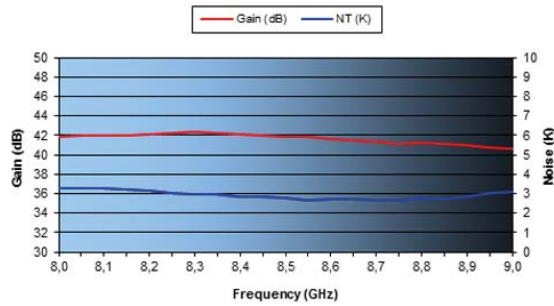
- * InP/GaAs technology
- * Extremely low temperatures operation (4 to 15 K)
- * Superior performance
- * High reliability & efficiency
- * Ultra-low noise figure
- * High gain & low ripple
- * Compact size & lightweight
- * Coupled port

OUTLINE DRAWING

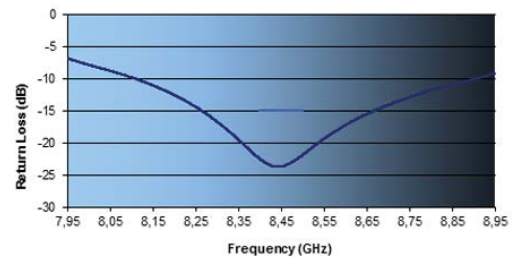


TYPICAL MEASURED DATA

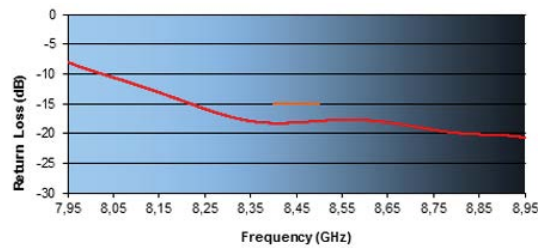
Gain & Noise variation at 12 K



Input return losses at 12 K



Output return losses at 12 K



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OPTIONS

- * Servo-controlled power supply unit

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NOTICE

Information contained in this document is subject to change without notice.

Dimensions are in mm and after treatment Tolerance according to ISO 2768-f.