



Pour-Fill LN2 Cryostats

The **LN400** is our lowest cost liquid Nitrogen cryostat, for optical and electrical experiments. This simple and inexpensive Liquid Nitrogen cryostat offer a variable temperature sample environment from 77K to 500K. Our standard 800K interface is also available. Temperatures below 77 K can be achieved by pumping on the exhaust port.

Applications

- Optical - UV, Vis, IR
- Raman
- FTIR
- Photoluminescence
- DLTS/PICTS
- Electro-Optical
- Magneto-Optical
- Resistivity/Hall Effect
- Diamond Anvil Cell
- DIP
- Liquid Samples
- Non-Optical
- Thermal
- Electrical

Features

- 77K to 500K operating temperature range
- 0.4 Liter Liquid Nitrogen capacity
- High Quality stainless steel construction
- Pop-Off optical block for easy sample change
- Large clear view optical windows (1.25 in)
- Large sample viewing angle for optical collection (F/1.4)
- Cold Tip Down Orientation
- Safety pressure relief

Typical Configuration

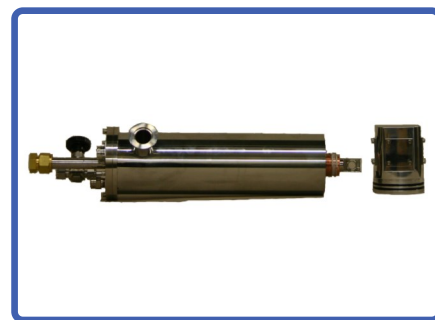
- Cold Head (LN400)
- Stainless Steel Top Flange with 10 Pin Feedthrough
- Stainless Steel Vacuum Shroud with Aluminum Pop off containing 4 window ports for optical and electrical measures
- 2 High purity quartz windows
- Instrumentation for temperature measurement and control:
 - 10 pin hermetic feed through
 - 50ohm thermofoil heater
 - Silicon diode sensor curve matched to ($\pm 0.5K$) for control
 - Curved matched Silicon Diode ($\pm 0.5K$) with 4 in. free length for accurate sample measurement.
- Wiring for electrical experiments:
 - 10 pin hermetic feed through
 - 4 copper wires
- Sample holder for optical and electrical experiments
- Temperature Controller

Options and Upgrades

- 800K High Temperature Interface
- Custom temperature sensor configuration (please contact our sales staff)
- Custom wiring configurations (please contact our sales staff)
- Window material upgrades (custom materials available)
- Sample holder upgrades (custom sample holders available)



The above picture shows the assembled LN400



The above picture shows pop off optical block for easy sample changes, with a sample holder.



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Cooling Technology-

LN400	Liquid Nitrogen Pour-Fill
Initial cooldown time(to 77K)	18 min
LN2 holding time 77K	6Hours

Temperature*-

LN400	<77K - 500K
By Pumping	<65K
With 800K Interface	(Base Temp + 2K) - 800K
Stability	0.1K
*Based on bare cold head with a closed radiation shield, and no additional sources of experimental or parasitic heat load	

Sample Space -

Diameter	61 mm (2.4 in.)
Height	51mm (2in.)
Sample Holder Attachment	1/4 - 28 screw
Sample Holder	www.arscryo.com/Products/SampleHolders.html

Optical Access-

Window Ports	4 - 90° Apart
Diameter	41 mm (1.63 in)
Clear View	32 mm (1.25 in)
#/F	1.4
Window Material	www.arscryo.com/Products/WindowMaterials.html

Temperature Instrumentation and Control - (Standard) -

Heater	50 ohm Thermofoil Heater anchored to the coldtip
Control Sensor	Curve Matched Silicon Diode installed on the coldtip
Sample Sensor	Curve Matched Silicon Diode with free length wires
Contact ARS for other options	

Instrumentation Access-

Instrumentation Skirt	Stainless steel top flange
Pump out Port	1 - NW 25
Instrumentation Ports	1
Instrumentation Wiring	Contact sales staff for options

Vacuum Shroud -

Material	Stainless steel, Aluminum
Length	378 mm (14.9 in)
Diameter	86 mm (3.38in) at the sample space
Width	86 mm (3.38 in) at the sample space

Radiation Shield -

Material	N/A
Attachment	N/A
Optical Access	N/A

Cryostat Footprint -

Overall Length	493mm (19.4 in)
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LN400 Outline Drawing

