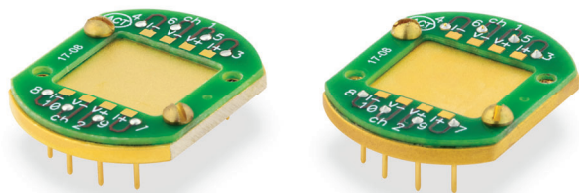


Several existing PPMS measurement options have been adapted to operate at sub-Kelvin temperatures in the various refrigerators offered. In some cases, additional hardware and/or electronics may be required for full compatibility, and the associated specifications are modified accordingly.

## AC Resistance, DC Resistance [ADR, Helium-3, DR]



DR (left) and Helium-3 (right) Transport Pucks  
for use with either Resistivity or ETO

## Sub-Kelvin Measurements Specifications (for Zero Field)

### AC Resistance, DC Resistance [ADR, Helium-3, DR]

Identical to standard specifications except:

Current Amplitude Range: Maximum available current may be further limited by sample resistance and available cooling power, or desired drift rate in the case of the ADR.

Operational Range: 0.1 to 300 K; 0 T (ADR)  
0.4 to 350 K; 0 to 16 T ( $^3\text{He}$ )  
0.05 to 4 K; 0 to 16 T (DR)

### Heat Capacity [Helium-3, DR]

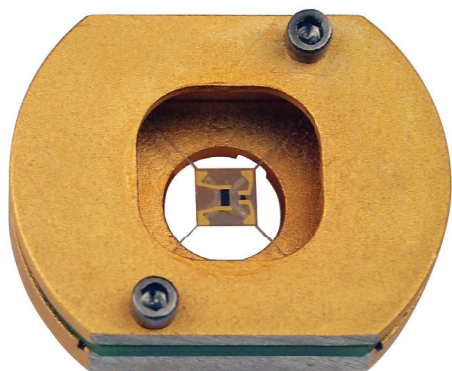
Identical to standard specifications except:

Typical Addenda Magnitude: 2.5 nJ/K @ 0.05 K, 225 nJ/K @ 2 K,  
1.5  $\mu\text{J/K}$  @ 4 K; (DR)  
10 nJ/K @ 0.4 K, 2.25  $\mu\text{J/K}$  @ 4 K,  
340  $\mu\text{J/K}$  @ 35 K, 11 mJ/K @ 350 K; ( $^3\text{He}$ )

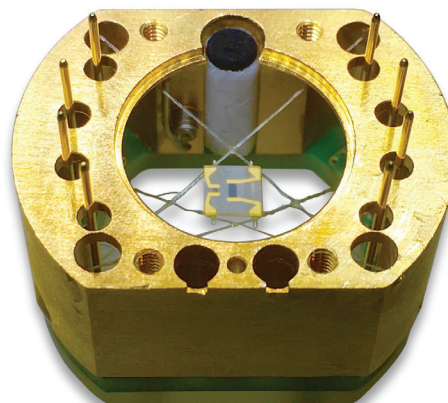
Operational Range: 0.4 to 350 K; 0 to 16 T ( $^3\text{He}$ )  
0.05 to 4 K; 0 to 16 T (DR)

Specifications are subject to change without notice.

## Heat Capacity [Helium-3, DR]



Dilution Refrigerator / Helium-3  
2D Heat Capacity Puck



Dilution Refrigerator  
3D Heat Capacity Puck  
(DynaCool only)