

Mechanical ICD

The mass

320g ±10g

The envelope.

127.1cm³

The footprint layout and the thickness of the base plate.

See “Dimension drawing” (Appendix 1)

The reference frame, the centre of mass, and the inertias around each axis

See “Dimension drawing” (Appendix 1)

The position of the input aperture centre and the apex of each CCR

Origin of coordinates is the centre of symmetry for the interface plane(C (0;0;0)).

Y-axis is a direction of the flight velocity vector.

Z-axis is a direction to the centre of the Earth.

X-axis adds the coordinate system to the right.

№	position of the CCR	X, mm		Y, mm		Z, mm	
		centre of the CCR	Apex of the CCR	centre of the CCR	apex of the CCR	centre of the CCR	apeex of the CCR
1	central	0	0	0	0	48	28.9
2	side	45.5	29.4	0	0	28.5	18.2
3	side	22.75	14.7	39.4	25.5	28.5	18.2
4	side	-22.75	-14.7	39.4	25.5	28.5	18.2
5	side	-45.5	-29.4	0	0	28.5	18.2
6	side	-22.75	-14.7	-39.4	-25.5	28.5	18.2
7	side	22.75	14.7	-39.4	-25.5	28.5	18.2

Tolerance of the coordinates will no more than ± 0.3 mm.

The material and finish properties of all surfaces.

Approved list of declared material is presented in Appendix 2.

The thermo-optical properties of all surface exposed to space.

Baseplate and CCRs housing of LRR array are made of aluminum alloy with an oxide coating: infrared emissivity $\varepsilon = 0,75$, solar absorption $\alpha = 0,24$. CCRs are made of fused silica KY-1: infrared emissivity $\varepsilon = 0,93$ and infrared emissivity $\varepsilon = 0,1$.

The contact surface area and thermal capacity.

Contact surface area of LRR array with spacecraft is $0,00538 \text{ m}^2$ (electrically conductive surfaces).

Thermal capacity of aluminum alloy AMr6 is $900 \text{ J/kg}\cdot\text{K}$. Thermal capacity of fused silica KY-1 is $892 \text{ J/kg}\cdot\text{K}$.

The markings, including flight direction.

On the flange of the LRR array conic basis the name, serial number and flight direction is engraved (see “Dimension drawing” (Appendix 1) and Figure 1, 2, 3).



Figure 1 Name of LRR array



Figure 2 Serial number of LRR array



Figure 3 Flight direction

The protection caps envelopes and dimensions.

The protection caps envelopes is 27.7 cm^3 ($3.96 \text{ cm}^3 \times 7$)
Dimension of the protective caps are showed on Figure 4.

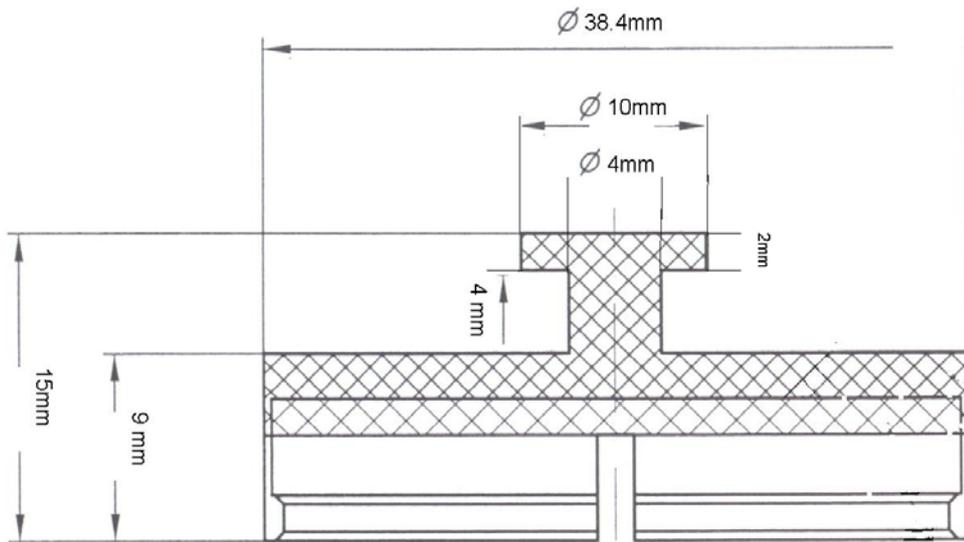


Figure 4 Dimensions of protection cap