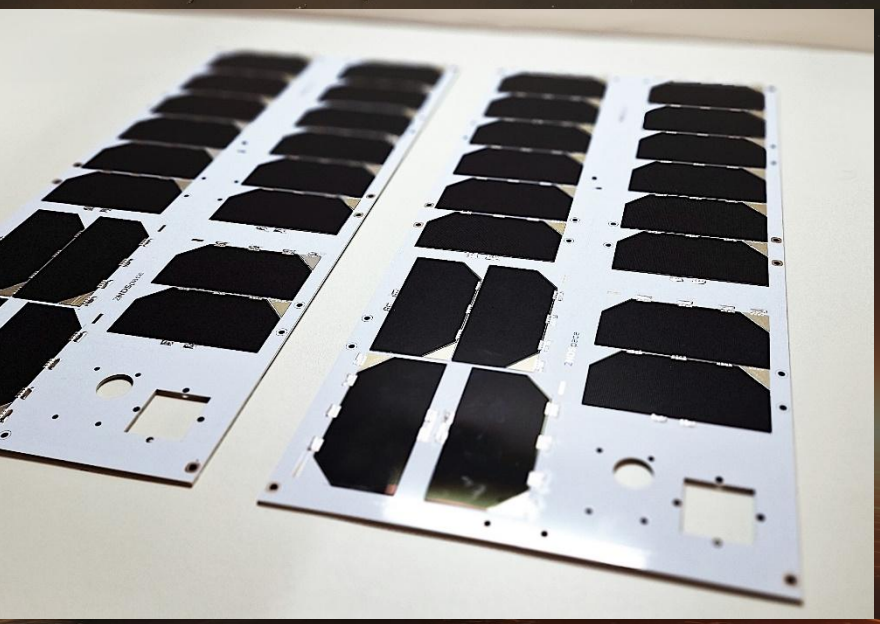
2NDSpace

CORE Solar Panels

TRL 9

BODY MOUNTED CUBESAT SOLAR PANELS

2NDSpace body mounted solar panels derive from a decade of experience of the team in the design of space systems and successful nanosatellites missions. All 2NDSpace products are conceived to offer excellence combined with customization-as-a-standard approach and reduced lead time.
CORE body mounted panels are a TRL9 solution with flight heritage offering high versatility with multiple additional options such as magnetorquer, RBF and umbilical interfaces and custom cut outs. Innovative designs include ZERO-residual dipole layout and improved thermal dissipation system.



- UTJ >30% efficiency solar cells
- Body mounted customizable layout
- Custom interfaces and umbilical connection
- ZERO-Residual dipole design
- Stabilized thermal dissipation architecture
- RBF and embedded magnetorquer
- Qualified for LEO and GEO

info@2ndspace.eu

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PRODUCT **PORTFOLIO**

	CORE-01Z	CORE-01	CORE-02	CORE-03	CORE-04	CORE-06Z	CORE-12	CORE-12Z	CORE-16
Peak Power [W]	2.45	2.45	4.88	8.54	11.00	4.88	19.52	9.76	24.4
OC Voltage [V]*	5.2	5.2	5.2/**10.4**	5.2/7.8/**16.4**	5.2/7.8/**10.4**/23.4	5.2/**10.4**	10.4/**20.8**	5.2/10.4/**20.8**	10.4/**13.0**/26.0
Suggested for	1U / 2U / 3U	1U / 2U / 3U	2U / 3U	3U / 6U	4U / 8U	6U / 8U	6U / 12U	12U / 16U	16U / 8U
Side	Top/Bottom	Lateral	Lateral	Lateral	Lateral	Top/Bottom	Lateral	Top/Bottom	Lateral
Form Factor	1x1	1x1	1x2	1x3	1x4	2x1	2x3	2x2	2x4
Mass [g]	38	35	75	118	148	91	289	195	387
Protection	Dual redundant	Dual redundant	Dual redundant	Dual redundant	Dual redundant	Dual redundant	Dual redundant	Dual redundant	Dual redundant

**Panel OC Voltage can be customized according to user requirement. Standard values are indicated in bold.*

QUALIFICATION AND **ACCEPTANCE TEST**

	Functional/AIT	Electrical control	Vibration test	Mechanical Shock	TVAC Test
Qualification Test	✓	✓	NASA GEVS: GSFC-STD-7000A ESA ECSS-E-ST-10-03C	NASA GEVS: GSFC-STD-7000A ESA ECSS-E-ST-10-03C	NASA GEVS: GSFC-STD-7000A ESA ECSS-E-ST-10-03C
Acceptance Test	✓	✓			

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FLIGHT HERITAGE

- Reliability and Efficiency to ensure consistent and dependable performance in demanding space environments.
- Fully customizable mounting holes and layout configurations to adapt to various satellite designs.
- Capable of supporting different voltage levels to meet specific mission requirements.
- Includes magnetorquers, umbilical connectors, remove before flight (RBF) interfaces, and a standard suite of sensors for seamless integration.
- Power lines are designed with dual redundancy to enhance reliability and ensure uninterrupted operation.
- Panels can be modularly composed to match the required form factor, providing additional design flexibility.
- Designed and manufactured to meet European Cooperation for Space Standardization (ECSS) requirements.

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