

Press Release

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BHEL achieves major landmark with deployment of Space Grade Solar Panels on GSAT-8 Satellite of ISRO

Bharat Heavy Electricals Limited (BHEL) has achieved a major landmark with the successful deployment of its Space Grade Solar Panels on the GSAT-8 Satellite of the Indian Space Research Organisation (ISRO). Launched from French Guyana, the satellite is ISRO's heaviest satellite, weighing in at about 3100 Kg at lift-off. India's advanced communication satellite, GSAT-8 is a high power communication satellite being inducted in the INSAT system. The four Solar Panels supplied by **BHEL** for GSAT-8, have an area of over 5 sq. mtrs. each, totaling to around 21 sq. mtrs. and comprise multi-junction Solar Cells in series and parallel combinations, with a total power capacity of 4.5 kW. The space grade solar panels were manufactured to strict space quality standards wherein cell welding, bonding and wiring work was carried out by highly skilled manpower. The panels were further subjected to detailed testing by ISRO such as vibration test and thermovac test as part of the space quality requirements to validate the mechanical, electrical and thermal performance. BHEL, in collaboration with ISRO, has established state-ofthe-art 10,000 clean room facilities at its Electronics Systems Division in Bangalore for the assembly and testing of Space Grade Solar Panels using high efficiency Solar Cells. BHEL has had a long association with ISRO and has earlier supplied several Space Grade Solar Panels and Space Quality Batteries to ISRO for use in their satellites. These panels are used to charge the batteries and provide electricity for various systems in the satellites. So far, BHEL has supplied 51 Space Grade Solar Panels totaling to 221 sq. mtrs. in area for various satellites of ISRO. While the Space Quality Batteries fabricated by BHEL for ISRO have been working satisfactorily in their CARTOSAT satellite, BHEL-supplied Space Grade Solar Panels are providing satisfactory service on INSAT 3A, INSAT 3E, GSAT 2, GSAT 3, GSAT 4, IRSP 5 and EDUSAT satellites, now in orbit. **BHEL**â€[™]s surface engineering expertise has also been used by ISRO, by way of application of non-corrosive coating on the secondary injection thrust vector control (SITVC) tanks of their Polar Satellite Launch Vehicle (PSLV) and Geosynchronous Satellite Launch Vehicle (GSLV) missions.

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