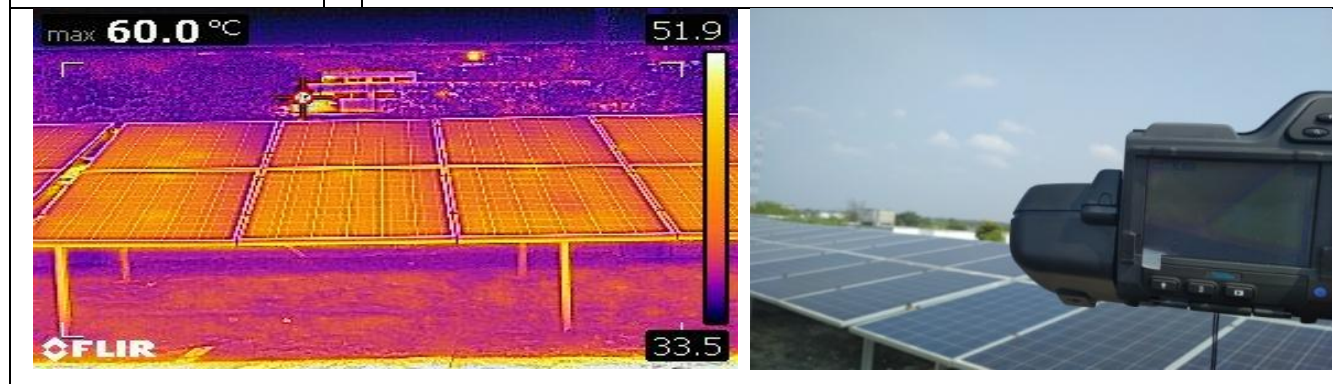


## FUNDED PROJECTS

### Funded Project: 1.

<b>Research Title</b>	:	Recognition and Characterization of Solar Cell Defects using Combined Thermography Image and Reconfiguration Scheme
<b>Principal Investigator</b>	:	Dr. A. Srinivasan, M.E., Ph.D., Professor & Head / EEE
<b>Co-Principal Investigator</b>	:	Dr. B. Meenakshi Sundaram., M.E., Ph.D., Professor / EEE
<b>Junior Research Fellow</b>	:	Mr. S. Devakirubakaran, M.E.,
<b>Funding Agency</b>	:	Department of Science and Technology, Government of India- Solar Energy Research Initiative (DST-SERI) Scheme
<b>Sanctioned Amount</b>	:	Rs 40.29 Lakhs
<b>Period</b>	:	2017- 2020 (3 years)
<b>Objective</b>	:	<p>In recent years, the utilization of renewable energy has become an attractive alternative to fossil fuels because of the growing concern on the environmental issues. Solar power generation has emerged as one of the most rapidly growing renewable sources of electricity. It has several advantages over other forms of electricity generation: pollution-free and inexhaustible nature. The power outputs from the panels are affected by various factors like mismatch faults, physical faults, interconnection and etc., It is quite complex to identify and locate the faulty panels from the PV arrays. Because it needs more measurements like current, voltage, power, temperature, irradiation, humidity, hotspot and etc., Extraction of maximum power from this condition is another difficult task. This research work is to define a new solution for this all issues. The fault identification and fault classification can be done by using the <b>Thermal Imaging Camera</b>. The reconfiguration scheme exposes a new way by the thermal imaging camera to extract maximum power from the PV array.</p> <p>The thermal imaging camera has wide range of applications in the field of</p>

research as well as in the industries. The abnormal hotspot in the power system (generator, transmission line, transformer, distribution grid, circuit breakers, switch gears, etc.) indicates the abnormal or the faulty operation. This can be captured by the thermal camera, which eliminates the need of meteorological and electrical measurements. This also used to find PCB defects, power usage, hot or loose connectors, phase supply outage, under floor heating, HVAC maintenance and performance, motors and generators burn-out condition, bearing failures, power leakages, faults in overhead equipment and etc.,



**Funded Project: 2.**

<b>Research Title</b>	:	Design and Development of Compact Electric Drive for Various Applications
<b>Principal Investigator</b>	:	Mr.V.Kannan, M.E.,(Ph.D), Assistant Professor (Senior Grade )
<b>Co-Principal Investigator</b>	:	Ms. C.Sonia, M.E., (Ph.D), Assistant Professor,
<b>Junior Research Fellow</b>	:	Mr. D.Sureshkumar, M.E
<b>Funding Agency</b>	:	Defence Research and Development Organization, Government of India - Armament Research Board (DRDO-ARMREB) Scheme
<b>Sanctioned Amount</b>	:	Rs.19.46 Lakhs
<b>Period</b>	:	2015-2017 (3 years)

**Objective**

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Design and development of slot-less type with Halbach array Brushless DC Motor Drives which is capable of converting electrical power to drive gun assembly, actuators and other subsystems at variable speeds. It is to provide dramatic improvements in reliability, maintainability, supportability and operations/support cost as well as enhancements in defense tankers weight, volume, and battle-damage reconfigurability

