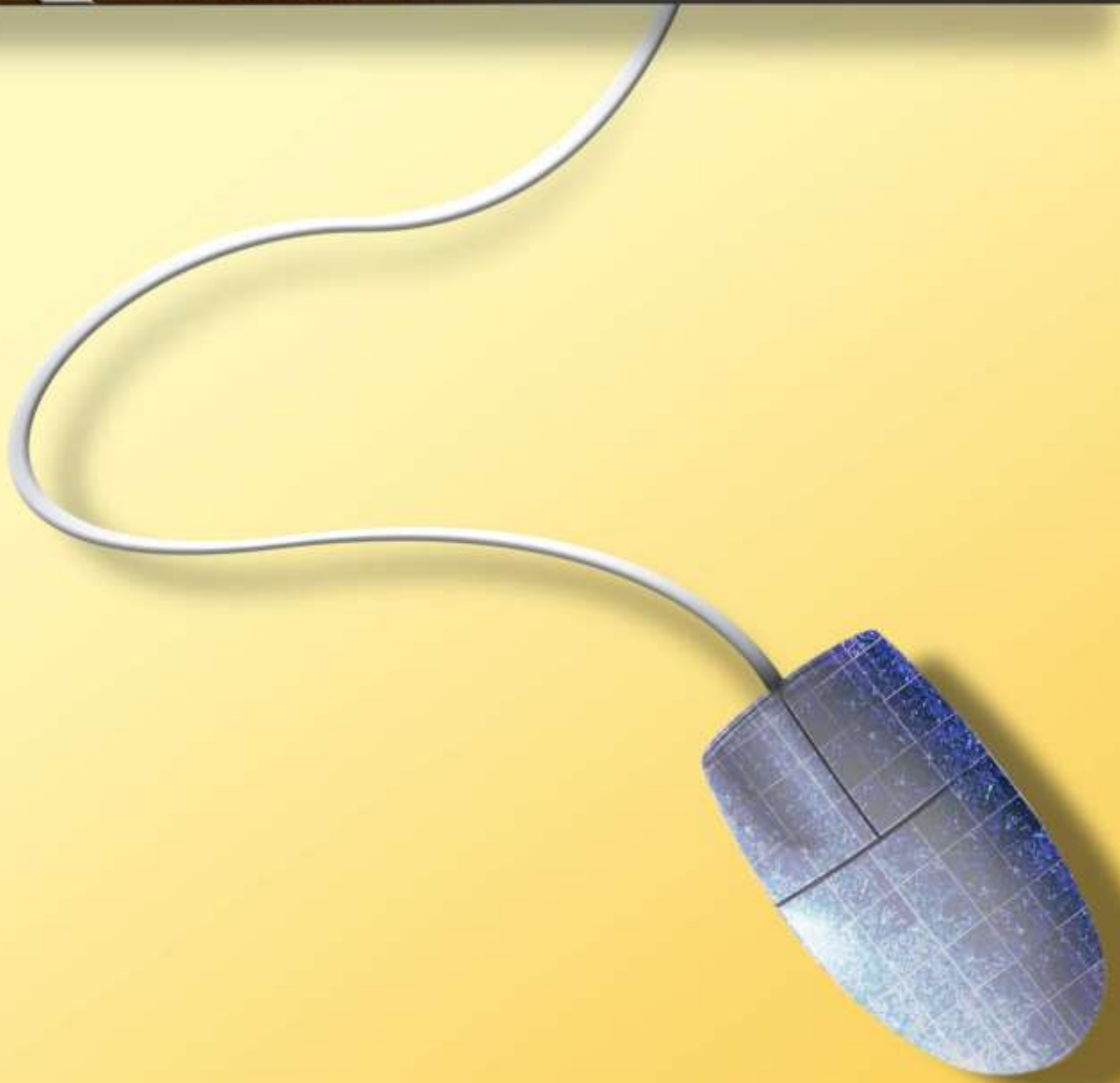


**Powering Primary Education  
In the 'real' India**

**TEJAS**  
**Solar Power Packs from Tata BP Solar**

www.tejasproject.org | Akshya Prakashini | 10:30 AM





## Bridging the digital divide... Tejas Solar Power Packs



### ...Because India's future lies in her classrooms

A nation's progress and development is inextricably linked with the literacy levels of its citizens. Understanding the critical importance of education, successive Governments launched several initiatives to "universalize" primary education.

As a result of the education programmes, by the end of 2000,

- 94% of India's rural population had primary schools within one km
- 84% had upper primary schools within 3 km.
- In 2002/2003, an estimated 82% of children in the age group of 6 - 14 were enrolled in school, taking the enrolment figures up to 114 million.

While India has done well in providing Universal Access to elementary education, the results for Universal Retention have not been so encouraging. More than half of all students who start school do not complete their basic education. Only 35.6% of boys and 19.7% of girls finish middle school.

An important factor for this is the lack of quality infrastructure including power supply, which severely hampers the development of rural primary education.

### From chalkboards to computers. From textbooks to television...

Research has proved that use of audio-visual teaching aids can add new life to dry lessons, foster spontaneous curiosity and develop a natural love for learning. Television, computers and access to internet play a crucial role in a student's life: providing quality up-to-date information and an opportunity to explore the world not limited by geography or economy.

Television in India has a long history of infotainment – imparting education, cultural and self-help programmes for urban graduates and rural farmers. DTH (Direct To Home) takes this further by providing quality 'distance education' programmes by getting the classrooms to individual homes or community centres.

While urban schools are fast waking up to the interactive and interesting way of imparting education, the situation is dramatically different in rural areas, especially since power is still a dream in most villages. Combined with a good and stable source of power, modern technology can truly open up a whole new world for students in rural schools!

### Tejas Solar Power Packs Using the sun to make learning fun!

The success of any technology intervention is dependent on reliable and cost-effective power. A fact that we at Tata BP Solar, India's largest Solar Company, well understand.

With abundant experience in providing Solar Solutions to the rural areas, Tata BP Solar is well-equipped to help Education Departments harness the power of the sun to bring the benefits of audio-visual teaching methods to rural schools.

### How does Tejas Solar Power Pack work?

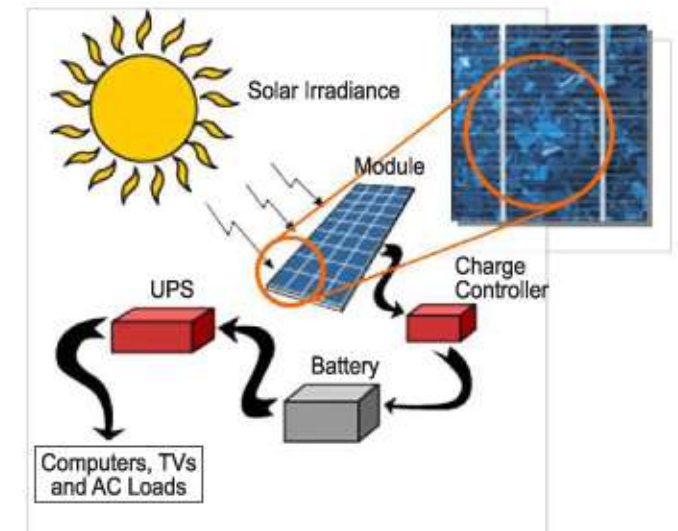
Simple. During daylight, when the sun is shining bright, the Solar Modules 'collect' sunlight and convert it into electrical energy.

This energy is then channelised through the Solar Charge Controller and stored in the Battery Bank, which is connected to the UPS.

When Grid Power is available, the UPS feeds the energy to the loads directly, powering the Computers / TVs in schools.

In the absence of Grid Power, (Power Cuts or Voltage Fluctuations), the UPS operates in 'Inverter' Mode, using energy stored in the Battery to power the connected load.

Depending on load and usage patterns, the Batteries, designed to provide adequate back-up for extended hours of operation, are charged by Solar / Grid Power.



### Advantages of Tejas Solar Power Packs from Tata BP Solar

- Can provide clean, green energy to power Computers, TVs, Lights and Fans
- Can be customized to meet the requirements of individual schools
- Modular design allows for future expansion with minimum hassle
- No recurring costs
- Negligible maintenance
- Assured quality

### Quality you can count on - for years!

As India's largest Solar Company, Tata BP Solar is constantly innovating to bring you world-class solar products that give you more value for your money. These high quality products are backed by excellent nationwide sales and service support.

Tata BP Solar is a 100% Solar Company. Which means, it focuses completely on solar and its applications. Its R&D efforts translate into better, more use-friendly solutions. A fact that has been appreciated by thousands of customers across India and the world.

Tata BP Solar is a joint venture between **Tata Power Company Ltd.**, a pioneer in the power sector in India and **BP Solar**, one of the largest Solar Companies in the world.

### TECHNICAL SPECIFICATIONS

DESCRIPTION	TEJAS-240	TEJAS-320	TEJAS-640
Application	TV+DTH Or 1 COMPUTER + PRINTER	COMPUTER + PRINTER	COMPUTERS + PRINTER
PV Module Rating (Wp @ STC)	240 Wp	320 Wp	640 Wp
Designed Loads	29" TV + DTH Receiver OR 1 Computer + 1 Printer	1 Computer + 1 Printer	2 Computers + 1 Printer
Operational Duration on Solar	3 Hrs / Day	4 Hrs / Day	4 Hrs / Day
System DC Voltage	12 Vnom	24 Vnom	24 Vnom
UPS / Inverter Rating	500 VA	1 KVA	1 KVA
Battery Size (Ah @ C10)	12V, 150 Ah	24V, 100 Ah	24V, 150 Ah
Battery Back-up Duration	6 Hrs	8 Hrs	8 Hrs

**Note :** Daily Peak Sun hrs considered --> 5 hrs  
Power consumption of Computer taken as 140 W, Printer - 75W, 29" TV - 150W and DTH Receiver - 20W  
Operational duration of Printer taken as 30%  
Custom designed Solar Power Generating Systems are available for specific requirements.

Loads are not in our scope.



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Your nearest Tata BP Solar Dealer :

[www.tatabpsolar.com](http://www.tatabpsolar.com)

*Due to continuous developments and product improvement, the Company reserves the right to change/alter the specifications.*