

Our Exploration: Calculating Photovoltaic Cell Output

A Project by Lakshita, Thanuj, and Rishik

Introduction

Our Exciting Journey:

- Venturing into the fascinating world of photovoltaic cells.
- Discovering the practical applications and environmental significance.

Learning Objectives

What We Aimed For:

- Creating a circuit: Understanding each component's role.
- Measuring energy: Exploring volts and amperes.
- Calculating power: Unveiling the $P=V\times I$ formula.

Our Readiness

Materials Used:

- We eagerly brought our photovoltaic cells on the project day.
- Equipped with essential materials: Photovoltaic cells, wires, and resistors.

Project Day – Live Demonstration

1.	Creating our Unique Circuit Design:	<ul style="list-style-type: none">• Excitingly, we actively participated in crafting our circuit design.• With a hands-on approach, we connected the photovoltaic cells, wires, and resistors to construct a meaningful circuit.
2.	Understanding Each Part:	<ul style="list-style-type: none">• We ensured a deep understanding of every component's role within our circuit.• This in-depth comprehension laid the foundation for accurate data interpretation during the experiment.
3.	Live Demonstration:	

- Let us now give you a live demonstration, allowing you to witness the circuit setup in action.
- Feel free to engage, ask questions, and explore the intricacies of our design.

4. **Prioritizing Safety:**

- Safety is, and always will be, our top priority during this live demonstration.
- We'll explain potential risks and the precautionary measures taken to ensure a secure and successful project day.

Project Day - Experiment

Experiment Steps:

- We tested with different wattage bulbs at a fixed distance.
- We then documented voltage for each bulb.
- We also measured voltage drop across the load and current.

Calculation

Power Calculation:

- Formula: $P=V \times I$.
- Breakdown of formula and examples using recorded data.

Conclusion

Wrapping It Up:

- Reflecting on why understanding PV cell performance matters.
- Sharing personal insights and discoveries made during our journey.

Q&A

Floor is open for questions