

TITLE :PALMLIGHT

MOTIVATION:

1 day we came across the idea of charging the phone through a wireless medium .We came up with converting heat energy of human body into electrical energy .

Our motivation was the project of a girl for the google science fair involving building a device which gets power from the heat of the human hand alone thus in turn harvesting human energy.

BROAD VISION:

There are many rural areas which do not have proper access to electricity. Infact many areas still lack power. So it would be a great help to those people if we can create an energy source which isn't dependent on money .We humans are great source of uncharged energy. So It would be amazing to make a flashlight powered solely from the heat of the human hand

This unique circuit and design has infinite possibilities and uses for the future! For example, imagine holding your phone, and at the same time charging it just from the heat of your hand! Or perhaps all school chairs in classrooms having Peltier tiles, and we could harvest the heat and amplify it into electricity using this method.

DEMONSTRATION:

A flashlight that works on heat radiations of palm .

TIMELINE :

WEEK1:Study of the project details and the learning part we need to know. It also includes the study of how much heat hand radiates per cm^2 and the area of the peltier tiles to be exposed where we'll hold the flashlight and calculating the values of the required capacitance and which IC will be required and studying ICs and which transformer will be required ,etc. . Buying required components.

WEEK2:Designing and preparing blueprint of circuit .Making circuit.

WEEK3:Using Peltier tiles and heat sink making structure of the flash light and totally making that part which takes heat radiation from hand .

WEEK4:Assembling all the components and completing the flash light

WEEK5:Debugging if any component fails to work .

SKILLS KNOWN:

1.Boosting voltage using stepup transformers .

2.Converting DC voltage to AC .

3.Designing electronic circuits.

UGHT TO LEARN :

1.Transforming heat energy to electrical energy .

2. Harvesting heat energy of human body .

3.Actually making circuits.

ESTIMATED COST:

1.Peltier Tiles – tiles will cost around Rs2000.

2.IC- nearly 600Rs

3.Step up Transformer –will cost Rs 200 -300 approx

4. LEDs – around Rs200

5. Capacitor –around Rs 50

Total cost is around Rs. 3000-4000.

REFERENCE:

<https://www.youtube.com/watch?v=yrnNmzSSn0w>