## **OPV ORGANIC PHOTOVOLTAIC CELLS**

The printed hexagonal OPV modules are laminated between clear plastic sheets and attached to a delicate steel net, which acts as both structural support and electrical conductor for the energy generated. The OPV modules can capture light from any direction, and they generate electricity even in hazy conditions.

Piezoelectric materials can be utilized to convert kinetic energy to electrical energy. Utilization of piezoelectric wind harvesting is a rather new means to convert renewable wind energy to electricity. Piezoelectric generators are typically low cost and easy to maintain.



Energy production per year:	
Oragnic Photovoltaic Cells	6045
Piezoeletric Ceramic Buzzer	1314
Plant Microbial Fuel Cells	4204

## **PIEZOELETRIC CERAMIC BUZZER**



## PLANT MICROBIAL FUEL CELLS (PMFC)

Sedum as driver for plant in a semi-arid ecosystem. It is proven that Sedum species (succulent plants) can generate energy under non-saturated conditions. Electrochemical results confirmed power generation by the Sedum species tested, with reactors using Sedum hybridum achieving the highest power density.



00 KWh

0 KWh

420480 KWh

Total energy generated 2844 KWh per day 1038120 KWh per year

Total energy saved 82534.19 AED