

**EFFICIENCY OF FLEXIBLE AMORPHOUS SOLAR PANEL
BASED ON RADIUS OF CURVATURE AND THE BENDING
ANGLE**

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ABSTRACT

EFFICIENCY OF FLEXIBLE AMORPHOUS SOLAR PANEL BASED ON RADIUS OF CURVATURE AND BENDING ANGLE.

The study is about to determine the efficiency of flexible amorphous solar panel at various radius of curvature and bending angle. The solar panel used was from Fe Fuji Electric Co., Ltd. The materials and model of the solar panel is Amorphous solar cell module, FPV1046DSJ2 with serial number F151118000103. The experiment was conducted by shaping the solar panel into curve shape with various radius. The experiment was done in dark room and using spotlight. Irradiance meter was used to measure the intensity of light. The result showed that concave shape has highest value of efficiency, 1.36% at radius 0.99 m than convex shape, 0.80% at radius of 1.24 m. The study also determines the efficiency of thin-film solar panel with tilt angle at time 10.20 a.m., 12.20 p.m., 2.20 p.m. the experiment was conducted at open area, and using inclined plane to determine the angle. This experiment was performed by using sunlight. The result showed that solar panel obtain highest efficiency at time 12.20 p.m. with efficiency of 8.41% with angle of 40.2°.

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