

***ANALYSIS OF SOLAR PANEL POWER WITH VARIATIONS LIGHT  
SENSOR PLACEMENT ON DUAL AXIS SOLAR TRACKER***

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***ABSTRACT***

*The dual axis solar tracker is used to optimize the reception of sunlight by solar panels. There are 4 light sensors in this solar tracker system that function to read the movement of sunlight, placed at different angles on the solar cells. Previous research has shown variations in sensor placement, with sensors placed at the top and bottom of the solar panel, and on the left and right sides. However, these placements were arbitrary and did not consider optimal sensor placement. Therefore, research is needed to determine the optimal placement of light sensors on the dual-axis solar tracker. Research has shown that the output data of current, voltage, and power on the solar tracker panels indicate that the highest average power value was obtained on the 1st day of testing, at 9.84 Watts with the placement of the light sensor (LDR 1), compared to a static value of 6.61 Watts. The percentage increase in the use of the dual-axis solar tracker compared to static was 4.39%. The research data over 3 days shows that the solar tracker panel generates a more optimal average power value compared to the static solar panel, due to the maximum sunlight absorption of the solar tracker.*

*Keywords: panel, power, tracker, LDR*