

## SOLAR CELL REPORT - NORTHWESTERN UNIVERSITY (11)

Charlie Costakis - Electrical Lead

Email: solar@u.northwestern.edu

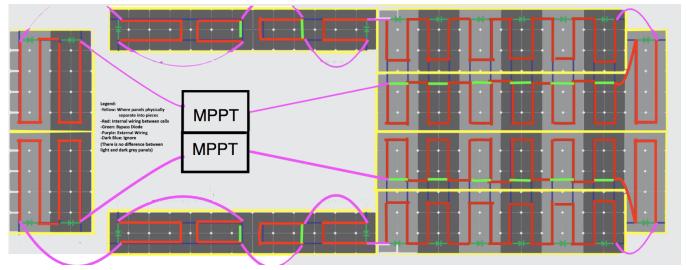
7

## SOLAR CELL DATA

- Array type: Silicon only
- Cell used (1 only):
  - Sunpower Corporation
  - o Contact: <u>Scott.Mchugo@sunpowercorp.com</u>
  - o Model: E60-135-B-Me1 (Maxeon Gen III cells)
  - o Cell area: 153 cm^2/cell
  - Cell performance: 3.72 peak watts/cell (24.3% efficiency)
  - o Datasheet included in zip
- No active cell area will be cut or trimmed

## MAIN ARRAY LAYOUT

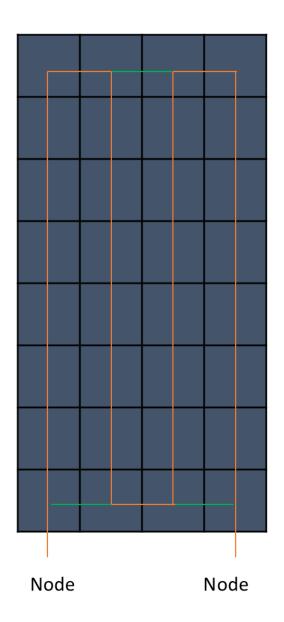
Our solar collector consists of 2 subarrays, each one containing 128 cells for a total of 256 cells. As shown in the figure below, the subarrays are divided by the horizontal line between the top and bottom of the array:



Every cell is the same type (Sunpower E60-135-B-Me1). The total area is thus  $256*(153cm^2 per cell) = 39168 cm^2$ .

## SUPP. ARRAY LAYOUT

Our supplemental array consists of a four sub-arrays, each one containing 32 cells. A single sub-array is pictured here. The total area is thus  $4*32*(153 \text{ cm}^2) = 19584 \text{ cm}^2$ .



4 identical pieces Green are bypass diodes