

Healthy Roots 5000

Team 3

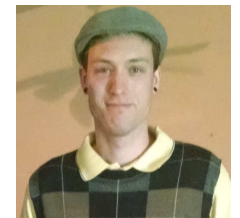


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- David Staron

- Honest Vang



- Ken Bennett

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Oasis Garden Watering System

<http://p5.focus.de/img/fotos/origs3754448/3286851666-w467-h458-o-q75-p5/oasisurlaubsbewaesserung.png>

Healthy Roots 5000

Description

- Purpose of Product – To automatically dispense water as-needed into the root area of a plant
- Features:
 - Solar-Rechargeable
 - Need-based Watering
 - User-Programmable
- Market: North America, any market or area with 120VAC at 60 Hz as residential voltage

Key Requirements

- Cost
 - Sales Price: \$130, Component Cost: \$105, Assembly & Test Costs: \$10
- Environment
 - Indoor or Outdoor (covered, protected from rain). Ideally located on a windowsill exposed to sunlight or under a covered porch.
 - Operating Temp Range: 0°C-45°C (32°-113°F)
 - Operating Humidity Range: 0%-100% Non-condensing
- Power Input(s)
 - Residential AC Power: 114 – 126 VAC @1A max AC
 - Battery Power: Qty:1, 12VDC, 12.5Ahr
 - Other Power Input: Solar Power, 12VDC, 500mA
- Major Functions, Quantities Measured, Displayed
 - For each: List the Range, Accuracy, & Resolution
 - *Functions:* On, Off, Monitor only, Run (automatic), Run (manual)
 - *Quantities displayed or measured:* Water float, Battery level, temperature
 - Water float: Range: water/no water, Accuracy: on/off, Resolution: 100%
 - Battery Level: 0 to 12V, Accuracy: +/- 0.1V, Resolution: +/- 5%
 - Temperature: -40C to 120C, Accuracy: 10mV/°C, Resolution: Analog/continuous
 - Humidity:0% to 100%, Accuracy: +/- 5%

Block Diagram

