cedargrove_widgets.magic_eye

A CircuitPython DisplayIO class for the 6E5 Magic Eye display widget.

The Cedar Grove …

- Author(s): JG for Cedar Grove Studios

Implementation Notes

Hardware:

Software and Dependencies:

- Adafruit CircuitPython firmware for the supported boards: https://github.com/adafruit/circuitpython/releases

class cedargrove_widgets.magic_eye.MagicEye(*, center=(0.5, 0.5), radius=(0.25), display_size=(None, None), bezel_color=0x000000)

Class representing the Magic Eye display widget. The class creates a hierarchical DisplayIO group consisting of sub-groups for the target anode, eye, and bezel/cathode. Defaults to an object with display center (0.5, 0.5) and radius of 0.25 in normalized display units (not pixels).

Parameters:

- **center** – The floating point width and height tuple value representing the center of the target anode in relative display units. Defaults to (0.5, 0.5).
- **radius** – The floating point radius value of the target anode in relative display units. Defaults to 0.25.
- **display_size** — The host display's integer width and height tuple expressed in pixels. If (None, None) and the host includes an integral display, the value is (board.DISPLAY.width, board.DISPLAY.height).
- **bezel_color** — The integer RGB color value for the outer bezel. Defaults to 0x000000 (black).

display_group

A class property that returns the MagicEye class DisplayIO group.

display_size

A class property that returns an integer tuple of the display size (width, height).

plot_eye(*, signal=0)

Plot the Magic Eye shadow wedge. Input is a positive floating point value normalized for 0.0 to 1.0 (no signal to full signal) for the 100-degree shadow wedge, but accepts a signal value up to and including 2.0 (signal overlap).

Parameter:

- **signal** – The normalized floating point signal value for the shadow wedge. Defaults to 0 (no signal).