cedargrove_widgets.magic_eye

A CircuitPython DisplayIO.Group class for the 6E5 Triode Indicator “Magic Eye” display widget.

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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=(0.5), display_size=(None, None), bezel_color=0x000000)

A CircuitPython class representing the Magic Eye display widget. The class creates a DisplayIO.Group object consisting of sub-groups for the target anode, eye, cathode, and bezel. Defaults to an object with display center (0.5, 0.5) and radius of 0.5, specified as normalized display units (not pixels).

Parameters:

- **center** – The floating point width and height tuple value representing the center of the Magic Eye specified as normalized display units. Defaults to (0.5, 0.5).
- **radius** – The floating point radius value of the Magic Eye specified as normalized display units. Defaults to 0.5.
- **display_size** — The host display's integer width and height tuple value specified as 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).

Properties

display_size

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

value

A class property that sets or returns the Magic Eye shadow wedge signal value. The signal value is a normalized, positive floating point value from 0.0 to 2.0. The 100-degree shadow wedge is at full width when the signal is 0.0. As the signal increases to 1.0, the shadow wedge gradually narrows. When the signal exceeds 1.0, the shadow wedge glows brighter, appearing to “overlap.”