cedargrove_colorfader

ColorFader is a CircuitPython helper for brightness and gamma adjustment of an integer color value. Gamma is optionally applied after the brightness calculation. Transparency index values are preserved and associated with the adjusted palette. Returns an adjusted integer color value.

To adjust a ***displayio*** palette or multiple color ***list***, use the ***cedargrove_unit_converter.color.palettefader.PaletteFader*** class.

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Implementation Notes

Hardware:

Software and Dependencies:

- Adafruit CircuitPython firmware for the supported boards: https://circuitpython.org/downloads

```
color_fader(source_color=None, brightness=1.0, gamma=1.0)
```

A secondary function of the PaletteFader class. Scale a 24-bit RGB source color value in proportion to the brightness setting (0 to 1.0). The adjusted color's gamma value is typically from 0.0 to 2.0 with a default of 1.0 for no gamma adjustment. Returns an adjusted 24-bit RGB color value or None if the source color is None (transparent).

Parameters:

- **source_color** – The integer color value to be adjusted. Default is ***None***.
- **brightness** – The brightness floating point value for color value adjustment. Value range is 0.0 to 1.0. Default is 1.0 (maximum brightness).
- **gamma** – The gamma floating point value for color value adjustment. Value range is 0.0 to 2.0. Default is 1.0 (no gamma adjustment).