

How to set an LED's color

There are lots of ways to set an LED's color; this page gives very short examples of several of them.

Set RGB Color

Here are six ways to set an LED's RGB color:

- 1 set individual R, G, and B fields, the classic way:
`leds[i].r = 255; leds[i].g = 68; leds[i].b = 221;`
- 2 set RGB from a single (hex) color code (v2)
`leds[i] = 0xFF44DD;`
- 3 set RGB from a standard named web/HTML color code (v2)
`leds[i] = CRGB::HotPink;`
- 4 set RGB using 'setRGB' and three values at once (v2)
`leds[i].setRGB(255, 68, 221);`
- 5 copy RGB color from another led (v2)
`leds[i] = leds[j];`
- 6 use new 'fill_solid', telling it to fill just one led. (v2) Note that this is a pretty silly way to set one pixel, but it lets us illustrate the existence of fill_solid, a new convenience function the library provides.
`fill_solid(&(amp;leds[i]), 1 /*number of leds*/, CRGB(255, 68, 221))`

Set HSV Color

Six ways to set an LED's color from HSV (Hue, Saturation, Value). In general, they mostly involve assigning a CHSV color to a CRGB color; the colorspace conversion happens through an automatic call to hsv2rgb_rainbow. It's worth noting that a 'spectrum' and a 'rainbow' are different things; rainbows are more visually color-balanced, and have more yellows and oranges than spectra do. You probably want to start with 'rainbow', and only switch to 'spectrum' if you have a specific need.

- 1 Using a 'rainbow' color with hue 0-255, saturating 0-255, and brightness (value) 0-255 (v2)
`// Simplest, preferred way: assignment from a CHSV color
leds[i] = CHSV(224, 187, 255);
// Alternate syntax
leds[i].setHSV(224, 187, 255);`
- 2 Setting to a pure, bright, fully-saturated rainbow hue
`leds[i].setHue(224);`
- 3 Using a 'spectrum' color with hue 0-255 (v2)
`CHSV spectrumcolor;
spectrumcolor.hue = 222;
spectrumcolor.saturation = 187;
spectrumcolor.value = 255;
hsv2rgb_spectrum(spectrumcolor, leds[i]);`
- 4 Using a 'spectrum' color with hue 0-191 (v2)
`CHSV spectrumcolor192;
spectrumcolor192.hue = 166;
spectrumcolor192.saturation = 187;
spectrumcolor192.value = 255;
hsv2rgb_raw(spectrumcolor192, leds[i]); //raw`
- 5 use new 'fill_solid', telling it to fill just one led. (v2) Note that this is a pretty silly way to set one pixel, but it lets us illustrate the existence of fill_solid, a new convenience function the library provides.
`fill_solid(&(amp;leds[i]), 1 /*number of leds*/, CHSV(224, 187, 255));`
- 6 With fill_rainbow. (v2) Note that this is a pretty silly way to set one pixel, but it lets us illustrate the existence of fill_rainbow, a new convenience function the library provides.
`fill_rainbow(&(amp;leds[i]), 1 /*led count*/, 222 /*starting hue*/);`

```

typedef enum {
    AliceBlue=0xF0F8FF,
    Amethyst=0x9966CC,
    AntiqueWhite=0xFAEBD7,
    Aqua=0x00FFFF,
    Aquamarine=0x7FFFD4,
    Azure=0xF0FFFF,
    Beige=0xF5F5DC,
    Bisque=0xFFE4C4,
    Black=0x000000,
    BlanchedAlmond=0xFFEBCD,
    Blue=0x0000FF,
    BlueViolet=0x8A2BE2,
    Brown=0xA52A2A,
    BurllyWood=0xDEB887,
    CadetBlue=0x5F9EA0,
    Chartreuse=0x7FFF00,
    Chocolate=0xD2691E,
    Coral=0xFF7F50,
    CornflowerBlue=0x6495ED,
    Cornsilk=0xFFFF8D,
    Crimson=0xDC143C,
    Cyan=0x00FFFF,
    DarkBlue=0x00008B,
    DarkCyan=0x008B8B,
    DarkGoldenrod=0xB8860B,
    DarkGray=0xA9A9A9,
    DarkGreen=0x006400,
    DarkKhaki=0xBDB76B,
    DarkMagenta=0x8B008B,
    DarkOliveGreen=0x556B2F,
    DarkOrange=0xFF8C00,
    DarkOrchid=0x9932CC,
    DarkRed=0x8B0000,
    DarkSalmon=0xE9967A,
    DarkSeaGreen=0x8FBC8F,
    DarkSlateBlue=0x483D8B,
    DarkSlateGray=0x2F4F4F,
    DarkTurquoise=0x00CED1,
    DarkViolet=0x9400D3,
    DeepPink=0xFF1493,
    DeepSkyBlue=0x00BFFF,
    DimGray=0x696969,
    DodgerBlue=0x1E90FF,
    FireBrick=0xB22222,
    FloralWhite=0xFFFFAF,
    ForestGreen=0x228B22,
    Fuchsia=0xFF00FF,
    Gainsboro=0xDCDCDC,
    GhostWhite=0xF8F8FF,
    Gold=0xFFD700,
    Goldenrod=0xDAA520,
    Gray=0x808080,
    Green=0x008000,
    GreenYellow=0xADFF2F,
    Honeydew=0xF0FFF0,
    HotPink=0xFF69B4,
    IndianRed=0xCD5C5C,
    Indigo=0x4B0082,
    Ivory=0xFFFFF0,
    Khaki=0xF0E68C,
    Lavender=0xE6E6FA,
    LavenderBlush=0xFFF0F5,
    LawnGreen=0x7CFC00,
    LemonChiffon=0xFFFFAC,
    LightBlue=0xADD8E6,
    LightCoral=0xF08080,
    LightCyan=0xE0FFFF,
    LightGoldenrodYellow=0xFAFAD2,
    LightGreen=0x90EE90,
    LightGrey=0xD3D3D3,
    LightPink=0xFFB6C1,

```

```
LightSalmon=0xFFA07A,  
LightSeaGreen=0x20B2AA,  
LightSkyBlue=0x87CEFA,  
LightSlateGray=0x778899,  
LightSteelBlue=0xB0C4DE,  
LightYellow=0xFFFFE0,  
Lime=0x00FF00,  
LimeGreen=0x32CD32,  
Linen=0xFAF0E6,  
Magenta=0xFF00FF,  
Maroon=0x800000,  
MediumAquamarine=0x66CDAA,  
MediumBlue=0x0000CD,  
MediumOrchid=0xBA55D3,  
MediumPurple=0x9370DB,  
MediumSeaGreen=0x3CB371,  
MediumSlateBlue=0x7B68EE,  
MediumSpringGreen=0x00FA9A,  
MediumTurquoise=0x48D1CC,  
MediumVioletRed=0xC71585,  
MidnightBlue=0x191970,  
MintCream=0xF5FFFA,  
MistyRose=0xFFE4E1,  
Moccasin=0xFFE4B5,  
NavajoWhite=0xFFDEAD,  
Navy=0x000080,  
OldLace=0xFDF5E6,  
Olive=0x808000,  
OliveDrab=0x6B8E23,  
Orange=0xFFA500,  
OrangeRed=0xFF4500,  
Orchid=0xDA70D6,  
PaleGoldenrod=0xEEE8AA,  
PaleGreen=0x98FB98,  
PaleTurquoise=0xAFEEEE,  
PaleVioletRed=0xDB7093,  
PapayaWhip=0xFFEFD5,  
PeachPuff=0xFFDAB9,  
Peru=0xCD853F,  
Pink=0xFFC0CB,  
Plaid=0xCC5533,  
Plum=0xDDA0DD,  
PowderBlue=0xB0E0E6,  
Purple=0x800080,  
Red=0xFF0000,  
RosyBrown=0xBC8F8F,  
RoyalBlue=0x4169E1,  
SaddleBrown=0x8B4513,  
Salmon=0xFA8072,  
SandyBrown=0xF4A460,  
SeaGreen=0x2E8B57,  
Seashell=0xFFF5EE,  
Sienna=0xA0522D,  
Silver=0xC0C0C0,  
SkyBlue=0x87CEEB,  
SlateBlue=0x6A5ACD,  
SlateGray=0x708090,  
Snow=0xFFFFFA,  
SpringGreen=0x00FF7F,  
SteelBlue=0x4682B4,  
Tan=0xD2B48C,  
Teal=0x008080,  
Thistle=0xD8BFD8,  
Tomato=0xFF6347,  
Turquoise=0x40E0D0,  
Violet=0xEE82EE,  
Wheat=0xF5DEB3,  
White=0xFFFFFFFF,  
WhiteSmoke=0xF5F5F5,  
Yellow=0xFFFF00,  
YellowGreen=0x9ACD32  
} HTMLColorCode;
```