

# Package ‘cetcolor’

July 10, 2018

**Title** CET Perceptually Uniform Colour Maps

**Version** 0.2.0

**Description** Collection of perceptually uniform colour maps made by Peter Kovesi (2015) “Good Colour Maps: How to Design Them” <arXiv:1509.03700> at the Centre for Exploration Targeting (CET).

**Depends** R (>= 3.3.0)

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**URL** <https://github.com/coatless/cetcolor>,  
<http://thecoatlessprofessor.com/projects/cetcolor/>,  
<http://peterkovesi.com/projects/colourmaps/>

**BugReports** <https://github.com/coatless/cetcolor/issues>

**Encoding** UTF-8

**LazyData** true

**Suggests** knitr, rmarkdown

**VignetteBuilder** knitr

**RoxygenNote** 6.0.1

**NeedsCompilation** no

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**Repository** CRAN

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cetcolor-package	<i>cetcolor: CET Perceptually Uniform Colour Maps</i>
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**Description**

Collection of perceptually uniform colour maps made by Peter Kovesi (2015) "Good Colour Maps: How to Design Them" <arXiv:1509.03700> at the Centre for Exploration Targeting (CET).

**Details**

56 Colour maps are available as of May 2018

**Author(s)**

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Other contributors:

- Peter Kovesi <peter.kovesi@uwa.edu.au> (Creator of CET Color Maps) [copyright holder]

**See Also**

Useful links:

- <https://github.com/coatless/cetcolor>
- <http://thecoatlessprofessor.com/projects/cetcolor/>
- <http://peterkovesi.com/projects/colourmaps/>
- Report bugs at <https://github.com/coatless/cetcolor/issues>

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cet_color_maps	<i>RGB Value Map of the CET Perceptually Uniform Colour Maps</i>
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**Description**

A list of data.frames that have the RGB values of the CET Perceptually Uniform Colour Maps as released in May 2018 with the original maps released in June 2016.

**Usage**

cet\_color\_maps

**Format**

A list with each entry coded as a data frame with 256 observations and 3 variables:

- R: Red value
- G: Green value
- B: Blue value

The following color maps have been included:

**Cyclic Colour Maps**

- c1, formerly: cyclic\_mrybm\_35-75\_c68\_n256
- c1s, formerly: cyclic\_mrybm\_35-75\_c68\_n256\_s25
- c2, formerly: cyclic\_mygbm\_30-95\_c78\_n256
- c2s, colorwheel, formerly: cyclic\_mygbm\_30-95\_c78\_n256\_s25
- c4, formerly: cyclic\_wrwbw\_40-90\_c42\_n256
- c4s, formerly: cyclic\_wrwbw\_40-90\_c42\_n256\_s25
- c5, formerly: cyclic\_grey\_15-85\_c0\_n256
- c5s, formerly: cyclic\_grey\_15-85\_c0\_n256\_s25

**Diverging Colour Maps**

- d1, coolwarm, formerly: diverging\_bwr\_40-95\_c42\_n256
- d1a, long: diverging\_bwr\_20-95\_c54\_n256
- d2, gwv, formerly: diverging\_gwv\_55-95\_c39\_n256
- d3, formerly: diverging\_gwr\_55-95\_c38\_n256
- d4, bkr, formerly: diverging\_bkr\_55-10\_c35\_n256
- d6, bky, formerly: diverging\_bky\_60-10\_c30\_n256
- d7, bji, formerly: diverging-linear\_bji\_30-90\_c45\_n256
- d8, formerly: diverging-linear\_bjr\_30-55\_c53\_n256
- d9, formerly: diverging\_bwr\_55-98\_c37\_n256
- d10, formerly: diverging\_cwm\_80-100\_c22\_n256
- d11, formerly: diverging-isoluminant\_cjo\_70\_c25\_n256
- d12, formerly: diverging-isoluminant\_cjm\_75\_c23\_n256
- d13, long: diverging\_bwg\_20-95\_c41\_n256
- diverging-isoluminant\_cjm\_75\_c24\_n256
- diverging\_gkr\_60-10\_c40\_n256

**Isoluminant Colour Maps**

- i1, formerly: isoluminant\_cm\_70\_c39\_n256
- i2, isolum, formerly: isoluminant\_cgo\_80\_c38\_n256
- i3, formerly: isoluminant\_cgo\_70\_c39\_n256

### Linear Colour Maps

- 11, gray, formerly: linear\_grey\_0-100\_c0\_n256
- 12, dimgray formerly: linear\_grey\_10-95\_c0\_n256
- 13, long: linear\_kryw\_0-100\_c71\_n256
- 14, long: linear\_kry\_0-97\_c73\_n256
- 15, kgy, formerly: linear\_green\_5-95\_c69\_n256
- 16, formerly: linear\_blue\_5-95\_c73\_n256
- 17, formerly: linear\_bmw\_5-95\_c86\_n256
- 18, formerly: linear\_bmy\_10-95\_c71\_n256
- 19, long: linear\_bgyw\_20-98\_c66\_n256
- 110, formerly: linear\_gow\_60-85\_c27\_n256
- 111, formerly: linear\_gow\_65-90\_c35\_n256
- 112, blues, formerly: linear\_blue\_95-50\_c20\_n256
- 113, kr, formerly: linear\_ternary-red\_0-50\_c52\_n256
- 114, long: linear\_ternary-green\_0-46\_c42\_n256
- 115, kb, formerly: linear\_ternary-blue\_0-44\_c57\_n256
- 116, long: linear\_kbgyw\_5-98\_c62\_n256
- 117, long: linear\_worb\_100-25\_c53\_n256
- 118, long: linear\_wyor\_100-45\_c55\_n256
- 119, long: linear\_wcmr\_100-45\_c42\_n256
- bgy, linear\_bgy\_10-95\_c74\_n256
- linear\_bgyw\_15-100\_c67\_n256
- bgyw, linear\_bgyw\_15-100\_c68\_n256
- bmw, linear\_bmw\_5-95\_c89\_n256
- inferno, linear\_bmy\_10-95\_c78\_n256
- linear\_kry\_5-95\_c72\_n256
- linear\_kry\_5-98\_c75\_n256
- linear\_kryw\_5-100\_c64\_n256
- fire, linear\_kryw\_5-100\_c67\_n256
- kg, linear\_ternary-green\_0-46\_c42\_n256

### Rainbow Colour Maps

- r1, formerly: rainbow\_bgyrm\_35-85\_c69\_n256
- r2, formerly: rainbow\_bgyr\_35-85\_c72\_n256
- r3, formerly: diverging-rainbow\_bgyrm\_45-85\_c67\_n256
- rainbow, rainbow\_bgyr\_35-85\_c73\_n256
- rainbow\_bgyrm\_35-85\_c71\_n256

### Colour Blind

- cbl1, long: linear-protanopic-deutanopic\_kbjyw\_5-95\_c25\_n256
- cbl2, long: linear-protanopic-deutanopic\_kbw\_5-98\_c40\_n256
- cbd1, long: diverging-protanopic-deutanopic\_bwy\_60-95\_c32\_n256
- cbc1, long: cyclic-protanopic-deutanopic\_bwyk\_16-96\_c31\_n256
- cbc2, long: cyclic-protanopic-deutanopic\_wywb\_55-96\_c33\_n256
- cbt11, long: linear-tritanopic\_krjcw\_5-98\_c46\_n256
- cbt12, long: linear-tritanopic\_krjcw\_5-95\_c24\_n256
- cbtd1, long: diverging-tritanopic\_cwr\_75-98\_c20\_n256
- cbtc1, long: cyclic-tritanopic\_cwrk\_40-100\_c20\_n256
- cbtc2, long: cyclic-tritanopic\_wrwc\_70-100\_c20\_n256

### Source

[http://peterkovesi.com/projects/colourmaps/CETperceptual\\_csv\\_0\\_1.zip](http://peterkovesi.com/projects/colourmaps/CETperceptual_csv_0_1.zip)

### References

<http://peterkovesi.com/projects/colourmaps/>

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cet\_pal

*CET Perceptually Uniform Color Maps*

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### Description

Extract n RGB Hexadecimal colors from the perceptually uniform color maps developed by [Peter Kovesi](#).

### Usage

```
cet_pal(n, name = "rainbow", alpha = 1)
```

### Arguments

- |       |   |
|-------|---|
| n     | A numeric value greater than one indicating how many colors to use from the color map.  |
| name  | A string indicating the color map to use. There are 51 options available. Please see <a href="#">cet_color_maps()</a> for more information. By default, the "rainbow" color scheme is used. |
| alpha | A numeric value between [0, 1] that indicates the level of transparency.  |

### Value

A character vector containing the RGB hexadecimal representation of the requested color map.

## References

Peter Kovesi. Good Colour Maps: How to Design Them. [arXiv:1509.03700](https://arxiv.org/abs/1509.03700) cs.GR 2015

## Examples

```
# Grab 8 colors from rainbow or rainbow_bgyr_35-85_c73_n256
colors = cet_pal(8)
plot(1:8, 1:8, col=colors, pch=19, cex=3, xlab="", ylab="")

# Grab 25 colors from coolwarm or diverging_bwr_40-95_c42_n256
colors = cet_pal(25, name = "coolwarm")
plot(1:25, 1:25, col=colors, pch=19, cex=3, xlab="", ylab="")
```

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display\_cet\_pal

*Display CET Color Maps*

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## Description

Offers a variety of ways to preview CET Color Maps.

## Usage

```
display_cet_pal(n = 256, name = "rainbow", alpha = 1)

display_cet_attribute(n = 256, attribute = "rainbow", alpha = 1)

display_cet_all(n = 256, alpha = 1)
```

## Arguments

n	A numeric value greater than one indicating how many colors to use from the color map.
name	A string indicating the color map to use. There are 51 options available. Please see <a href="#">cet_color_maps()</a> for more information. By default, the "rainbow" color scheme is used.
alpha	A numeric value between [0, 1] that indicates the level of transparency.
attribute	A character string indicating the attribute. Accepted values are: "rainbow" (Default), "linear", "diverging", "cyclic", "isoluminant", and "colorblind".

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