

RapidTables

[Home](#) › [Conversion](#) › [Color conversion](#) › [RGB to HSL](#)

RGB to HSL color conversion

Enter red, green and blue color levels (0..255) and press the *Convert* button:

Enter red color (R):	<input type="text" value="0"/>
Enter green color (G):	<input type="text" value="0"/>
Enter blue color (B):	<input type="text" value="0"/>
	<input type="button" value="Convert"/> <input type="button" value="Reset"/>
Hue (H):	<input type="text" value="0"/> °
Saturation (S):	<input type="text" value="0"/> %
Lightness (L):	<input type="text" value="0"/> %
Color preview:	<div></div>

[HSL to RGB conversion ►](#)

RGB to HSL conversion formula

The *R,G,B* values are divided by 255 to change the range from 0..255 to 0..1:

$$R' = R/255$$

$$G' = G/255$$

$$B' = B/255$$

$$C_{max} = \max(R', G', B')$$

$$C_{min} = \min(R', G', B')$$

$$\Delta = C_{max} - C_{min}$$

Hue calculation:

$$H = \begin{cases} 0^\circ & \Delta = 0 \\ 60^\circ \times \left(\frac{G' - B'}{\Delta} \bmod 6 \right) & , C_{max} = R' \\ 60^\circ \times \left(\frac{B' - R'}{\Delta} + 2 \right) & , C_{max} = G' \\ 60^\circ \times \left(\frac{R' - G'}{\Delta} + 4 \right) & , C_{max} = B' \end{cases}$$

Saturation calculation:

$$S = \begin{cases} 0 & , \Delta = 0 \\ \frac{\Delta}{1 - |2L - 1|} & , \Delta <> 0 \end{cases}$$

Lightness calculation:

$$L = (C_{max} + C_{min}) / 2$$

RGB to HSL color table

Color	Color name	Hex	(R,G,B)	(H,S,L)
<div></div>	Black	#000000	(0,0,0)	(0°,0%,0%)

COLOR CONVERSION

- [CMYK to RGB](#)
- [Hex to RGB](#)
- [HSL to RGB](#)
- [HSV to RGB](#)
- [RGB to CMYK](#)
- [RGB to hex](#)
- [RGB to HSL](#)
- [RGB to HSV](#)

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	White	#FFFFFF	(255,255,255)	(0°,0%,100%)
	Red	#FF0000	(255,0,0)	(0°,100%,50%)
	Lime	#00FF00	(0,255,0)	(120°,100%,50%)
	Blue	#0000FF	(0,0,255)	(240°,100%,50%)
	Yellow	#FFFF00	(255,255,0)	(60°,100%,50%)
	Cyan	#00FFFF	(0,255,255)	(180°,100%,50%)
	Magenta	#FF00FF	(255,0,255)	(300°,100%,50%)
	Silver	#BFBFBF	(191,191,191)	(0°,0%,75%)
	Gray	#808080	(128,128,128)	(0°,0%,50%)
	Maroon	#800000	(128,0,0)	(0°,100%,25%)
	Olive	#808000	(128,128,0)	(60°,100%,25%)
	Green	#008000	(0,128,0)	(120°,100%,25%)
	Purple	#800080	(128,0,128)	(300°,100%,25%)
	Teal	#008080	(0,128,128)	(180°,100%,25%)
	Navy	#000080	(0,0,128)	(240°,100%,25%)

HSL to RGB conversion ►

See also

- [How to convert RGB to hex](#)
- [Hex to RGB converter](#)
- [HSL to RGB converter](#)

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