Surprise! It's not Pink.

Lighting Design and Color Mixing with Gel Filters

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AMERICAN UNIVERSITY | 18TH ANNUAL PHYS 200 CONFERENCE

Outline

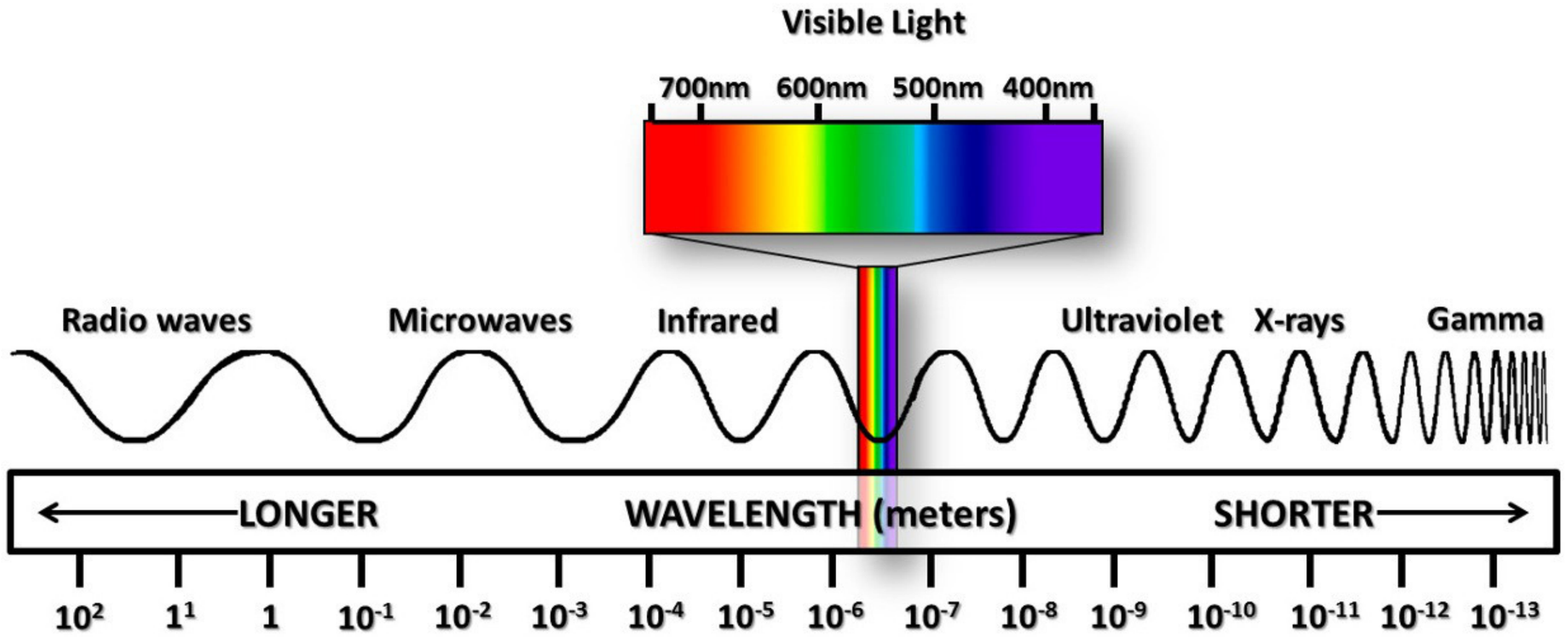
1. Roscolux Color Filters (Gels)
2. The Electromagnetic Spectrum
3. Additive Color Wheel
4. Spectral Energy Distribution
5. Color Matching Functions
6. Tungstens and LEDs
7. An Example of Color Mixing





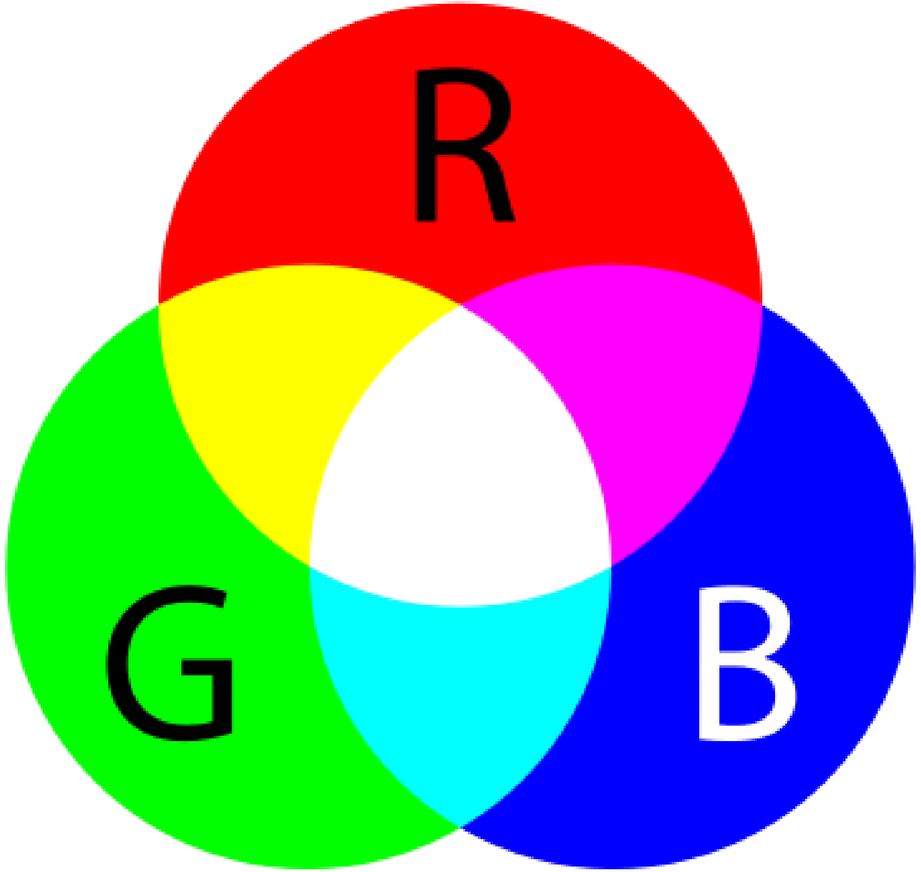
oscolux
Added Colors
Classic Edition
#36
Pale Basic
Amber
TRANS. = 88%

The Electromagnetic Spectrum



$$\lambda = c / \nu$$

Additive Color Wheel



Red + Green + Blue = White

Red + Green = Yellow

Red + Blue = Magenta

Green + Blue = Cyan

Magenta - Blue = Red

Magenta - Red = Blue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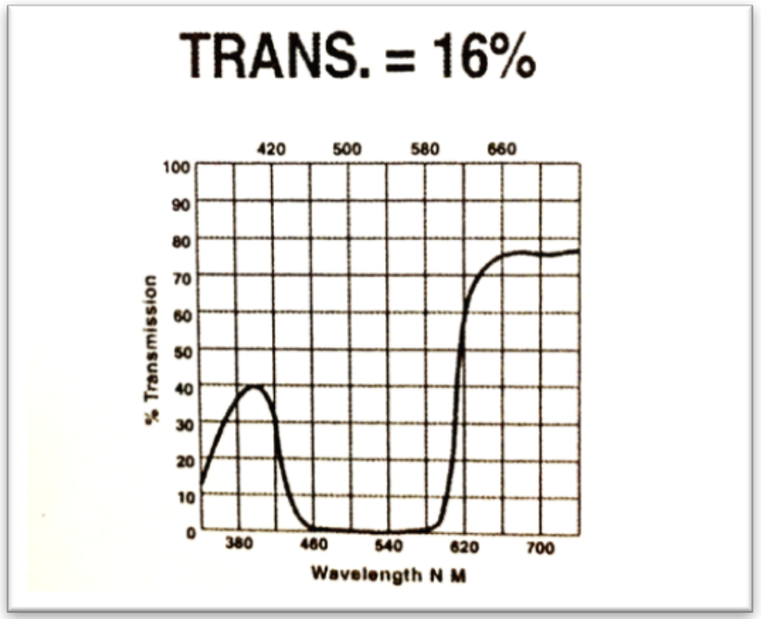
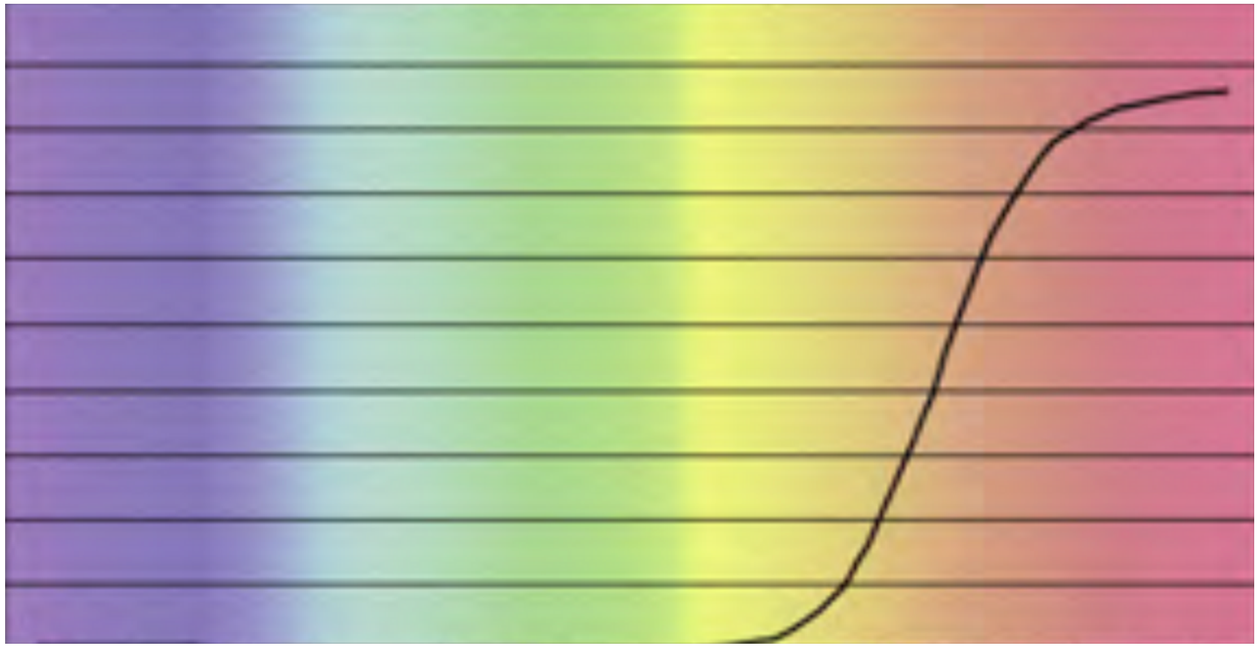
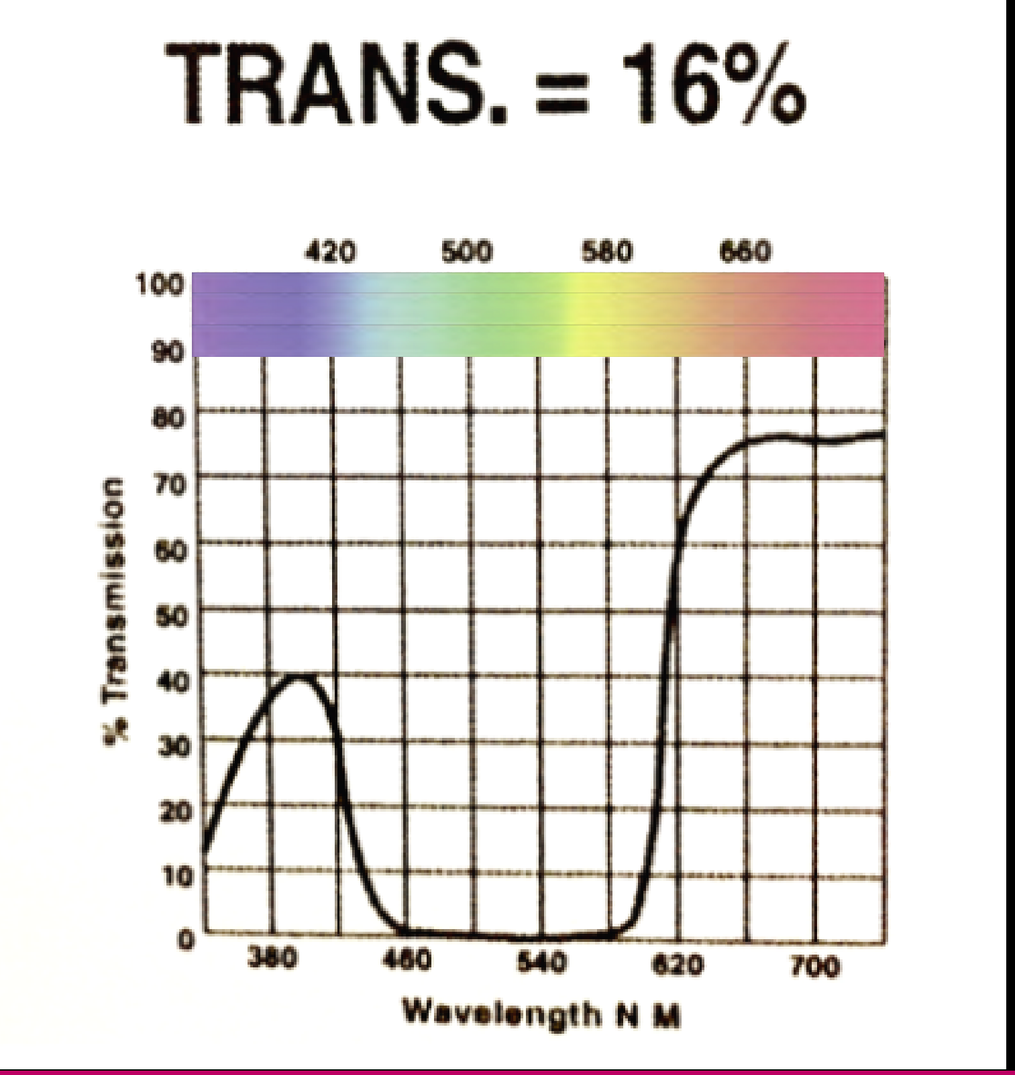
Spectral Energy Distribution



R342 Rose Pink



R27 Medium Red



R342

Yxy (10.215, 0.496, 0.225)

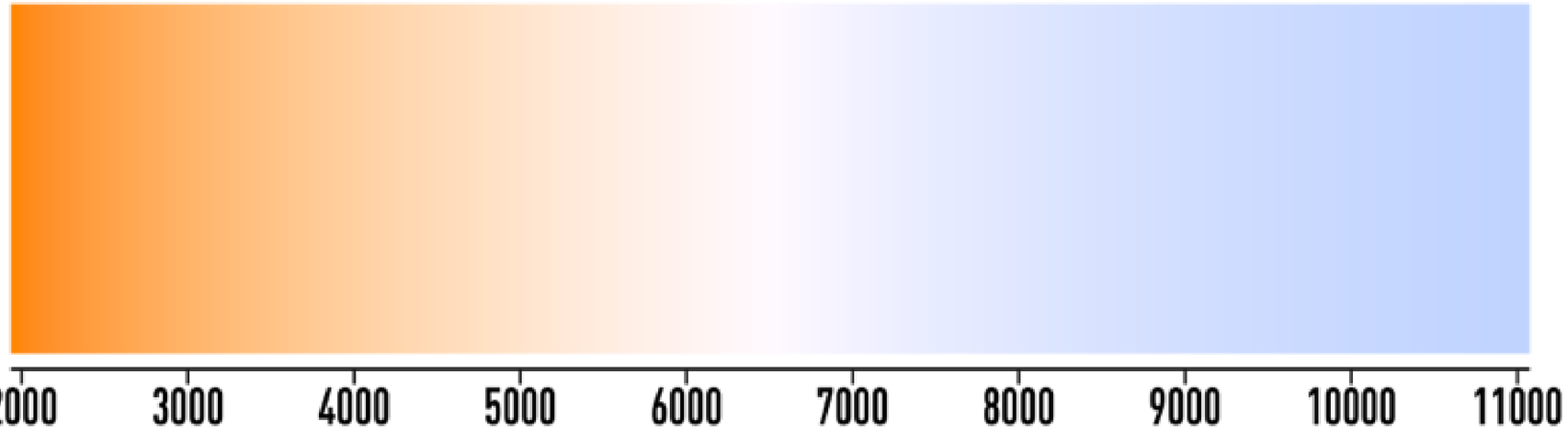
CIE (40.80, 68.01, -0.35)

R 189

G 0

B 99

Kelvin Color Temperature Scale



Source A

Source D65

Example Data Sheet

Brand:	Roscolux, Supergel
Color:	R342 Rose Pink
Transmission:	16% (Y=16.774)
Available Sizes:	20 in. x 24 in. sheets (50cm x 60cm) 24 in. x 25 ft. rolls (60cm x 7.62m)
Description:	Color Effects Lighting Filter.
Additional Info:	

	Source A		Source D65	
Y	16.774	Y	10.215	
(x)	0.637	(x)	0.496	
(y)	0.301	(y)	0.225	

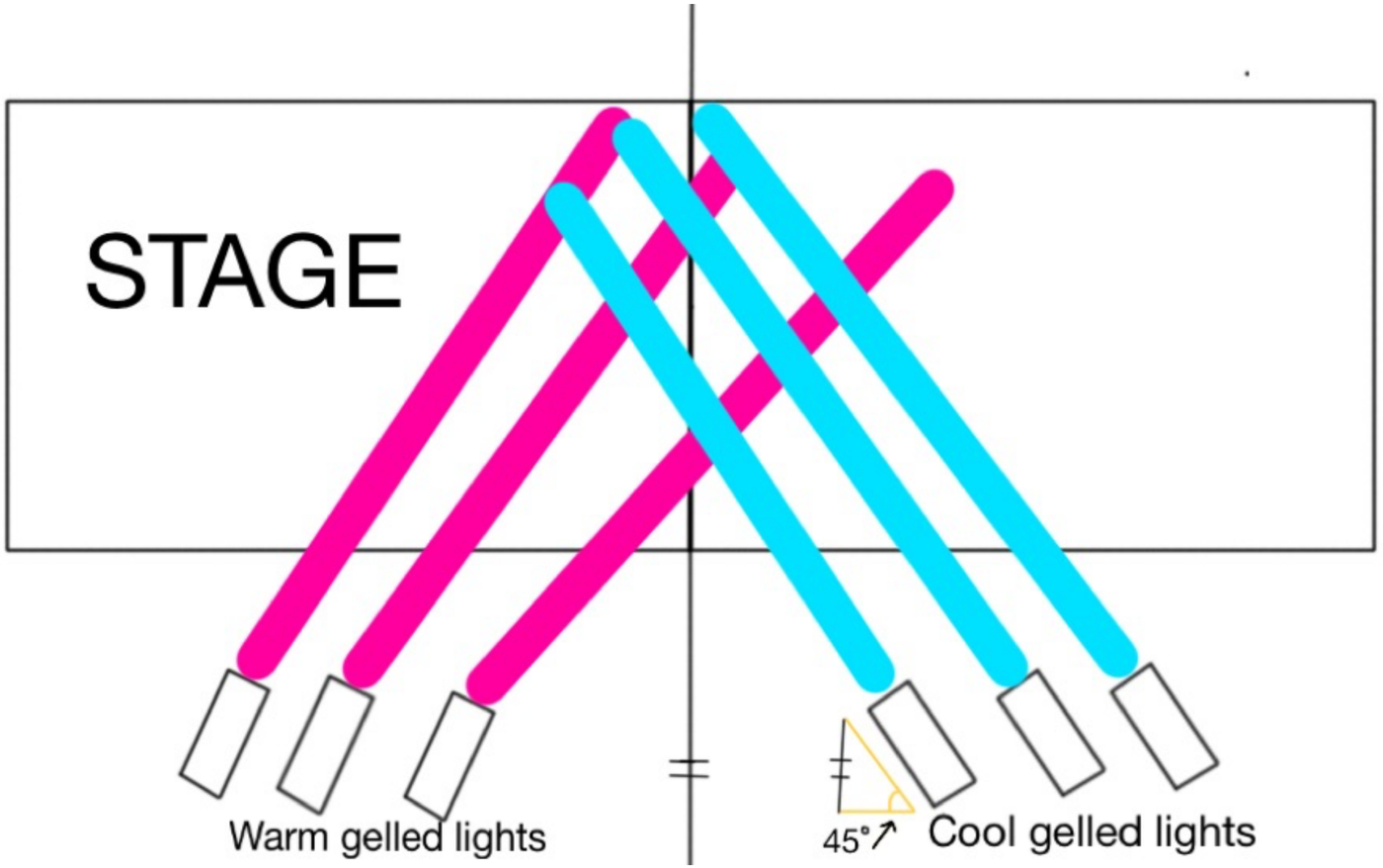
Source A

Source D65

The McCandless Method

R337 True Pink

CIELAB (A)
75.14, 29.72, 38.40
RGB
245, 159, 116
HEX
F59F74



R4360 CalColor 60 Cyan

CIELAB (A)
73.92, -21.22, 36.16
RGB
145, 196, 107
HEX
91C46B

Color Math and Output

RGB: 190, 178, 107