Interference Filter

Conventional (dye) filters absorb unwanted colors.
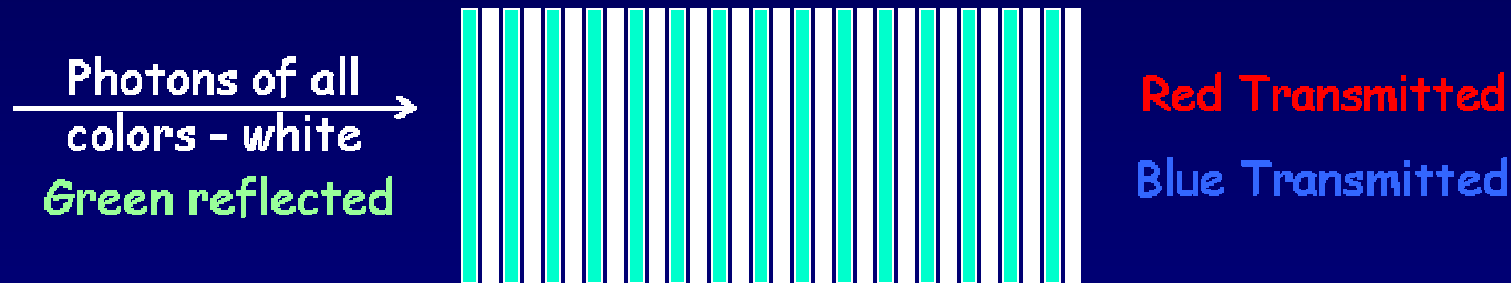Interference filters do not absorb light (do not get hot) and are
used in many applications: TV, photography, astronomy, …
Examples: Red, Green, Blue (RGB) → Yellow, Cyan, Magenta

What is magenta?
Answer: Magenta = Red + Blue (no Green)

A magenta filter must have a stop band in the green, but pass red and blue:

Photons of all
colors - white
Green reflected

Red Transmitted

Blue Transmitted

Demonstration with a
commercial interference filter

Magenta Subtractive Filter
typical transmittance curve