

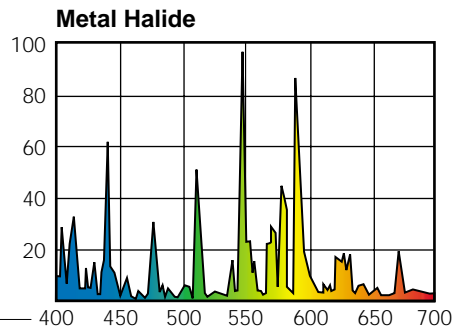
# Color Effects and Lamp Selection

**NOTE:** The color samples shown are for comparison use only, and do not represent actual field conditions (impossible in a printed format.) Actual performance and colors will change based on lamp and reflector system used. Light Loss Factor (LLF) indicates approximate percentage of source lamp illuminance that is transmitted through the filter.

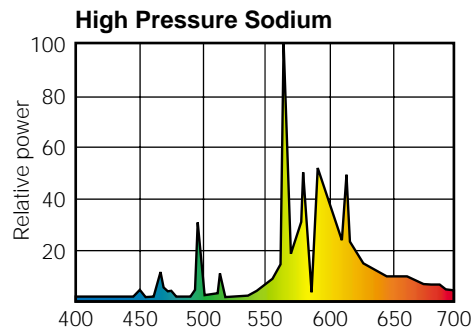
# Color Filters

## Lamp Selection

The selection of lamp should be based on the coloration of the target surfaces being lighted. Where the target is predominantly warm in color, such as brick, stone, or earth-tone paint, High Pressure Sodium is appropriate. For whites, cool paint colors, exposed metals such as stainless steel, and for the greens in landscape, Metal Halide may be a more appropriate choice.



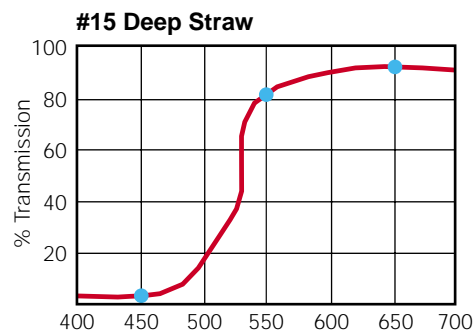
The spectral distribution chart at left shows where Metal Halide lamp output is greatest. Note that its output in the red zone, above 600nm, is very weak. This means that this lamp will not render red color well, and will tend to tint whites to appear blue and blue-green, as this is where the lamps greatest energy is produced.



The spectral distribution chart at left shows where High Pressure Sodium lamp output is greatest. Note that its output below 550nm is very weak. The strong output in the 560nm to 625nm range is what gives this lamp its characteristic yellow-orange color appearance. These lamps will not render blue surface colors well, and will tend to tint whites to a yellow-orange color appearance.

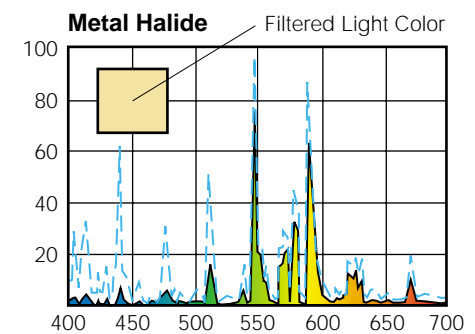
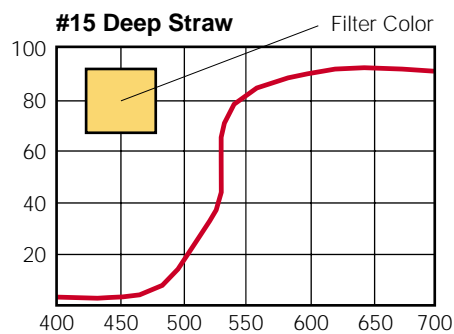
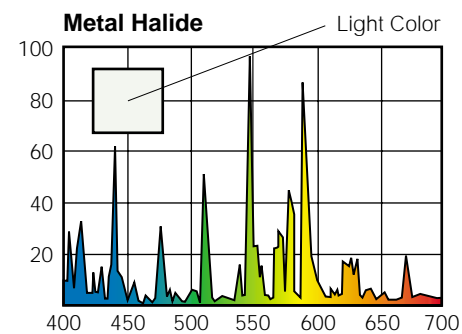
## Color Filters

Color filters can be used to modify lamp coloration, or to add a dramatic color effect to a project. Color filters work simply by blocking some wavelengths of light, and transmitting others. Color filters cannot add color to the light passing through them. Therefore, when using color filters with H.I.D. sources, it is important to select an appropriate source, as it will have a dramatic impact on the appearance of the resulting light output.



The color distribution shown for each filter is a representation of the amount of light transmitted at each wavelength. In this example; the filter will transmit approximately (●) 2% of the light passing through it at 450nm, 80% at 550nm, and 90% at 650nm.

Lamp spectral energy distribution will have a dramatic effect on the color transmitted by the color filter.



Raw Lamp Output → Filter Characteristics → Resulting Light Output

