



More About Vision

- Vision senses a variety of light wavelengths.

Vision-2

THE COLORS OF LIGHT

The Vision String identifies three adjacent Bands: named adjacent peak wavelengths corresponding to colors. Vision detectable wavelengths (defined in nm nanometers) range from the ultraviolet to the infrared across a spectrum of sixteen colors.

Humans see in RGB (Red-Green-Blue); others may see a spectrum which overlaps human vision (for example, PBG, or RCA), or a spectrum above or below the human range.

Subjective Color. A being "sees" a range of colors analogous to RGB. Someone with vision in the PSU (Purple-Sparkle-Uv) band "sees" P as Red, S as Green, and U as Blue).

Seeing Colors

Objects reflect (or radiate) many different colors; beings can only see the colors their eyes can sense. Colors convey information; beings seeing different wavelengths harvest different information from what they see.

Seeing White. A white object reflects all colors. A human seeing RGB sees a white object. A sophont seeing PSU also sees a white object.

Seeing Black. A black object reflects no colors. A human seeing RGB sees a black object. A sophont seeing PSU also sees a black object.

Seeing Heat. A sophont who sees in the InfraRed (any of the colors ANIFXZ) can see objects hotter than its body temperature as bright glowing ANIFXZ colors and those colder as dull grey or black regardless of light levels. In addition, the sophont can see ordinary objects in reflected ANIFXZ colors.

AN OVERVIEW OF COLORS

nm	Code	Name	Star	Extended Color Name
30	V	Vharduv	B0 I	Very Hard Ultra Violet.
100	H	Harduv	B0 V	Hard Ultra Violet.
170	D	Darkuv	B5 V	Dark Ultra Violet.
240	U	Uv	B9 V	Ultra Violet.
310	S	Sparkle	A2 V	Near Ultra Violet.
380	P	Purple	A9 V	Human visible Violet (almost ultraviolet).
450	B	Blue	F7 V	Human visual Blue.
540	G	Green	G2 V	Human visible Green.
610	R	Red	K1 V	Human visible Red.
680	C	Cerise	K4 V	Human visual Cerise (almost infrared)
750	A	Aglow	K7 V	Edge of infrared.
820	N	Nearir	M0 V	Near Infra Red
890	I	Ir	M2 V	Infra Red
1000	F	Farir	M5 V	Far Infra Red
2000	X	Xir	L9 VII	Extreme Infra Red
4000	Z	Zir	T7 VII	Beyond Extreme Infra Red

nm: the wavelength in nanometers (nm). The peak wavelength perceived; the eye actually sees wavelengths within 100 nm on either side of the peak (more in the Infrared). **Code.** The single letter abbreviation for this color.

Name. The name of this color. **Star.** Stellar spectral class with peak output at this wavelength. **Extended Color Name.** A description of this color.

IT'S MORE COMPLEX THAN THESE FEW STATEMENTS

The equivalence of colors across wavelengths is far more complex than these few statements. For role-playing purposes, a player can assume the equivalences for everyday usage can concentrate on the differences.

THE ADVANTAGES OF OTHER COLORS

A sophont with vision in the infrared can see heat: hotspots in machinery; body heat from animals or sophonts, even in the darkest night; heat traces left by vehicles.

A sophont with vision in the ultraviolet can see fluorescing minerals, chemicals left by organic activity.

Vision in other colors can often detect flaws, document alterations, or overpainting not visible to the original users.

THE DISADVANTAGES OF COLOR

Devices may show blank output: in colors invisible to the user.

Insignia, markings, color identifiers, warning signs, or alarms may be in invisible colors.

TECHNOLOGICAL VISION

Many devices depend on light input, produce light output, and operate to enhance vision.

A Vision device is identified with a Vision String and may include an enhanced Vision Constant, a Range Mod, and alternate color input and output.

An unaided human V-16-RGB has a 40% chance of noticing a person Size = 5 at R=5.

Binox-10 V-20-VHD> RGB is a TL-10 vision enhancer seeing in the VHD range and outputting in human-visible RGB. Constant 20 increases the chance of success.

A human using Binox-10 V-20-VHD has a 78% chance of noticing a person Size = 5 at R=5.

Binox-12 V-16-RGB R-1 is a TL-12 vision enhancer seeing in the RGB range. R-1 reduces the applicable range band by 1.

A human using Binox-12 V-16-RGB BM+1 has a 40% chance of noticing a person Size=5 at Range=6 (resolved as R=5).

