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There are millions of people who suffer from specific vision ailments that are not treatable. For many, the use of special absorptive filters aids their ability to see. We are proud that we offer four specific lens tints that hopefully will make many people's lives just a little bit better. The following document outlines what our tints are and what they do.

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## What is Low Vision?

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Low vision is a subspecialty within the professions of optometry, ophthalmology and opticianry dealing with individuals who have less than normal vision even with the most accurate conventional prescription available. It can be a result of either congenital or acquired factors; anyone with non-correctable reduced vision is considered to be visually impaired, and can have a wide range of causes. There are also levels of visual impairment based on visual field loss (loss of peripheral vision). In the United States, any person with vision that cannot be corrected to better than 20/200 in the best eye, or who has 20 degrees (diameter) or less of visual field remaining, is considered to be "legally blind" or eligible for disability classification and possible inclusion in certain government sponsored programs.

Globally, in 2002 more than 161 million people were visually impaired, of whom 124 million people had low vision and 37 million were blind. However, refractive error as a cause of visual impairment was not included, which implies that the actual global magnitude of visual impairment is greater. There are many different causes of low vision; some of the ailments are Cataracts, Glaucoma, Uveitis, Macular degeneration, Corneal opacity, Trachoma, Diabetic retinopathy, Myopia magna, Stargardt's disease, Albinism and Retinitis pigmentosa.

There are several devices and treatments designed to improve and alleviate various types of low vision impairments, however improving sensitivity to contrast requires the person to use special optical filters. Low Vision Cocoons are available in four of the most prescribed tints Boysenberry (plum), Lemon (yellow), Hazelnut (amber) and Orange. Each tint is specifically designed to absorb different amounts of the visible light spectrum. For example, a patient may respond best to the reduction or elimination of scattered blue light. Blue light that enters the retina creates distortion by making the definition of objects not as crisp; our Hazelnut and Orange lenses are extremely effective for blocking blue light.

The Low Vision Hazelnut filter is often referred to as an amber tint which provides 18% light transmission and 100 percent UV and infrared protection. The tint blocks 98% of blue light and all visible light up to 410 nm. They are good general purpose glasses providing good visual acuity and have excellent glare protection. They are often recommended to aid those with vision loss connected to retinitis pigmentosa, diabetic retinopathy, pre-cataract and glaucoma.

Low Vision Cocoons with Orange filters have 34% light transmissions and blocks 100% of blue light and all visible light up to 520 nm. The lenses enhance contrast and provide protection from glare. They are helpful to individuals with macular degeneration.

Our Lemon filter, sometimes referred to as yellow, provides moderate blue light filtering, which is ideal for reading and watching television. Lemon provides 86% light transmission and blocks 100% UVA/UVB light and all visible light up to 470nm. It helps increase contrast indoors, but should not really be used outside in direct sunlight. It's a tint that is better for low light conditions, unless specifically prescribed for outdoor use by a low vision specialist.

The Boysenberry filter, also referred to as plum, is ideal for reading and watching television. Boysenberry has 15% light transmission and provides 100% UVA/UVB protection. The filter blocks 90% of blue light and all visible light up to 410 nm.