



• **2- ASTIGMATISM**

In the astigmatic eye the front of the cornea is not equally curved; it is slightly oval in shape. As a result, the rays of light that enter the eye are bent unequally and cause distortion of the image. Many people have some degree of astigmatism. You can check your existing spectacles by holding them away from your eyes. Then look at some distant object with a straight surface through one of the lenses. Rotate the lens. If you can clearly see the distortion of the straight surface as you rotate the lens you are likely to have lenses for the correction of astigmatism.

• **3- PRESBYOPIA**

As we age, the focusing system of the eye weakens. Presbyopia occurs when the focusing system is not strong enough to allow one to comfortably see at close distance; reading glasses (or bifocals) are then required. If you have excellent sight you are likely to experience some reading difficulties in your early 40's. Many individuals compensate by holding reading material away from their eyes, however eventually the find their arms are not long enough.

• **4- GLAUCOMA**

Glaucoma causes damage to the optic nerve. The optic nerve carries the images we see to the brain. The optic nerve is like an electric cable containing about 1.2 million wires. Glaucoma can damage nerve fibers, causing blind spots to develop.

What causes glaucoma ?

Many people know that glaucoma has something to do with pressure inside the eye - the intraocular pressure (IOP).

Pressure builds up in the eye when the clear liquid called the aqueous humor, which normally flows in and out of the eye, is prevented from draining properly. This can happen in different ways, depending on the type of glaucoma. The resulting increase in pressure within the eye can damage the optic nerve.

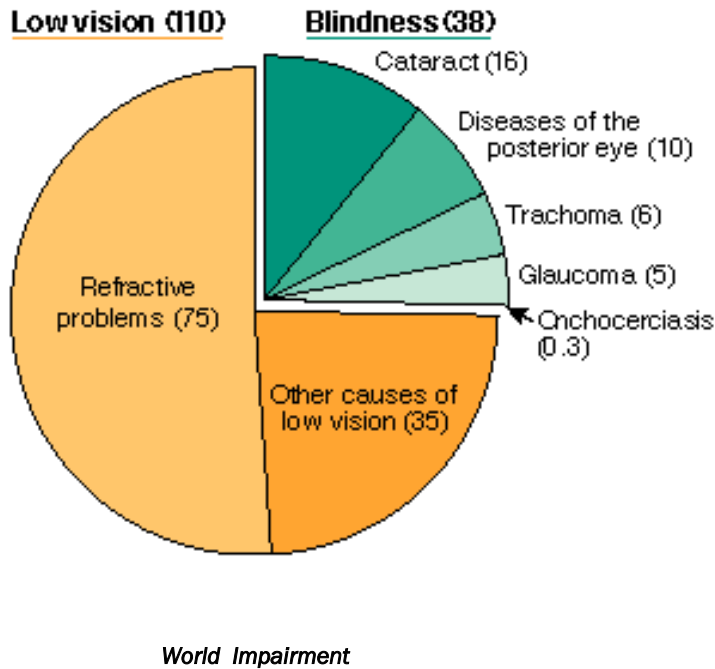
• **5- EXPOSURE TO COMPUTER**

People are using computers at home for everything from e-mail to shopping on the internet. Growing numbers. Growing numbers of office workers and school children are also using them. The most complaints from computers users are eyestrain, tired eyes, dry or irritated eyes, a burning sensation or blurry vision. Computer users often experience neck, shoulder and back pain, which can be eye-related as well.

Modern Lifestyles place additional stresses and strains on your eyes, increasing the importance of choosing the adapted lenses. To answer this need, HITOP has created the anti-EMI technology, a coating that protects the eye from harmful rays from computers.

**Causes of Eye problems for Computer Users:**

- Incorrect positioning of the screen and/or documents, and unsuitable Lighting
- Fatigue
- Uncorrected eyesight problem –e.g. astigmatism, presbyopia
- Using the wrong type of glasses



*"...It is very important to prevent further vision loss by choosing the right lens.*

*"...predictions are always hard, especially when they are about the future..."*

## CHOOSING THE RIGHT LENS

The priority is to choose an optically correct lens. These are the characteristics to look out for:

- (a) Lens Materials

Plastic lenses are the best when lightweight and clear vision are equally important. Users with stronger prescriptions should consider high index plastic materials, which can significantly reduce the thickness and/ or weight of their glasses.

- (b) ABBE Value

The **Abbe value** or constant of a lens is the reciprocal of the V value, or dispersive power. A number which is directly proportional to the chromatic quality of a lens. For example, CR-39, which is considered a low chromatic material, has an Abbe value of 58. ( see our *HITOP CRYSTAL 1.61* with Abbe value of 42).

The higher the **refractive index** number, the thinner a given lens will be. A lens material with lower **specific gravity** will produce a lighter lens. Light weight lenses have become a highly desirable consumer benefit so knowing the specific gravity of lens materials is important information for dispensers.

• **(c) Lens Design Selection**



High index lenses (right) can be considerably thinner and lighter, even in a strong prescription for people with high myopia or high hyperopia. (see our HITOP HT160 lens). With improved technology High index lenses can reach a new level of aesthetics with aspheric design lenses. ( see our HITOP A1UI 1.67).

Aspheric lenses use flatter base curves in their design. In minus lenses for nearsighted people, the curves flatten away from the center, for a lens that doesn't bulge out as much. It also doesn't magnify the eye nearly as much as a regular lens design would, so the eye looks more natural.



***"...Aspheric lenses use flatter base curves in their design..."***

• **(d) Coatings**

Lens coatings can enhance the performance and appearance of eyeglass lenses. A lens that is treated front and back with a clear, has built in scratch-resistant coatings does become more resistant to scratching.

Another lens treatment that is beneficial but invisible to the naked eye is ultraviolet (UV) protection. An ultraviolet treatment is simple and quick to apply to most plastic eyeglass lenses, and it does not change the appearance of the lenses at all.

To improve both the vision through the lenses and the appearance of the glasses, an antireflective coating (also called AR coating) is applied. All out items have 5 layers to block reflected light. Because of the layering effect, our AR coatings have a hint of green color. The result is that you'll see a reduction in glare, annoying reflections, and halos around lights. This is a great safety benefit when you're driving at night.



## CHOOSING A HITOP LENS

The focus of our products lies in being relevant to the needs of its users. We were the first in SE Asia to introduce the multi-coated and hard-coated lens to our customers and continue to set milestones each year. Our latest range of Multi-Purpose lens has both standard features (such as having multi-coat, hard coat, Ultra-Violet coat and being water-resistant) and Asia's first Anti-Electro Magnetic Interference Coating (Anti-EMI Coating). The Anti-EMI coating is a revolutionary lens coating that is developed to cut EM emissions originating from radiating devices such as computer monitors, microwave ovens, etc. This new feature promises to heighten customer expectations of the optical lens. Since its launch, our customers have come to call it, The Computer Lens.

Ready acceptances of the various products introduced by our company by many optical firms in our region have prompted us to expand our lens production capability. We are now desirous in addressing our products to a worldwide audience and are seeking to develop long term business relationship with wholesalers / distributors / importers in every major city.



## PRODUCTS DESCRIPTION

- **HITOP POLAR SCV CR39 1.499 (uncoated lens)**

This item is an uncoated lens, featuring water resistance, ultra thinness, and a super lightweight. Polar SCV is FDA and CE certified. The diameter in both plus and minus lenses is of 65mm.

- **Refractive Index of 1.499**
- **Uncoated Lens**
- **Ultra Slim design**
- **Ultra Light**
- **Water resistant**



*“...The focus of our products lies in being relevant to the needs of its users...”*

• **HITOP PLASSEL CR39 (1.50)**

CR39 (1.50) finished with HMC (Plassel Lens) has the best AR coating in its class. It is very popular due to the fact that is 25% thinner than ordinary CR39 lens.

- **Refractive Index of 1.499**
- **Multi/AR Coated and Hard Coated**
- **Slim design (25% Thinner than ordinary CR39 lenses)**
- **Water resistant**



• **HITOP HT 160 (1.58)**

Our Best Seller, our HT160, which is standing at 1.58, it is thinner and lighter and it is one of the most durable lenses among its class with its very strong AR coating.

- **Refractive Index of 1.58**
- **Both sides Multi/AR Coated & Hard Coated**
- **UV protection**
- **Water resistant**



• **HITOP MR1.61**

Being crystal-clear is what most of high index lenses cannot achieve. Nevertheless, we have developed a 1.61 lens with an ABBE value of 42, which is now one of the clearest 1.61 lens on the world market.

- **Refractive Index of 1.61**
- **Anti EMI coating**
- **Multi/AR coated & Hard Coated**
- **Abbe Value of 42**
- **UV Protection**
- **Water resistant**



• **HITOP A1UI (1.67)**

One of our very popular product, A1UI is a high index lens with a performance and quality standard that our clients worldwide have come to appreciate. The extra clarity and high quality coating had pushed standard of 1.67 to the next level. With its *aspheric design*, this lens is adaptable to all customers conscious of aesthetics.

- **Refractive Index of 1.67**
- **Multi /AR Coated & Hard coated**
- **Aspheric Design**
- **Impact Resistant**
- **UV 400 Protection**
- **Water resistant**



• **HITOP HEMW (1.58)**

This item is counterpart of HT160 lens and it is super advanced with Anti-EMI coating. The anti-EMI coating is a shield to harmful electro-magnetic interference rays. Our customers have called this lens as computer lenses.

- **Refractive index of 1.58**
- **Multi/ Hard & AR coated**
- **Anti-EMI coated**
- **UV Protection**
- **Water Resistant**



• **HITOP NEOLENS 1.58**

The Neolens is a new innovative lens that enhances the readability of small prints on any type of reading materials. The Neo Tinted (15%- available in blue and brown) lens highlights the prints and thus reduces the stress on the eyes of the reader.

- **Refractive index of 1.58**
- **Multi/ Hard, AR coated**
- **Anti-EMI coated**
- **UV400 (100%) protection**
- **NEO tinted**
- **Water resistant**



**• HITOP MPP8 1.56 PHOTOCROMIC LENS**



This is a plastic photogrey, photochromic lens in 1.56 index. This item is best suited for active users and provides maximum protection when a user is in front of the computer and when they are expose in the sun.

- Refractive index of 1.56
- Multi/ Hard & AR coated
- Anti-EMI coated
- UV400 (100%) protection
- Water resistant

**• HITOP XP160 (1.58)**

For extreme protection, choose our brand new XP160. With both sides anti-reflection coated, a double density hard coating and a full protection from UV rays and magnetic emissions (UV400 +Anti-EMI coating) this lens is the ultimate choice.

- Refractive index of 1.58
- Multi/ Hard & AR coated
- Anti-EMI coated
- Light-Weight and Hardness of Surface
- UV400 (100%) protection
- Water resistant



• **HITOP Strata Finished Progressive Lens (1.499)**

Our multicoated finished progressive lenses are of 1.499 index. We have impressed many laboratories around the world.



- **Refractive index of 1.499**
- **Multi/ Hard & AR coated**
- **Soft and short corridor design**
- **UV protection**
- **Water Resistant**

Light-Weight & Hard Surface

• **HITOP SEIDA 1.74**

This is the latest super high index plastic lens innovation of 1.74 index. It is a full designed impact resistant with FDA certified.

- **Refractive index of 1.74**
- **Multi/ Hard & AR coated**
- **Anti-EMI coated**
- **Super thin aspheric design**
- **UV 400 (100%) protection**
- **Water resistant**



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