

1- Optical Abbreviations

Abbreviation	Word	Example
Rx	Prescription	- 1.00 sph / - 0.50 cyl ax 180
Ref	Refraction	- 1.00 sph / - 0.50 cyl ax 180
OD (RE)	Oculus Dexter (Right eye)	RE (OD) : - 1.00 D sph
OS (LE)	Oculus sinister (Left eye)	LE (OS) : - 1.00 D sph
OU (both eye)	Oculus Uteque	OU (RE & LE) : - 1.00 D sph
D	Diopter	- 1.00 D sph or Cyl
Sph	Sphere	- 1.00 D sph
Cyl	Cylinder	- 1.00 D cyl ax 180
Ax	Axis	- 1.00 D cyl ax 180
PL	Plano	RE : pl
ADD	Addition for near fixation	Add + 2.00 D sph
DIST. V (F. V)	Distance or far Vision	- 1.00 sph / - 0.50 cyl ax 180
N . V	Near vision	OU : + 2.00 D sph
NP	Near point fixation	30 cm
FP	Far point fixation	6 m
VA	Visual Acuity	20/20 or 6/6
FVA	Far visual acuity	6/6
NVA	Near visual acuity	6/6
UCVA		UCVA 6/12
BCVA		BCVA 6/6
IPD (PD)	Inter pupillary distance	Pd = 60 mm
MPD	Monocular pupillary distance	RE = 30 mm , LE 30 mm
BVD	Back vertex distance	12 mm
OC	Optical Center	
GC	Geometric Center	
PH	Pinhole	VA with PH = 6/6

ET	Edge thickness lens	ET : 3 mm
N	Index of refraction for lens	N : 1.51
SRC	Anti scratch resistant coating	
AR	Anti reflective coating	
UV	Ultraviolet	UV 400 or 100%
S.V	Single vision	
Bif	Bifocal	
Tri	Trifocal	
F.S	Frame size	
B.D	Bridge distance	
DBL	Distance between two lense	

2- spectacle consists from

A- Frame

B- lens

A- frame

Learn the Nine Essential Parts of Eyeglasses, Here are the nine main parts of eyeglasses:

1. Rims

The rims lend form and character to your eyeglasses—they also provide function by holding the lenses in place.

2. End pieces

The end pieces are the small parts on the frame that extend outward and connect the lenses to the temples.

3. Bridge

The bridge is the center of the frame that rests on your nose and joins the two rims together.

4. Hinges

The hinges, which sit between the end pieces and the temples, allow you to close your glasses by folding the temples inward.

5. Lenses

[Lenses](#) are the clear pieces of glass, plastic or other material held in place by the rims. The lenses are crafted and shaped with your unique prescription to help you see clearly.

6. Screws

The screws are the small metal fasteners near the hinges that connect the end pieces with the temples.

7. Nose pads

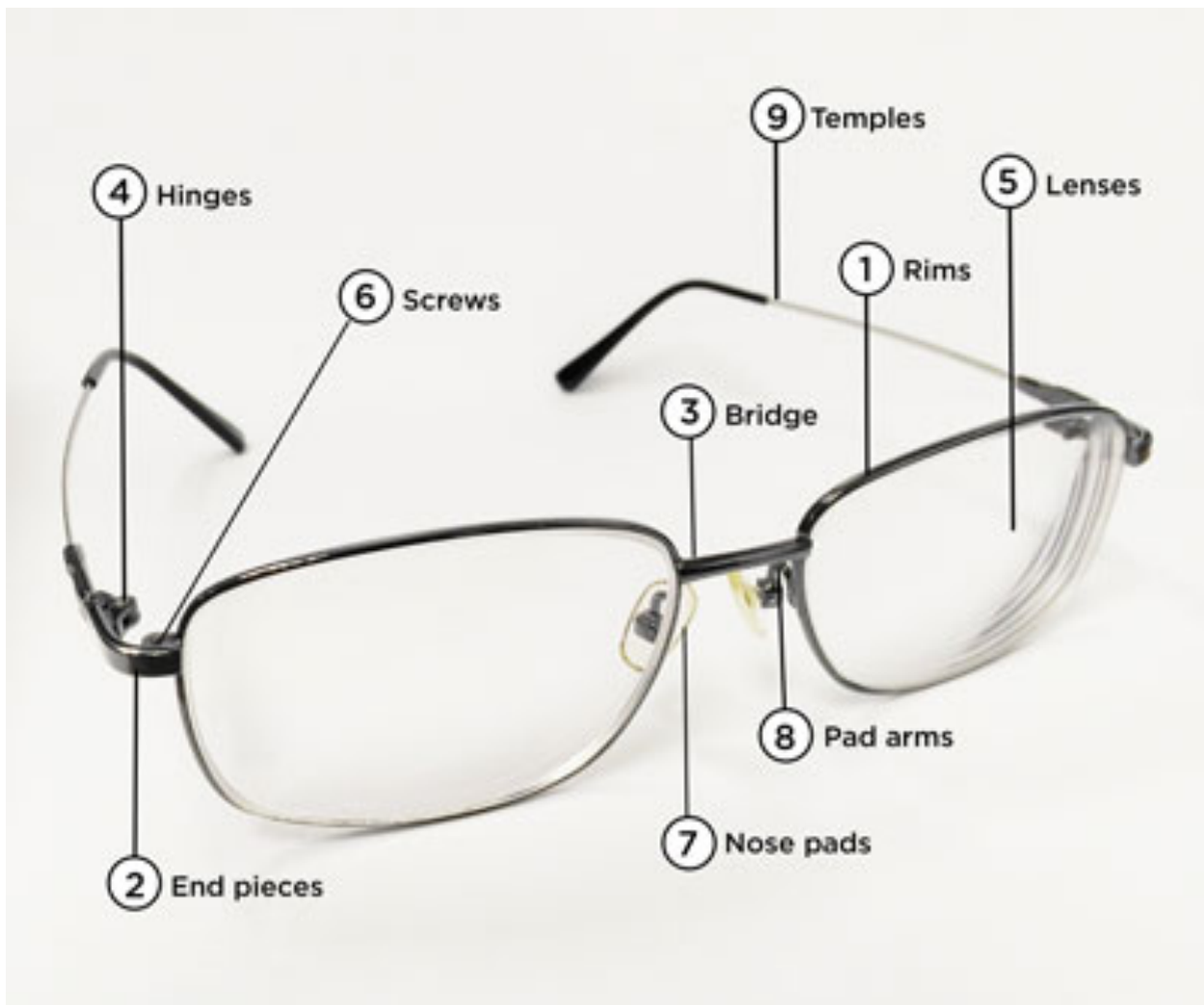
The nose pads are the round plastic pieces under the bridge that sit on your nose. They give your glasses a more comfortable and secure fit.

8. Pad arms

The pad arms extend from the rims and hold the nose pads in place. They're adjustable to fit the natural shape of your face.

9. Temples

The temples are the long arms on the side of the frame that fit over your ears for a snug fit.



consider four important factors:

1. Vision
2. Comfort
3. Appearance
4. Safety

Choosing the Right Frames

Selecting the right frames is just as important as selecting the appropriate lenses. The pair you choose should be comfortable enough for long-term wear and efficient enough for your daily needs. Plus, it should also express your personal style. Explore some of the different frames on the market to decide which could be right for you.

Frame Materials

There are two different kinds of materials available for glasses frames: metal and plastic. Each comes with its own set of pros and cons.

Plastic frames can consist of different types of plastics, including zylonite, nylon blends and castor seed oil. You can find them in various colors. Some are hypoallergenic, and many come with an economical price tag. However, they tend to be less durable than metal, and the color of the plastic can fade over time.

Metal frames are often made from numerous metals such as:

- Monel.
- Titanium.
- Stainless steel.
- Aluminum.
- Flexon.
- Beryllium.

Metal glasses can cost the same as plastic or be considerably more based on the materials used. Sometimes they are double or triple in price compared to plastic. Metal frames are quite durable, lightweight and resistant to corrosion. However, they may not be the best option for those with skin sensitivities, and there are fewer colors to choose from.


Frame Type


Frames are designed in three different types, each varying in style. See which


lensabl

Frame Types

Frames are designed in **three different types**, each varying in style.

 **Full Frame**

Semi-Rimless Frame 

 **Rimless Frame**

frames could be the best option for you:

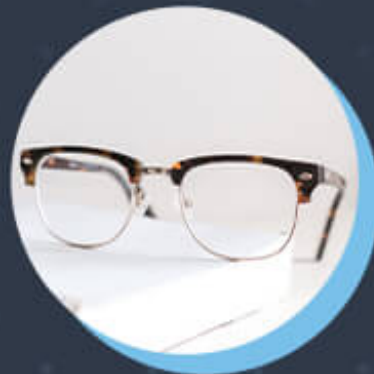
Frame Types

Frames are designed in **three different types**, each varying in style.



Full Frame

**Semi-Rimless
Frame**



Rimless Frame

B- lenses : _ definition of optical lenses : The lens is a transparent optical medium with a homogeneous refractive index. It works to deflect the ray incident on it at a certain angle, and one of its surfaces must be curved, either concave or convex.

types of lenses

1. spherical lenses and there is two types of spherical lenses

A- concave lenses

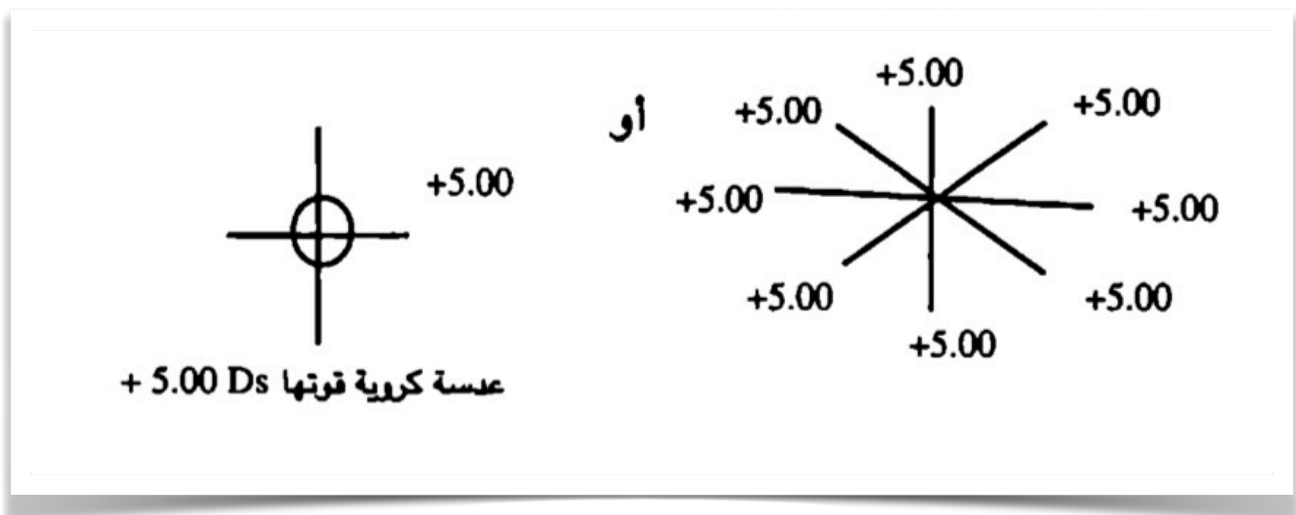
B- convex lenses

2_ Aspherical lenses and there is two types of Aspherical lenses

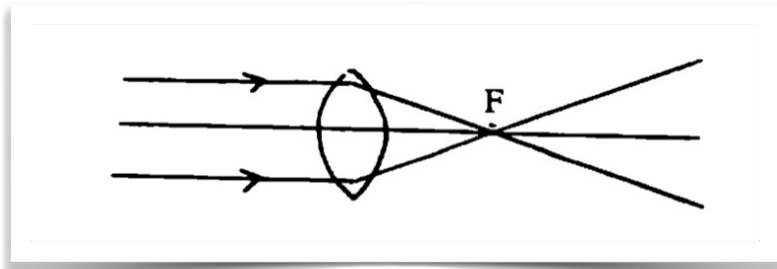
A- cylindrical lenses

B- toric lenses

spherical lens is a lens in which all meridians are equal in all directions in power

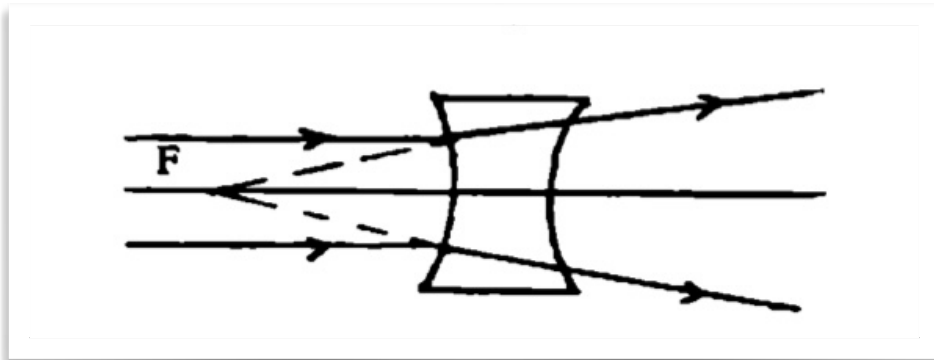


_ spherical convex lens It is the lens that collects parallel incident light rays to a focus located behind the lens



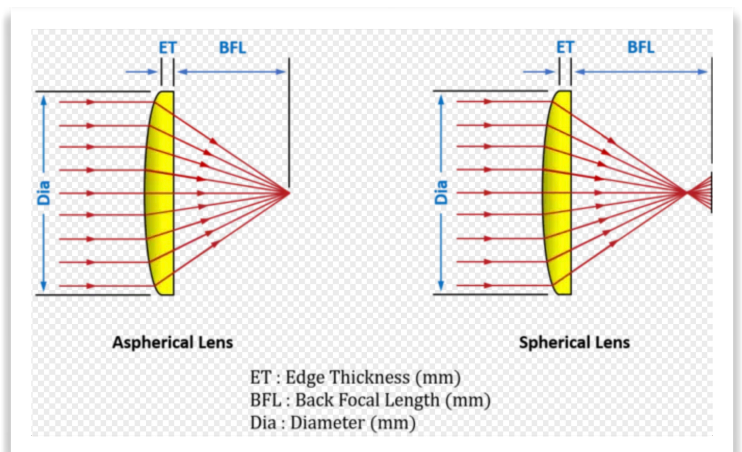
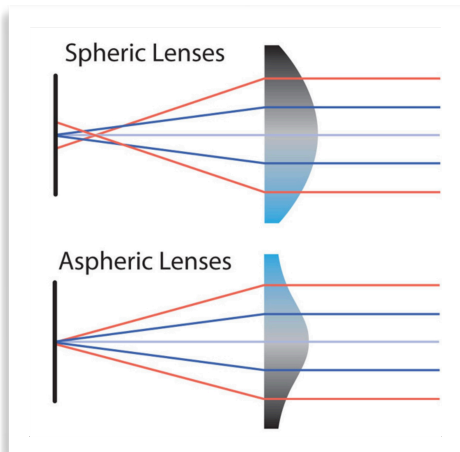
Convex lens

_ spherical concave It is the lens that collects parallel incident light rays to a focus located in front the lens

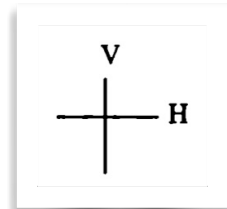
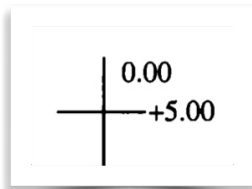


Concave lens

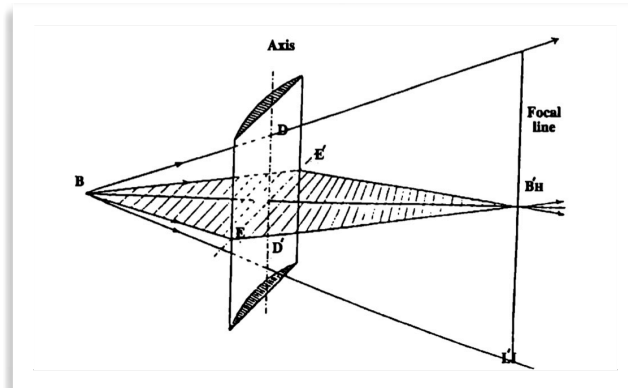
_Aspherical lens is a lens in which the power in one meridian and there is power in other meridian



- vertical meridian
- Horizontal meridian



- Aspherical cylinder lens is make linear focus



Refraction by cylindrical lens , line focus

- Toric lens ,is consist from one surface sphere and other surfaces aspheric

