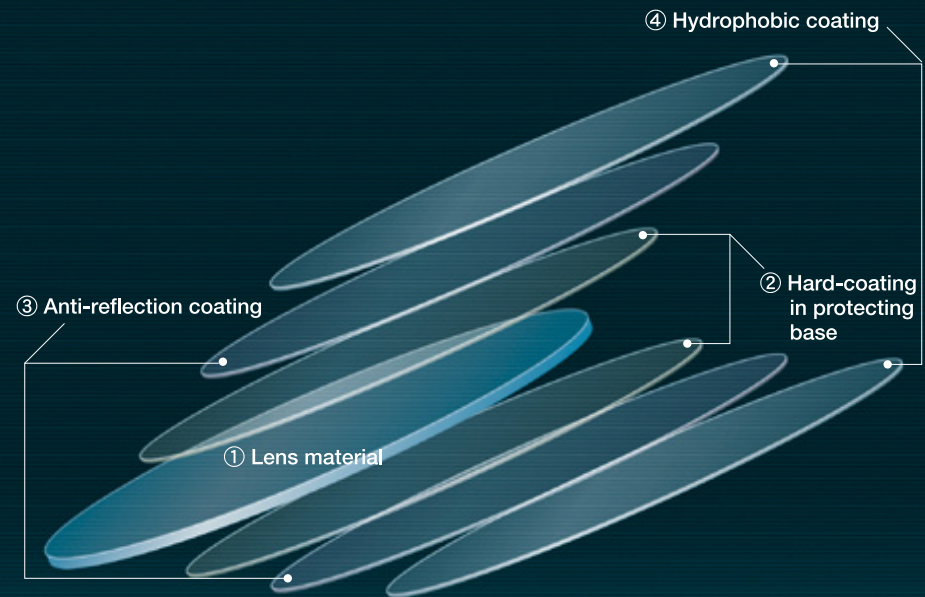


## First please understand the structural features of plastic lens.

Plastic lens consists of a lens material with multi-layer coatings. Therefore, it may crack or peel due to the environment or conditions of use. The following examples explain the reasons for such cracks or peel. You should understand well the nature of plastic lens and handle it properly for a long and comfortable use of your glasses.



The following coatings are applied to

- ① Both sides of the plastic lens material
- ② Hard-coating
- ③ Anti-reflection coating
- ④ Hydrophobic coating

Lens is a good partner to your eyes.  
You should understand well the nature of lens for comfortable use.

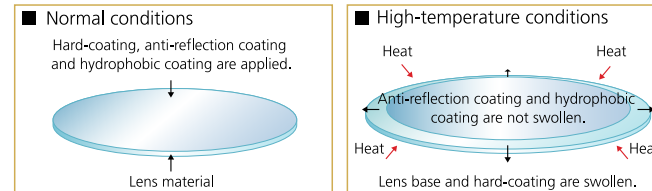
While cracks on rice cakes are appealing,  
cracks on lens are not.



## Do plastic lenses have poor heat resistance?

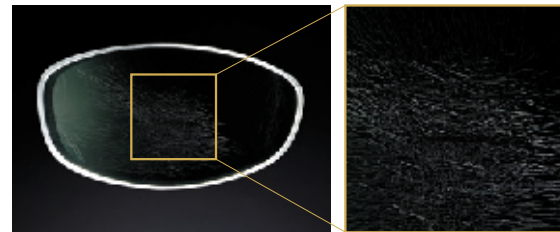
Plastic lenses have poor heat resistance. They should not be kept in places where the temperature is high. When it is heated to over 60°C, the coating may crack. Leaving glasses on a dashboard or wearing glasses in a sauna should be avoided.

### Mechanism of cracking



When heated, the lens material and hard-coating are swollen, while the anti-reflection coating and the hydrophobic coating are not swollen, which is the reason for cracking.

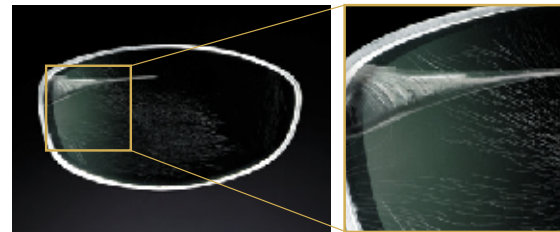
### Crack



The innumerable lines on a lens surface are called a "crack".

When heated further,

### Flaw

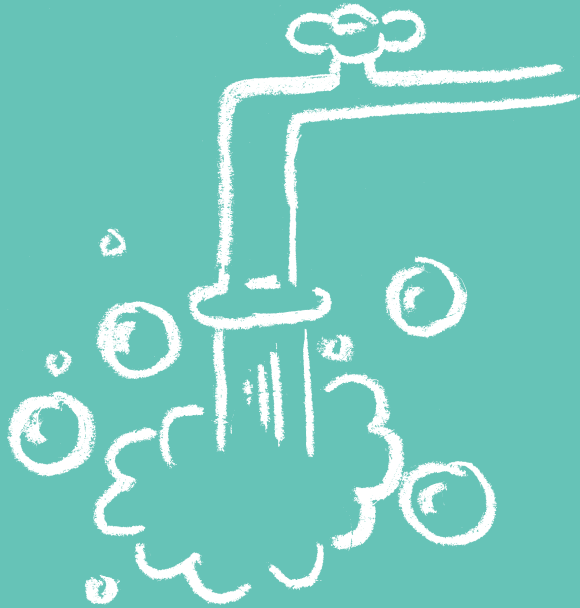


When the cracked lens is heated further, it may chip due to the pressure from the frame, which is called a "Flaw".

※ The inserted pictures are one of the examples for your understanding of lens' situation.

Lens is a good partner to your eyes.  
You should understand well the nature of  
lens for comfortable use.

Dirty hands should be washed and wiped.  
Think the same for lens.

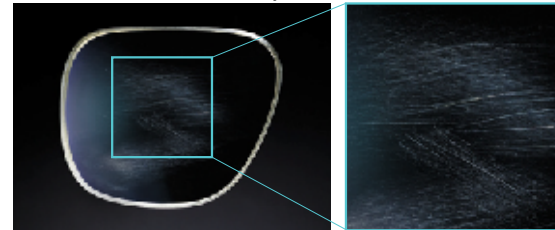


## What should be kept in mind when cleaning glasses?

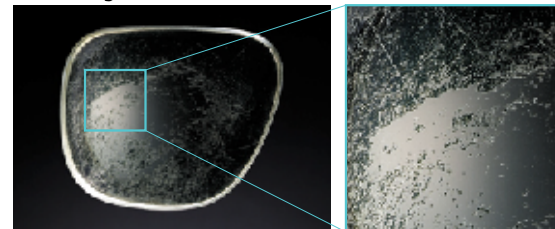
Glasses should always be kept clean for daily use.  
Wipe off dirt on glasses with lens cloth.  
For excess dirt, or foreign objects like sand or dust,  
wash glasses and then wipe them off.  
Do not wipe off glasses too strongly but softly  
with power like grasping a sandwich.

To wipe glasses with a foreign object on it may  
cause “cracking” or a “flaw”.

### ■ Cracks due to hard object



### ■ Peeling coat



Water or chemical material may cause a peel in coating when lens is  
with a number of cracks. Do the cleaning properly before it is damaged.

The key point of cleaning glasses is  
a soft touch just like grasping  
a sandwich.



※ The inserted pictures are one of the examples for your understanding of lens' situation.

Lens is a good partner to your eyes.  
You should understand well the nature of  
lens for comfortable use.

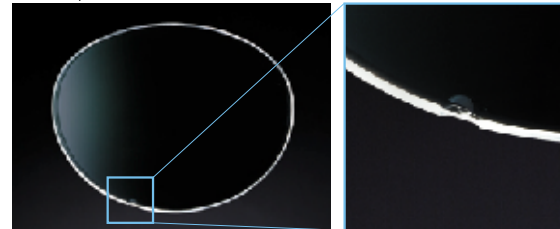
To sleep in bed is the best;



## What is the good place to keep glasses?

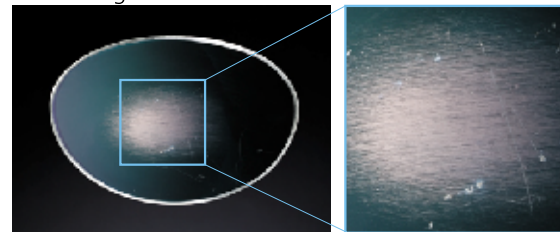
Keep glasses in a glasses case or in a safe place with the lens' surface up.  
Folding glasses with glasses cloth is recommended to avoid cracking.  
Do not leave glasses on a table or put them away in a pocket.  
Glasses are the same as human beings.  
They should be kept in a comfortable place.

### ■ Chip



For rimless glasses, the lens is not protected by a frame.  
Hit against hard things may cause chipping.

### ■ Rubbing scratch



Keep glasses in a safe place  
when you don't use them.



※ The inserted pictures are one of the examples for your understanding of lens' situation.

Lens is a good partner to your eyes.  
You should understand well the nature of  
lens for comfortable use.

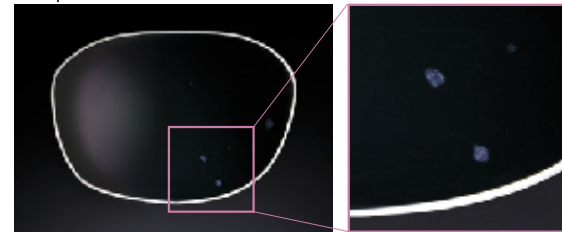
Nobody washes their face with bleach.



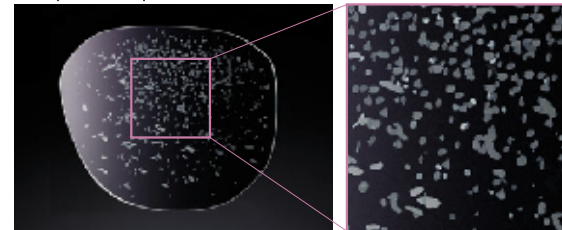
## Chemicals on a lens cannot be removed if you let them be!

Multi-layer coatings are applied to plastic lens.  
Chemicals, such like mould removing agent, alkaline or acid detergent,  
or hairspray, may cause the coating to peel or spot.  
If any chemicals stick to lens, wash and then wipe them off.

Spots due to chemicals



Spot-like peel due to chemicals



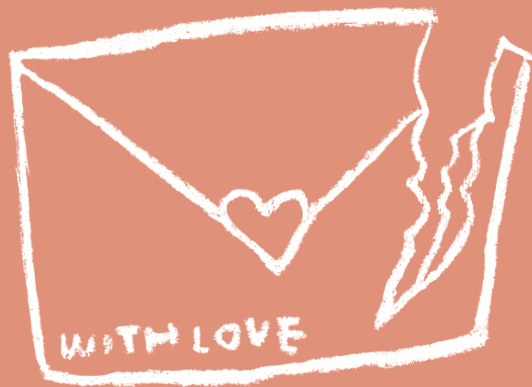
Spots on lens prevent  
clear vision.



※ The inserted pictures are one of the examples for your understanding of lens' situation.

Lens is a good partner to your eyes.  
You should understand well the nature of  
lens for comfortable use.

When recognizing “Haste is waste”.



## Why do lenses break?

Do you take off glasses roughly when you are in a hurry?

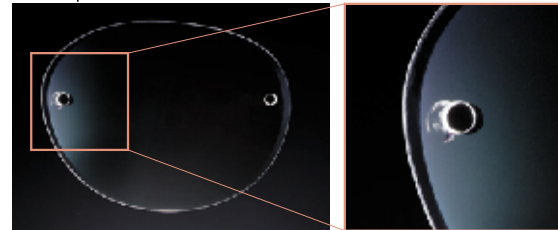
Haste may cause damage.

Especially some types of rimless glasses, so-called “two-point” or “three-piece” should be handled carefully.

Haste is waste.

It's fundamental to put on and take off glasses gently.

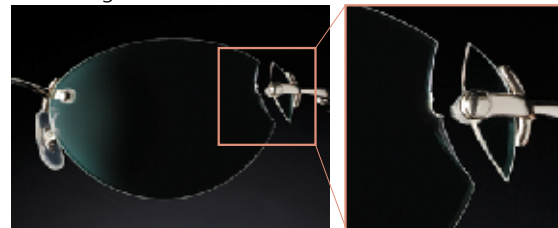
### ■ Chip on lens



Regret always comes after.  
Put on and take off glasses gently.



### ■ Damages to lens



※ The inserted pictures are one of the examples for your understanding of lens' situation.

Lens is a good partner to your eyes.  
You should understand well the nature of lens for comfortable use.

## Proper ways to use glasses

### When putting on glasses

Open temples completely and put on with the temples along face slowly from the front. Be careful for eyes and face not to be bothered by the tips of the temples.

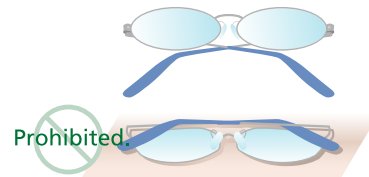


### When taking off glasses

Hold both temples and take off glasses with temples along the face slowly from the front. To hold only one temple may cause damage, deformation or looseness of glasses.

### When placing glasses

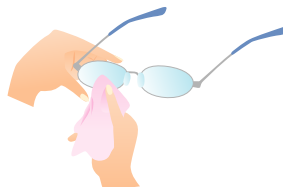
Place glasses with convex's surface up.  
Otherwise, the lens may be damaged.



### When wiping glasses

Hold the outside of the lens to be wiped and wipe softly with glasses cloth.  
To hold the opposite lens to be wiped, or to hold lens too tightly, may damage the frame or lens.

Hold the outside of the lens to be wiped.



When lenses get scratched or crack, the coating will peel off easily. Mishandling will cause many problems.

### When foreign subject or dust attaches to lens

Wash first, even for the lens with anti-damage coating.  
Remove water with tissue paper and then wipe it off softly with glasses cloth.  
Dry wiping may cause damage.



### When lens gets dirty:

Wash in diluted mild detergent.  
After water washing, wipe it off as above.  
Do not use alkaline or acid detergent such as soap, hand soap, or thinners, which may cause the coating peel.

### When glasses get wet

Wipe off with glasses cloth immediately.  
Otherwise, water may remain like a spot on the lens and can't be removed.  
Besides, the metal part of frame may rust, and the plastic may discolor or deform.

### Carrying, not using or keeping glasses

In case of carrying or not using glasses, fold glasses lens with glasses cloth (as shown in the picture) after cleaning and put in glasses case.  
Do not keep glasses together with insect repellent, detergent, cosmetics, hairdressing or medicines.  
Otherwise, the lens or frame may discolor, deform or deteriorate.

