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3D Spectacles

3D spectacles are used for viewing 3D images, whether it is for viewing a 3D film or viewing your 3D television.

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They are not currently available with a prescription glazed into them but can be worn over your spectacles or as they are if you do not wear spectacles.

The two main types of 3D spectacles are Passive and Active.

Passive 3D glasses

Passive 3D glasses do not require a power source to view the 3D content and the two major types of these are anaglyph and polarized.

Anaglyph glasses are most commonly seen with one red and one green lens. They are the least advanced of all methods of delivering 3D and because they use colour to separate the images, some or all colour information is lost to the viewer, so are rarely used now.



Example of Anaglyph Glasses

Polarized 3D glasses

Polarized 3D glasses come in two forms, linear polarized and circular polarized. Linear polarized glasses require the user to maintain a vertical head position. Tilting the head, left or right, can break the 3D effect because the content relies



Example of Polarised Glasses

on one eye seeing the vertically polarized image and the other eye seeing the horizontally polarized image. Circular polarization does away with this problem but requires a special projector and filters and will not be used on 3D televisions.

Active 3D glasses

Active 3D glasses require a power source for them to function.

Shutter glasses are the active 3D glasses most viewers will use for 3D content. They use LCD lenses that alternately open and shut each lens to show each eye a different image. Shutter glasses used to be connected to the TV by a wire to provide both synchronization and power but now most are powered by small batteries and receive synchronization signals via an infrared beam similar to a TV remote control.

The technology involved, makes shutter glasses considerably more expensive than passive glasses.

All retailers selling 3D televisions sell them and some opticians have different styles available.

They offer lightweight frames designed for extended wear, custom frames with precisely curved circular polarized lenses with an uncompromising field of vision.

They also offer UV protection and can be worn outdoors (not recommended for extended outdoor usage).

Some companies have clip-on 3D lenses that attach to prescription eyewear.

They are compatible with all RealD 3D sources, with smaller styles available for children and teenagers.



Example of Samsung 3D Active Glasses (battery)