# AutoEye

Documentation v0.3

## Materials Diagram



Sclera

Iris

Cornea

Pupil

## Parameters Diagram



Fibers

Collarette

Crypts

Pupillary

Dark Ring

Veins
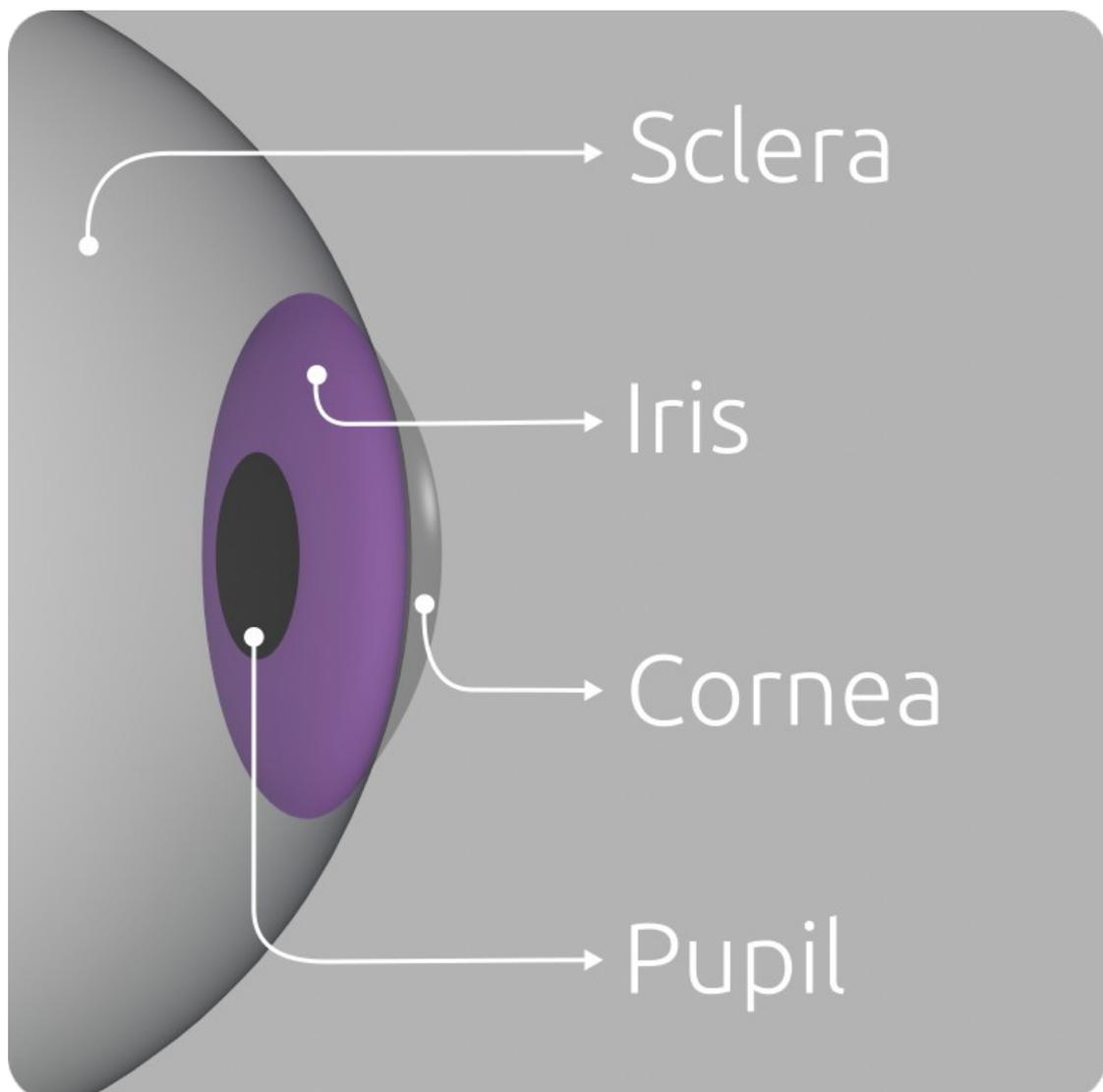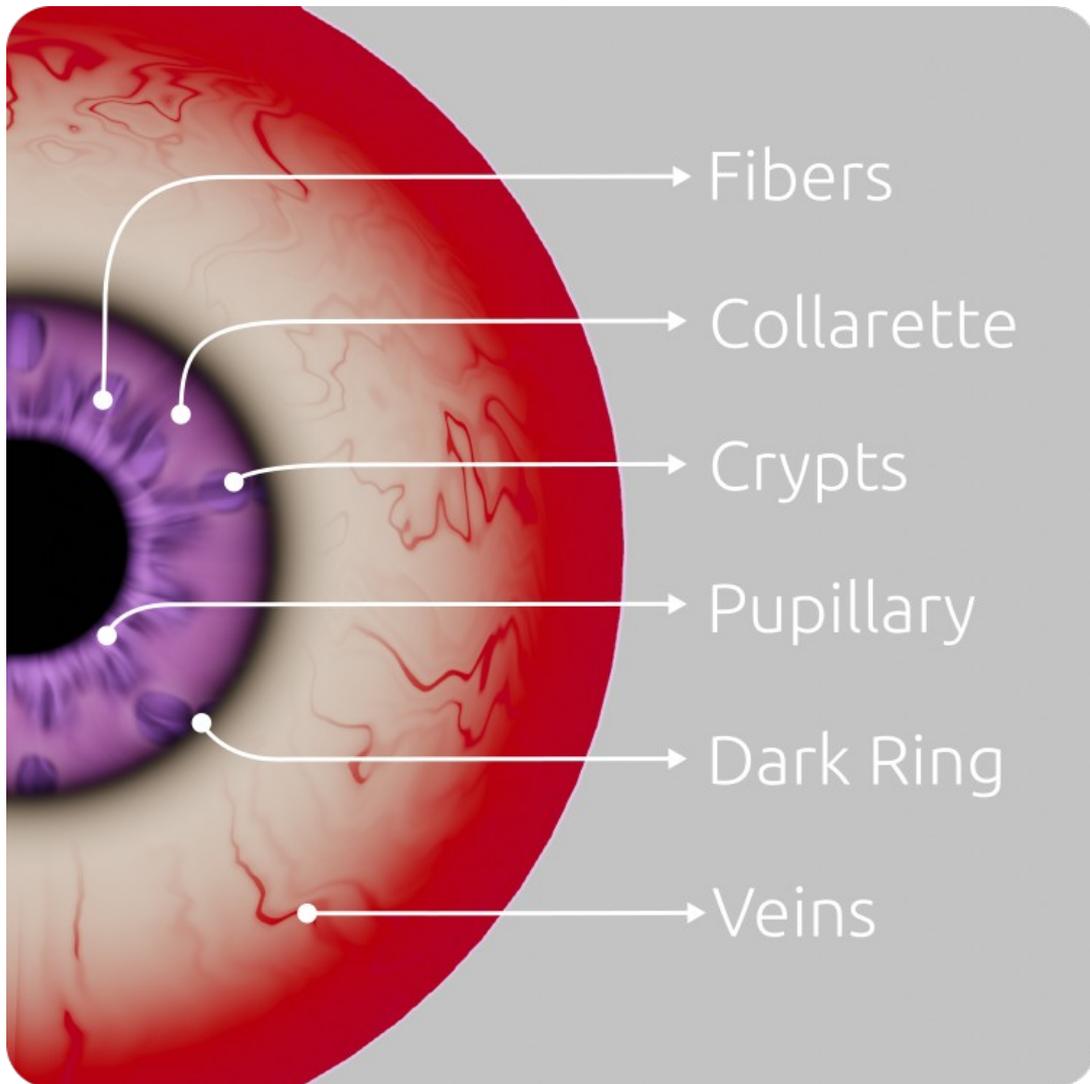
## Modifiers

Auto Eye comes with two modifiers, a Subdivision Subsurface and a Mask modifier to turn on and off the cornea visibility.

The Mask modifier is particularly useful to see where your character is looking on the viewport, in Solid mode. Make sure to always leave this modifier turn off for the render and only use the display on viewport option.

## Shape Keys

You find 8 Shape Keys on Object Data tab, make sure to select the Auto Eye.

• Iris Bigger
• Iris Smaller
• Iris Curvature
• Pupil Bigger
• Pupil Smaller
• Cornea Curvature
• Cat Eye Height
• Cat Eye Width
• Bake

## IRIS MATERIAL

FIBERS 01 - Color variation 01 of the fibers.

FIBERS 02 - Color variation 02 of the fibers.

COLLARETE - Color of the Collarette.

PUPILLARY - Color of the Pupillary.

DARK RING - Color of the Dark Ring.

# FIBERS

**Scale** - Controls the size of the fibers, higher values will result in more thin lines and lower values will result in less and thicker lines.
**Rotation** - Rotates the fibers.
**Distortion** - Add distortion along the fibers.
**Distortion Scale** - Controls the size of the distortion, if the detail is small or bigger.
**Noise** - Add a noise texture on top of the fibers, resulting in more details.
**Contrast** - Adds more contrast to the fibers colors.

# COLLARETTE

**Opacity** - Controls how transparency the collarette will be.
**Scale** - Controls the size of the collarette.
**Rotation** - Rotates the collarette.
**Contract** - Adds more contrast to the collarette.
**Shape** - If the collaratte will have a "gear" or a smooth shape.
**Shape Detail** - How much "teeth" the shape will have.
**Detail** - Adds more texture detail to the collarette.
**Detail Scale** - Controls the scale of the detail.
**Contrast** - Adds more contrast to the collarette colors.

# CRYPTS

**Opacity** - Controls how transparency the crypts will be.
**Scale** - Controls the size of the crypts.
**Rotation** - Rotates the crypts.
**Shape** - Controls if the crypts will be more square or circle.
**Smothness** - Makes the crypts mix with each other.
**Randomness** - Randomize the size of the crypts.
**Seed** - Get a different randomized result on the crypts position.

# PUPILLARY

**Opacity** - Controls how transparency the pupillary will be.
**Scale** - Controls the size of the pupillary.
**Rotation** - Rotates the pupillary.
**Distortion** - Add distortion on the pupillary.
**Distortion Scale** - Controls the size of the distortion, if the detail is small or bigger.

# DARK RING

**Opacity** - Controls how transparency the dark ring will be.
**Scale** - Controls the size of the dark ring.
**Rotation** - Rotates the dark ring.
**Distortion** - Add distortion on the dark ring.

Distortion Scale - Controls the size of the distortion, if the detail is small or bigger.

FAKE SHADOW

Opacity - Controls how transparency the fake shadow will be.
Position - Move the dark shadow up and down.

PUPIL

Hardness - Defines how hard or soft the border of the pupil will be.
Rotate - Rotates the pupil, effect only visible when it have distortion.
Distortion - Add distortion on the pupil.
Distortion Scale - Controls the size of the distortion, if the detail is small or bigger.

SUBSURFACE

Factor - How much subsurface scattering effect the material will have, 0 is none and 1 is full subsurface scattering.
Radius - This is RBG radius of the subsurface, just enter the current radius of the Auto Eye and the R, G and B radius will be calculated automatically. If you don't know how to do it, just scale a cube around the Auto Eye and copy the scale value and paste on the Radius parameter.

SPECULAR Tint - Saturation of the specular color, 0 is white and 2 will make the specular a more saturated color based on the diffuse color of the iris.

HUE - This parameter will shift the colors on colors wheel, the default value is 0.5, if you lower the value the colors will shift in a counter clock wise and if you increase the value the colors will shift in clock wise.

SATURATION - This parameter controls the intensity of the color, default value is 1.

VALUE - This parameter controls the lightness and the darkness of the colors, default value is 1.

BUMP Strenght - Controls the intensity of simulated bumps on the surface based on the iris information, no deformation on the geometry of the mesh.


OUTPUTS

Shader - Will output the full shader, with specular, roughness, subsurface and bump.
Color - Will output only the flat colors, without any shader effect.

# CORNEA/SCLERA MATERIAL

SCLERA Front - Color of the frontal part of the sclera.

SCLERA Back - Color of the back part of the sclera.

VEINS - Color of the veins.

## SCLERA

Softness - Controls the softness of the gradient between the front and back color.
Position - This parameter brings the gradient forward or backward.
Roughness - Controls the specular reflection, perfect sharp reflection at zero to almost diffuse at one.

## VEINS

Opacity - Controls the transparency of the veins.
Scale - Controls the scale of the veins.
Rotation - Controls the rotation of the veins.
Mask - It controls the transparency of the veins through a mask in the Y axis.
Bleed - This parameter adds more secondary blurry veins.
Distortion - Adds distortion to the veins.
Distortion Scale – Controls the scale of the distortion.
Position - Will move the veins in the Y axis.
Seed - Get a different randomized result on the veins position.

## CORNEA

Roughness - Controls the specular reflection, perfect sharp reflection at zero to almost diffuse at one.
Reflection - It will add a extra reflection to the cornea.
IOR - Index of refraction of the cornea, 1.380 it's an accurate value for a more realistic cornea. For stylized or cartoon characters I suggest use 1.300.
Mask Hardness - This parameter makes the border of the cornea more harsh, for stylized and cartoon characters.
Mask Position - This parameter moves the mask in Y axis.

SUBSURFACE

Factor - How much subsurface scattering effect the material will have, 0 is none and 1 is full subsurface scattering.
Radius - This is RBG radius of the subsurface, just enter the current radius of the Auto Eye and the R, G and B radius will be calculated automatically. If you don't know how to do it, just scale a cube around the Auto Eye and copy the scale value and paste on the Radius parameter.

BUMP Strength - Controls the intensity of simulated bumps on the surface based on the veins information, no deformation on the geometry of the mesh.

OUTPUTS

Shader - Will output the full shader, with specular, roughness, subsurface and bump.
Color - Will output only the flat colors, without any shader effect.

## How to install

Go to Edit > Prerences > Add-ons and install the zip file.

## How to use it

The Auto Eye will be available on the Add menu, at the top of the viewport or using the shift + a shortcut. You will see it at the bottom of the list, just click and it'll be add to your scene.