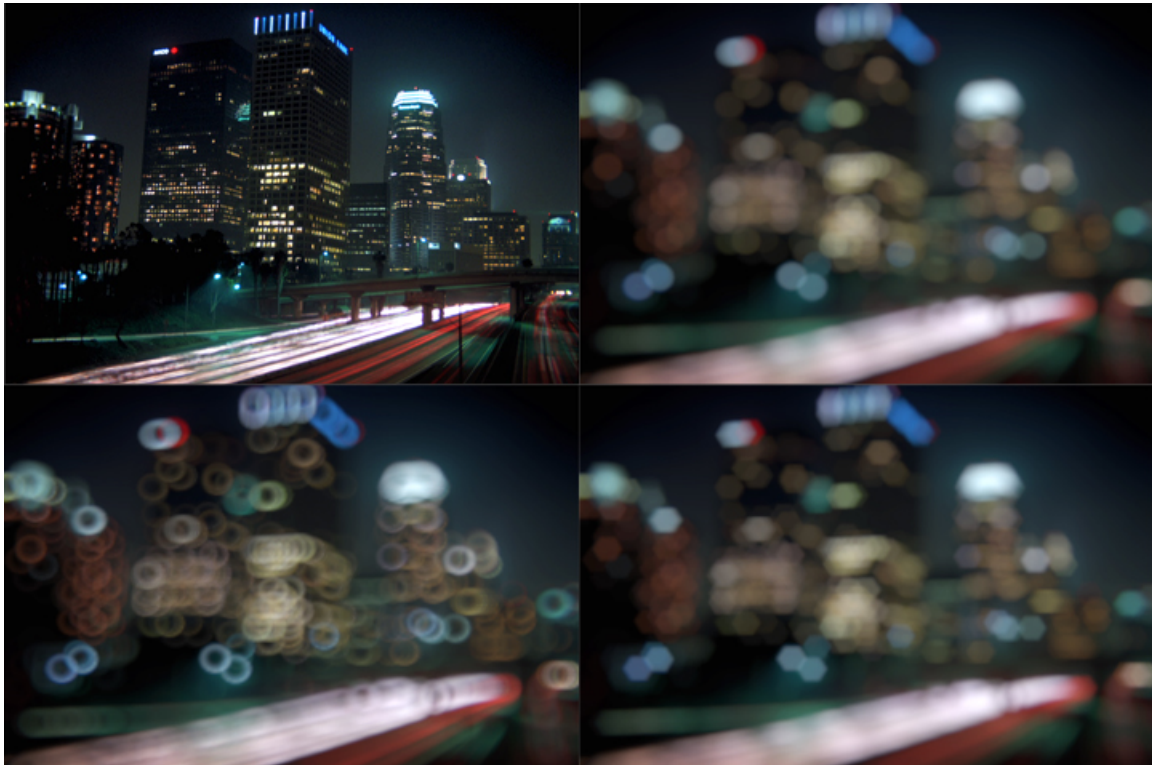


## BCC Lens Blur

The BCC Lens Blur filter emulates a lens blur defocus/rackfocus effect where out of focus highlights of an image clip take on the shape of the lens diaphragm. When a lens is used at its maximum aperture (fully open / set to the smallest f stop number) the out of focus highlights are typically in the shape of a circle, however, when the lens is stopped down (set to something other than the smallest f stop number) the blades inside the lens shape the out of focus highlights into multi-sided shapes. This filter includes a pop-up that can be used to match the different looks that can be achieved in the physical world based on the lens aperture setting. This pleasing optical result is referred to in photographic terms as Bokeh.

The BCC Lens Blur filter also includes a comprehensive depth of field (Z-Depth) option, whereby a separate image can be used to control the depth and position of the focus field.

Here are some image examples that demonstrate some of the different looks that can be achieved with this filter and beneath the images you will find a complete description of each parameter.





## Parameter descriptions:

**Compare Group:** This controls the output that is rendered by the filter.

**Compare Mode pop-up:** Controls what is displayed by the Compare Mode. The options are:

**Off:** Shows the output of the filter.

**Wipe:** Enables the user to interactively wipe the effect across the image. The left side of the wipe bar on the image output shows the unfiltered image, while the right side of the wipe bar shows the filtered result. When in Wipe mode, the corresponding Wipe slider becomes available.

**Side By Side:** The left side of the output shows half of the incoming image, and the right side shows the same half of the image as processed by the filter. When in Side-By-Side mode, the corresponding Slide and Right Offset sliders become available.

**Wipe/Slide:** Operates as a Wipe function when Wipe is selected in Compare Mode, and as a Slide function when Side-By-Side is selected in Compare Mode. When in Wipe mode, adjustments to this parameter moves the vertical wipe bar across the image; the region on the left of the wipe bar shows the original unfiltered image, while the region on the right shows the filtered result. When in Slide mode, adjustments to this parameter pans the image in the viewer window, maintaining the spatial relationship in the viewer between the before and after images.

**Right Offset:** Provides a way to adjust the spatial relationship between the unfiltered original image and the filtered result in the viewer window. Adjustments to this parameter will offset the position of the filtered image in the viewer.

**Quality** pop-up - 3 way pop-up containing options that affect the edges of the generated highlights.

**Normal**

**Sharp**

**Sharper**

**Iris Scale** - Used to set the size of the highlight blur effect.

**Scale X** - Scales the highlight along the X axis only.

**Scale Y** - Scales the highlight along the Y axis only.

**Gamma** - Used to control the image highlight gamma.

**Show Iris Widget** checkbox - When checked, displays the on-screen interactive iris scale widget.

**View Iris** checkbox - When checked, displays the iris shape on a black background.

**Iris** group - Contains parameters to control the shape and look of the generated highlights.

**Iris Shape** pop-up - Used to control the iris shape.

**Circle** - Generates circular highlights (lens at maximum aperture / wide open.)

**3 - 16 Sides** - Sets the number of sides representing the number of shutter blades in the lens.

**Iris Curvature** - Used to control the iris shape. positive values produce rounded shapes, negative values produce diamond shapes.

**Iris Rotation** - Used to rotate the angle of the iris.

**Bokeh** - Used in conjunction with the Iris Shape pop-up to define the shape of the out of focus highlights.

**Bokeh Shading** - Used to set the level of shading of the inner region of the highlights.

**Z Map** group - Contains parameters to enable and control Z-Depth compositing within the filter.

**Mode** pop-up - Used to set the mode of the Z-Map function:

**Off** - Default, the Z-Map function is disabled

**On** - The Z-Map function is enabled

**View Focus Map** - Displays the current state of the depth of field image

**View Z Map** - Displays the Z-Map input image

**Mask Defocused Pixels** - Displays a ruby red mask which is overlaid on the main image showing the pixels that are out of focus

**Z Layer** pop-up - Used to select the layer that is used as the depth map image

**Z Channel** pop-up - Used to select a channel from the layer that is used as the depth map image with the following options:

**Luminance**

**Alpha**

**Red**

**Green**

**Blue**

**Lightness**

**PixelChooser**

**Smoothness** - Higher values produce a smoother blur result

**Focal Point** - Used to set the point along the Z axis which is in focus.

**Depth of Field** - Controls the depth of the focus field, or the amount of pixels that remain in focus

**Z Gamma** - Used to adjust the gamma levels of the Z Map input image

**Near Scale** - Use to increase the size of the blur applied to the pixels that are closest to the camera

**Far Scale** - Use to increase the size of the blur applied to the pixels that are farthest from the camera

**Noise** group - Contains parameters to control the level of noise in the highlights.

**Noise Intensity** - Used to set the amount of noise in the highlights.

**Noise Scale** - Used to set the size of noise structure in the highlights.

**Noise Stretch** - Used to distort the noise structure in the highlights.

**Noise Blur** - Used to smooth the generated noise in the highlights.

**Noise Seed** - Used to set the random seed that controls the noise structure in the highlights.

**Highlights** group - Contains parameters to control the highlights that are generated by the filter.

**Boost/Sup Mode** pop-up - Used to determine the way the highlights are composited into the image with the following options:

**RGB Max** - Boosts the RGB values of the highlights.

**RGB Glow** - Boosts the RGB and Saturation values of the highlights.

**Luma Boost to White** - Boosts the Luminosity values and desaturates the highlights.

**Luma** - Boosts the Luminosity values of the highlights.

**Highlight Boost** - Used to set the intensity of the highlight boosting - higher values result in brighter highlights.

**Highlight Threshold** - Used to set the cut-off point for highlight boosting.

**Suppress Threshold** - Used to set the intensity of the shadow boosting - higher values result in darker shadows.

**Boost Soften** - A slope control that softens the highlight and shadow boosting effect.

**Post** group - Contains parameters for post processing the image.

**Apply Mode** pop-up - Contains 27 image apply modes for compositing the filtered result with the original image.

**Apply Mix** - Used to create a blend between the current apply mode and the Normal apply mode.

**Mix with Original** -Used to blend the filtered result with the unfiltered original image.

**Opaque Source** checkbox - Disable to affect the image alpha channel.

**Motion Tracker** group - Contains the Motion Tracker control parameters.

**PixelChooser** pop-up - This pop-up is used to enable or disable the PixelChooser masking / matte system.

**PixelChooser** Group - contains the PixelChooser masking / matting parameter controls.