

Dome Light

This page provides information on V-Ray Dome Light.

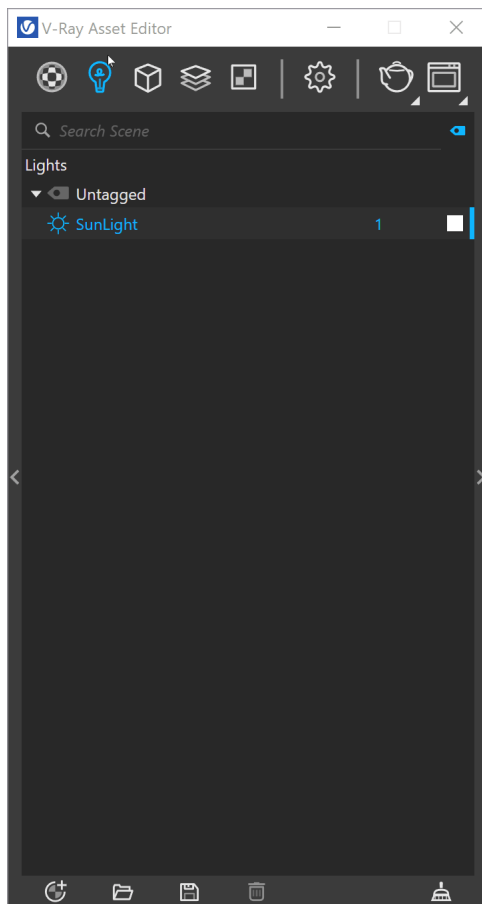
Overview

V-Ray Dome Light shines inward at the scene as if from a spherical or hemispherical light source outside the scene extents. This light is frequently used for Image-Based lighting using panoramic HDR images as environments.

UI Paths

||V-Ray Asset Editor|| > **Lights** (right-click) > **Dome Light**

||V-Ray Asset Editor|| > **Create Asset** (left-click) > **Lights** > **Dome Light**



||V-Ray Lights Toolbar|| > **Dome Light**



SketchUp Menus Ribbon

||Extensions|| > **V-Ray** > **Lights** > **Dome Light**

Parameters

Enabled () – Turns the V-Ray Dome Light on and off.

Color/Texture HDR – Specifies the color of the light. A high dynamic range texture can be used. Make sure that the map checkbox is enabled for the texture to take effect.

A bitmap image (HDR!) connected to the Dome Light automatically uses a UVWGenEnvironment **Spherical Mapping Type** placement. The rotation of the image can be adjusted from the Bitmap **UVW** options using the **Vertical** and **Horizontal** rotation parameters. *For more information, see the [Bitmap](#) page.*

Intensity – Specifies the strength of the light.

Units – Specifies the light unit of measurement. The light automatically takes the scene units scale into consideration to produce correct result. Using correct units is essential for working with physical camera exposure.

Default (Scalar) – The color and multiplier directly determine the visible color of the light without any conversion. The light surface appears with the given color in the final image when seen directly by the camera.

Luminous Power (Lumens) – Total emitted visible light power measured in lumens. The intensity of the light does not depend on its size. A typical 100W incandescent light bulb emits about 1500 lumens of light.

Luminance (lm/m²/sr) – Visible light surface power measured in lumens per square meter per steradian. The intensity of the light depends on its size.

Radiant Power (W) – Total emitted visible light power measured in watts. The intensity of the light does not depend on its size. This is not the same as the electric power consumed by a light bulb for example. A typical 100W light bulb only emits between 2 and 3 watts as visible light.

Radiance (W/m²/sr) – Visible light surface power measured in watts per square meter per steradian. The intensity of the light depends on its size.

Shape – Controls whether the Dome light covers the entire scene or only half above the horizon. See the [Shape of Dome Light](#) example below for illustration.

Finite Dome – Enables the finite dome projection mode. If enabled, the dome light becomes a finite half dome with ground. See the [Embed models in HDRIs with the finite dome mode](#) example below.

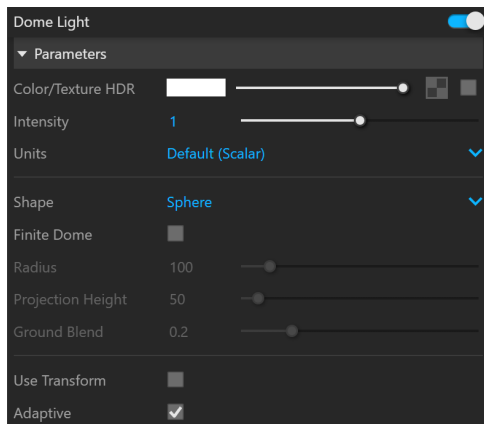
Radius – Specifies the radius of the projection.

Projection Height – Specifies the camera height for the projection.

Ground blend – Specifies the blending amount between the finite ground and upper hemisphere.

Use Transform – When enabled, the HDRI texture locks to the orientation of the V-Ray Dome widget and allows them to rotate together in the scene.

Adaptive – Enables the Adaptive Dome Light sampling method. Note that Light Cache has to be selected as a secondary GI engine in order for this optimization to work. This limitation does not apply to the V-Ray GPU engine.



Options

Invisible – When enabled, the shape of the light source is not visible in the render result. When disabled, the source is rendered in the current light color. This only affects the visibility of the light when seen directly by the camera or through refractions. The visibility of the light with respect to reflections is controlled by the **Affect Specular** option.

Shadows – When enabled (the default), the light casts shadows. When disabled, the light does not cast shadows.

Affect Alpha – Determines whether the Dome Light is visible in the Alpha channel of the render. When enabled, the alpha is white and the background is visible. When disabled, the alpha is black and the background is visible.

Affect Diffuse – When enabled, the light affects the diffuse properties of the materials.

Affect Specular – When enabled, the light affects the specular of the materials.

Affect Reflections – When enabled, the light appears in the reflections of materials.

Texture Resolution¹ – Specifies the dimensions at which the texture is resampled for importance sampling.

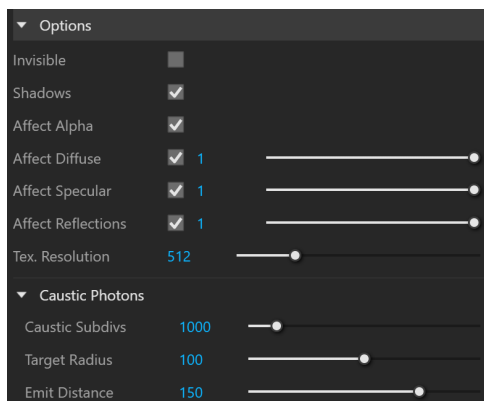
Textures attached to the **Color/Texture HDR** slot are controlled only by the **Texture Resolution** parameter and ignore the GPU Texture mode.

Minimum texture size for Dome Light by default is 2048 and cannot be set lower.

Caustic Subdivs – Controls the amount of photons that V-Ray traces to estimate caustics. Lower values produce noisy results but faster rendering. Higher values produce smooth results but take more time.

Target Radius – Defines a sphere around the light icon where photons are being shot when photon-mapped caustics or global photon map are used.

Emit Distance – Defines a sphere around the light icon from which photons are being shot towards the target radius area.



Example: Background

This example shows how the render changes according to the visibility of the Dome light and the map attached as a Color/Texture.



Dome Light is visible, Background is set to an HDRI map



Dome Light is Invisible, a gradient map is set as a Background



Dome Light is Invisible, Background is set to Black

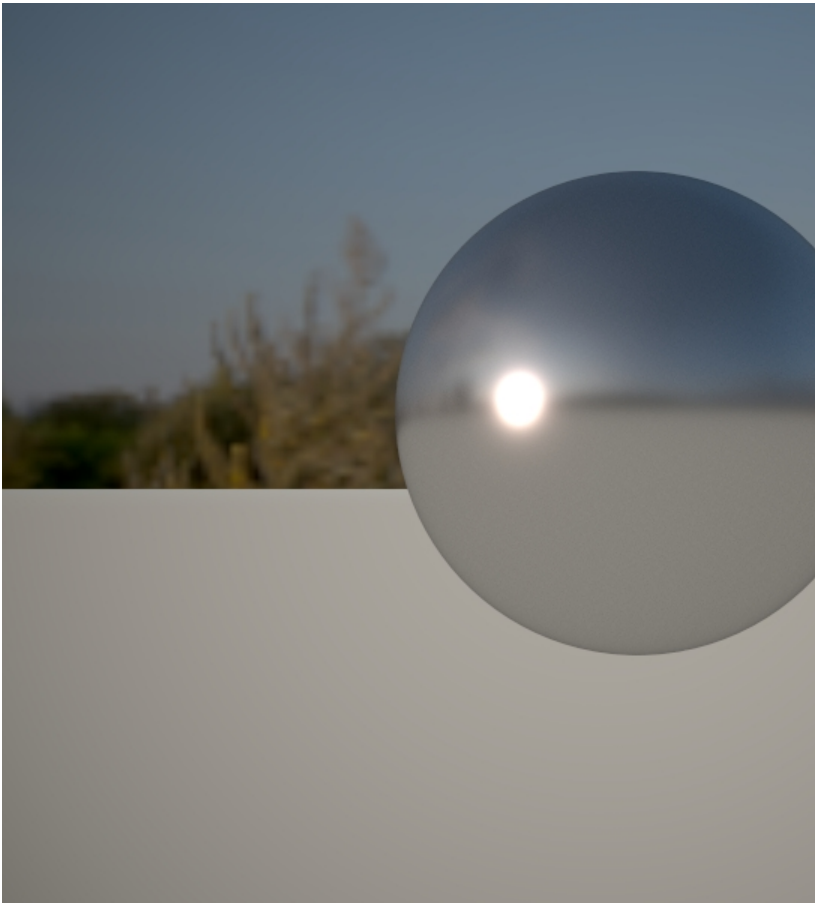


Dome Light is visible, Background is an HDRI map

Example: Shape of Dome Light

The example below shows the difference between the two types of Dome Light - a sphere or a hemisphere. When a sphere is used, the projection of the HDRI goes below the horizon, while when a hemisphere is selected, the render is halved in two by the horizon.

Hemisphere
Sphere





Example: Embed models in HDRIs with the finite dome mode

Notes

- When using V-Ray GPU, the Texture Resolution parameter also affects the background resolution.
- Scene units in SketchUp are always calculated in inches.