

Working with Solaris Lights

This page provides information on V-Ray lights in Solaris.

Overview

Lights in Solaris have two main groups of settings for controlling lights - settings that apply to all renders and render-specific settings like V-Ray light settings.

The V-Ray lights settings are located as separate V-Ray tabs in the Solaris lights LOP nodes. The settings are similar to those of the various V-Ray lights nodes in obj network. The V-Ray lights settings are available when you create Light LOP from `||state|| > Light > Light`.

Note that V-Ray Dome, V-Ray Sun, and V-Ray Direct lights are available in separate Dome Light and Distant Light LOP nodes.

Create Lights

Solaris allows you to create and edit lights, and then export them to USD.

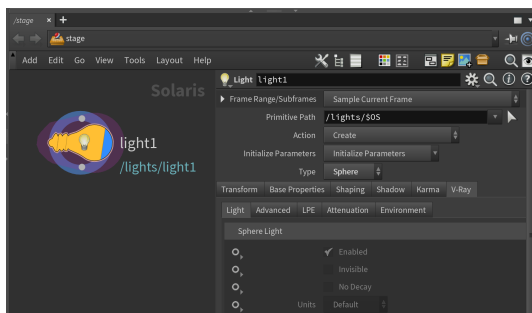
To create a USD light:

- Add a light node in the stage network and select its type from the **Type** parameter list.

Parameters that are part of the USD lighting schema and can be used in multi-render workflows are available in the light node's Base Properties, Shaping, and Shadow tabs. The available parameters vary based on the type of light.

Parameters that are specific to V-Ray lights can be found in the light node's V-Ray tab.

- Create and set the attributes needed for the scene.



Create and Set Attributes

The parameters that correspond to a USD attribute have a pop-up menu that controls how the LOP node authors the attribute:

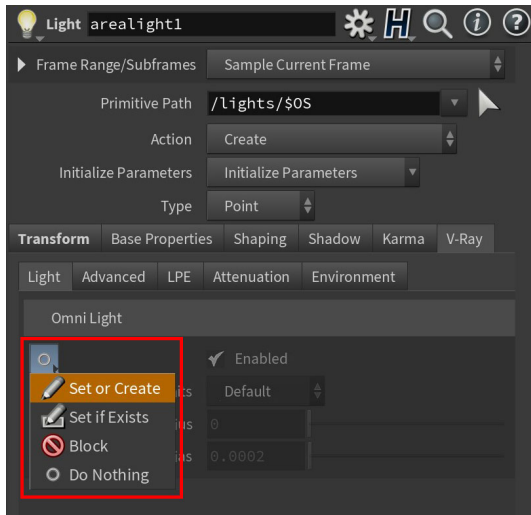
Set or Create – Sets the attribute to a given value, regardless of whether the attribute previously existed or not.

Set if Exists – Sets an attribute to the given value only if it previously existed. Use this option to make sure the attribute is set on primitives of the correct type.

Block – Makes the attribute appear to not exist so it takes on its default value.

Do Nothing – Does not affect the attribute, i.e. does not create or change the attribute in any way.

Types of Lights



There are three main lighting LOPs in Solaris that are used to create and control lights: Light LOP, Distant LOP, and Dome LOP. The Light LOP can be used

Light LOP

Omni light

The V-Ray Omni Light parameters are available through the Light LOP. They are grouped into Basic, Advanced, LPE, Attenuation, and Environment parameters.

For more information on the individual parameters for this type of light, see the [V-Ray Omni Light](#) page.

Rectangle/Disk light

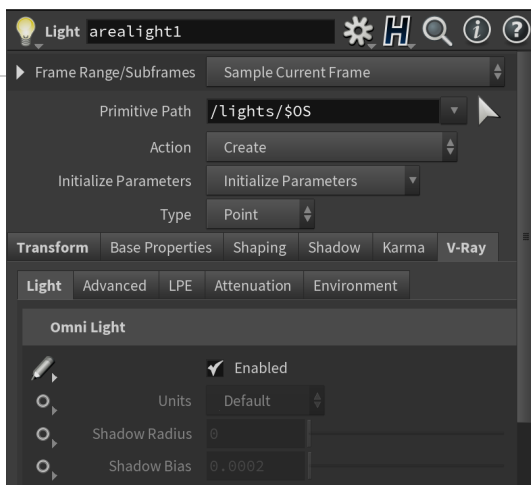
The V-Ray Rectangle/Disk Light parameters are available through the Light LOP. They are grouped into Basic, Advanced, LPE, Attenuation, and Environment parameters.

For more information on the individual parameters for this type of light, see the [V-Ray Rectangle Light](#) page.

Sphere light

The V-Ray Sphere Light parameters are available through the Light LOP. They are grouped into Basic, Advanced, LPE, Attenuation, and Environment parameters.

For more information on the individual parameters for this type of light, see the [V-Ray Sphere Light](#) page.



Distant LOP

Direct light

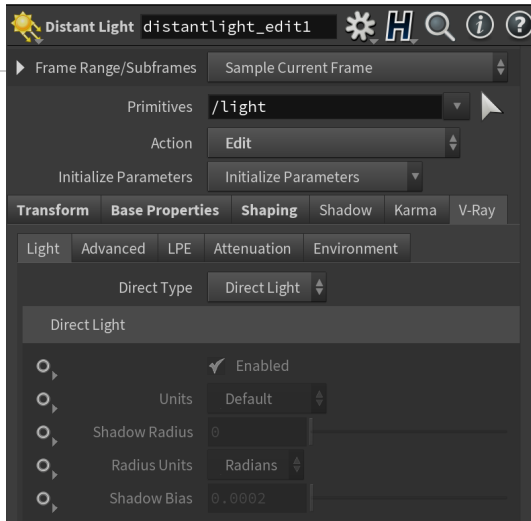
The V-Ray Directional Light parameters are available through the Distance Light LOP. They are also available in the Light LOP when primitive type is set to Distant. The parameters are grouped into Basic, Advanced, LPE, Attenuation, and Environment parameters.

For more information on the individual parameters for this type of light, see the [V-Ray Direct Light](#) page.

V-Ray Sun light

The V-Ray Sun Light parameters are available through the Distance Light LOP. They are also available in the Light LOP when primitive type is set to Distant. They are grouped into Basic, Advanced, LPE, and Environment parameters.

For more information on the individual parameters for this type of light, see the [V-Ray Sun Light](#) page.



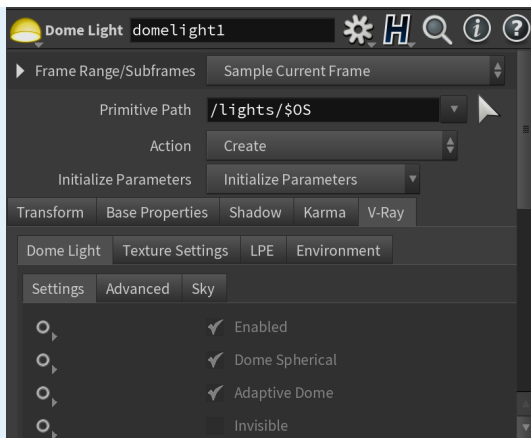
Dome LOP

Dome light

The V-Ray Dome parameters are available through the Dome Light LOP. They are grouped into Basic Settings, Advanced, and Sky parameters. The Dome Light LOP node also provides settings for the HDRI texture, environment, and LPE.

The Texture path in the Base Properties tab can be used to assign an HDRI dome light texture across all renderers and adjust commonly used dome light parameters.

For more information about the V-Ray Dome light parameters, see the [V-Ray Dome Light](#) page.



Spotlights and IES lights are created by enabling the Spotlight and IES options under the Shaping tab of the Light LOP.

Light Path Expressions

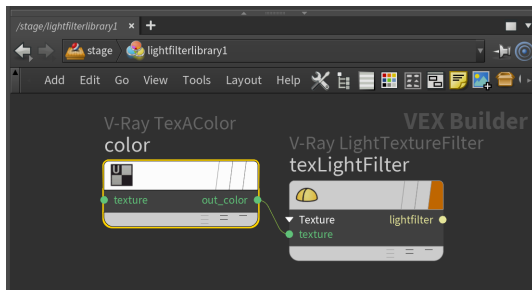
The LPE Tag tab of each light allows the use of Light Path Expressions (LPEs).

LPEs are a special type of render element. They use regular expression patterns to record selected events of light contribution along the path of a ray. For more information on how to use LPEs, see the [Advanced Light Path Expressions](#) page.

Add Textures to Lights

To add a texture to a V-Ray light, you need to use the shared USD workflow of applying the texture through a Light Filter. V-Ray has a dedicated V-Ray Light Filter node - the V-Ray Light Texture LightFilter - in the material context which can be used to create a shading network for texturing the light.

For more information on how to use V-Ray Light Texture LightFilter, see the [V-Ray Light Texture LightFilter](#) page.

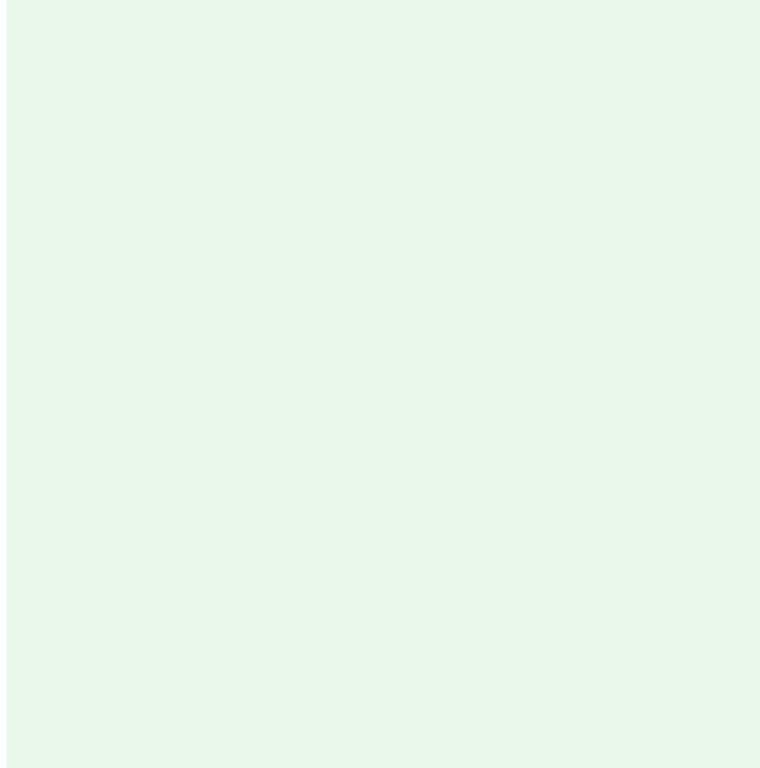


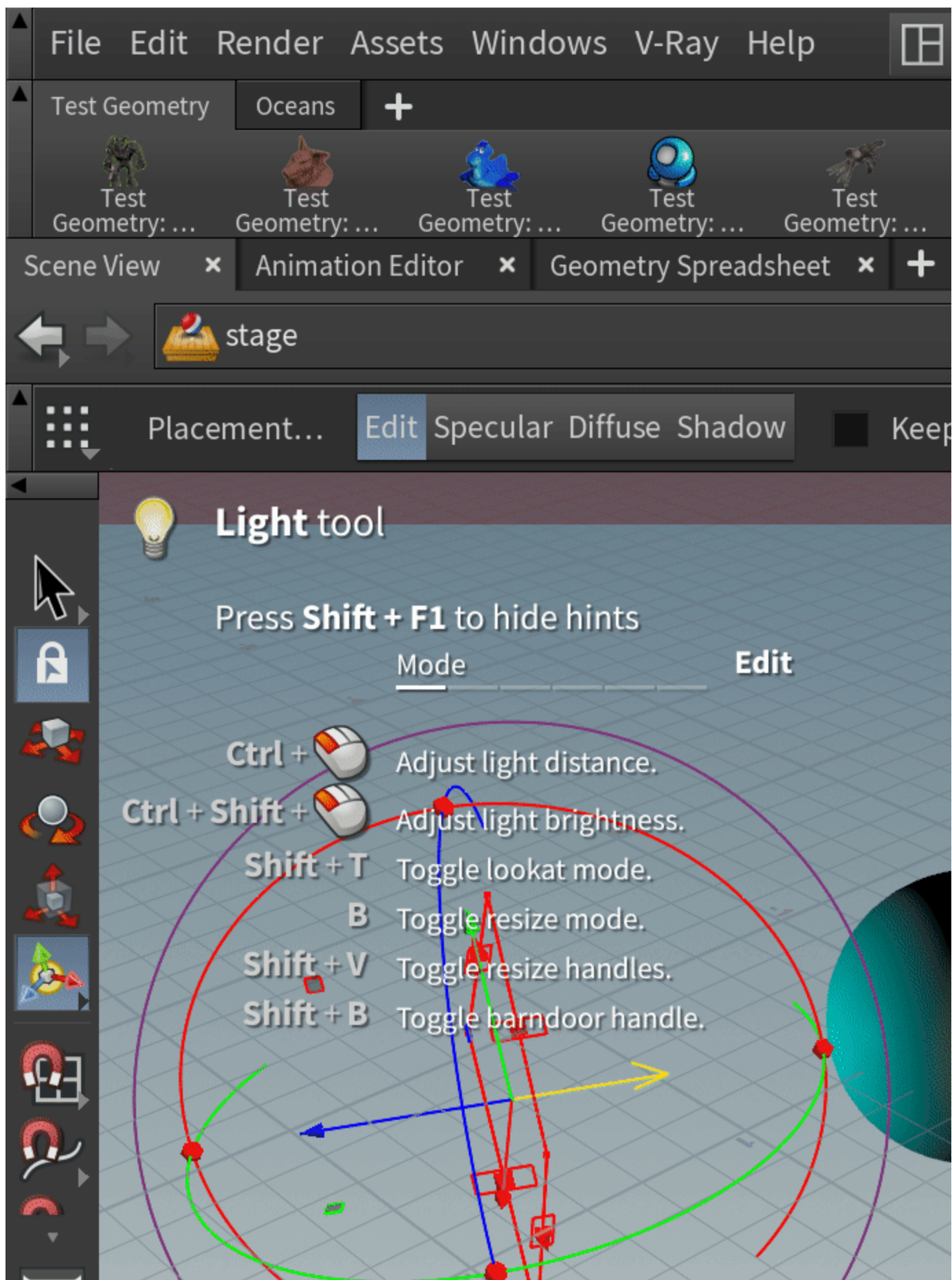
Light Mixer

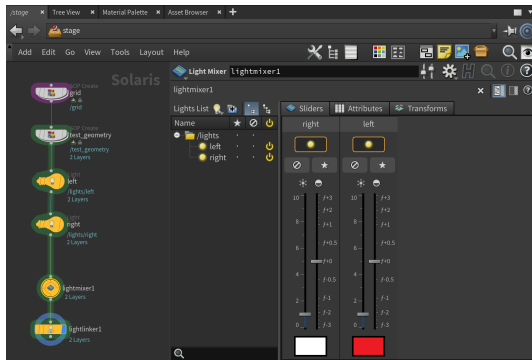
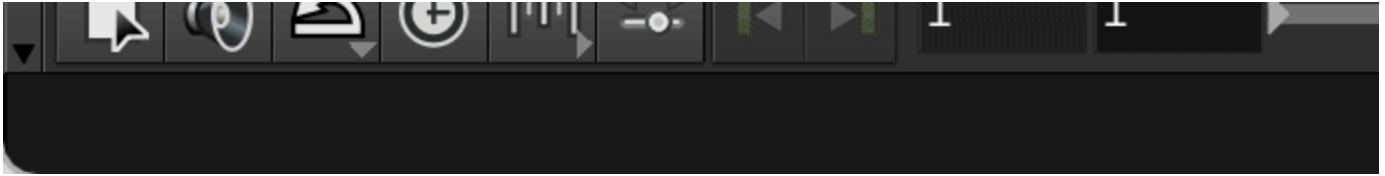
The Light Mixer node provides an easy way to view and edit multiple lights' USD properties such as intensity, exposure, and color. It also allows you to solo out and deactivate your lights.

Simply drag one or more lights from the tree on the left into the space on the right.

In order to tweak the lights' temperature parameter from the Light Mixer, turn on the **Enable Color Temperature** parameter of the light from the Base Properties.





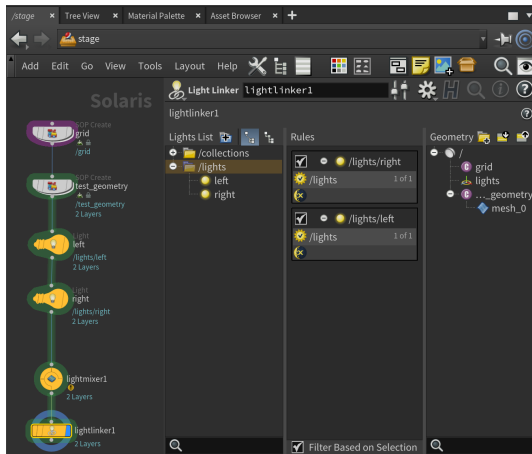


Light Linker

The Light Linker node provides finer control over what prims are lit by each light based on rules. It enables you to create relationships (rules) between the individual prims and lights.

To create rules you can do one of the following:

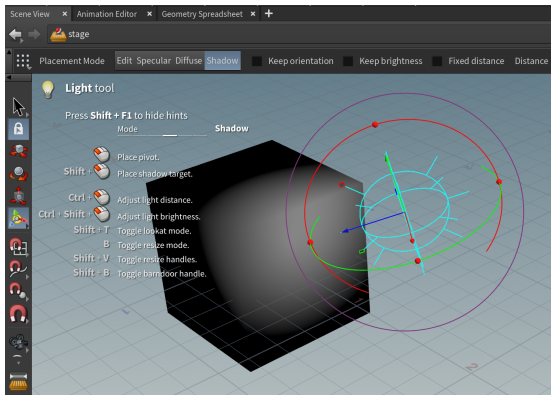
- Drag and drop a light from the tree on the left into the Rules section, then drag and drop a geometry from the tree on the right on/off section for this particular light.
- Alternatively, drag and drop a geometry from the tree on the right into the Rules section, and then drag and drop one or more lights into the on/off section for this particular geometry.



Shortcuts

Solaris provides some shortcuts for easier manipulation and control of lights. When a Light LOP is selected a list of shortcuts becomes available in the Solaris Scene View.

The full list of shortcuts is available in Solaris documentation: [here](#)



See also:

- [V-Ray Lights](#)
- [V-Ray Light Texture LightFilter](#)
- [Solaris Lighting tutorials](#)
- [Houdini Dome LOP](#)
- [Houdini Distance LOP](#)
- [Houdini Lights](#)
- [Solaris LightMixer](#)
- [Solaris LightLinker](#)