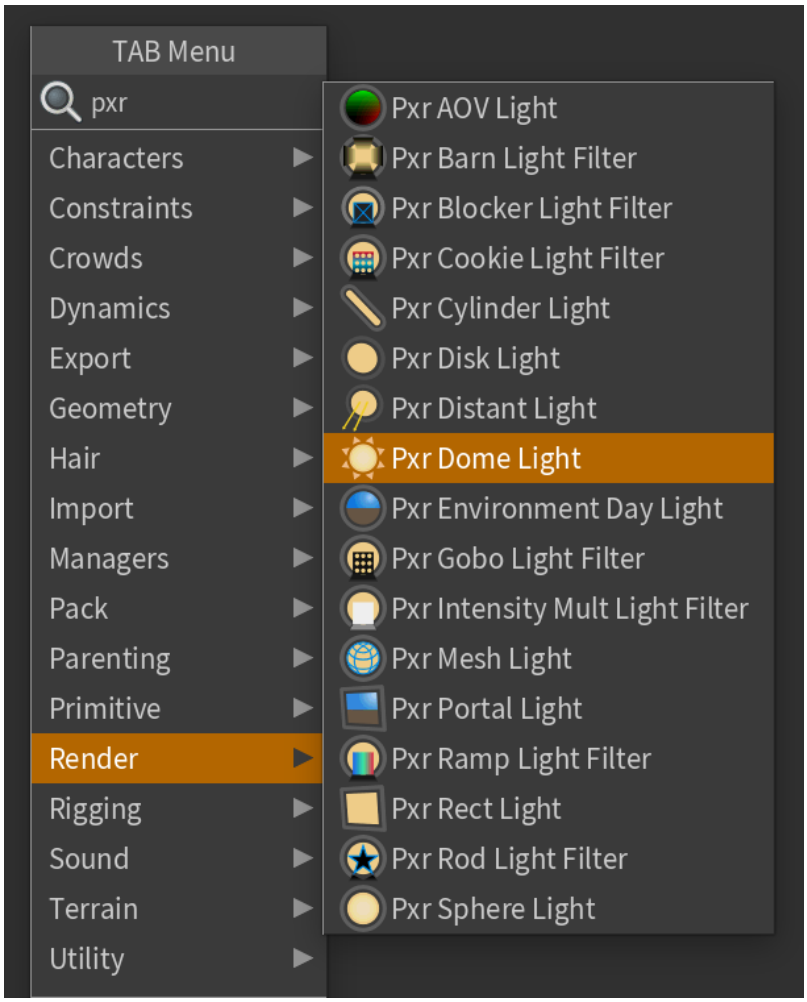
Adding Lights

Analytic Light

To add a light, select one of light tools such as Dome from the RenderMan Shelf which automatically creates a Pxr light OBJ.

We can also add a light via the TAB menu in OBJ pane. All the Pxr lights are listed under the Render TAB Menu.



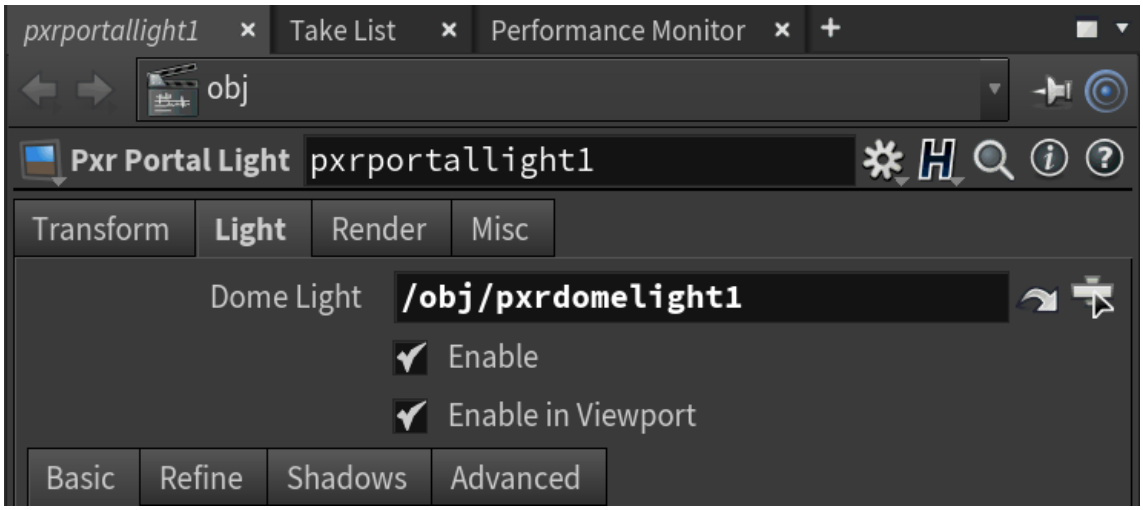
Light Transformation

You will notice some light's transformation components are hidden. This is because they are not applicable to that particular light type.

Light Name	Transformation
PxrRectLight	Translate, scale, and rotation.
PxrDiskLight	Translate, scale, and rotation.
PxrSphereLight	Translate, *uniform* scale, and rotation. If scaled non-uniformly it will render as a sphere anyway.
PxrCylinderLight	Translate, *uniform* cross-section scale, length scale, and rotation. If scaled non-uniformly it will render as a sphere anyway.
PxrDistantLight	Rotation only.
PxrDomeLight	Rotation only.
PxrPortalLight	Like a PxrRectLight, but you also need an external coordsys for the orientation of the dome texture itself.
PxrEnvDayLight	Rotation only.
PxrAOVLight	Since this is not a real light designed to illuminate, no translate, scale, and rotate.

Portal Light

The PxrPortalLight is an optimized version of the dome light by looking through a "portal". To set up a PxrPortalLight OBJ, we need to set the Dome Light parameter to point to a PxrDomeLight OBJ. A dome light can have more than one portal light as children. Parent the portal light to the dome if you want the portal to inherit the dome's transform (optional).

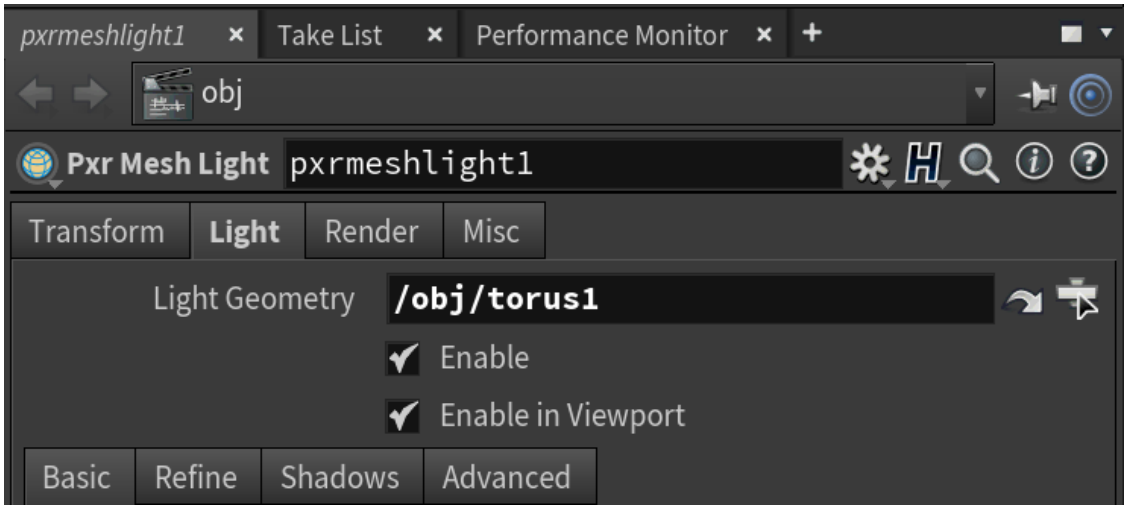


RenderMan for Houdini will process the portal light specially according to the following rules:

- If a parameter is not local to the portal light, it will inherit from the parent dome light's setting for that parameter.
- Intensity Multiplier will be multiplied by the parent dome's light Intensity.
- Color Tint will be multiplied by the parent dome's Color.
- It will apply all the dome's light filters as well as its own.

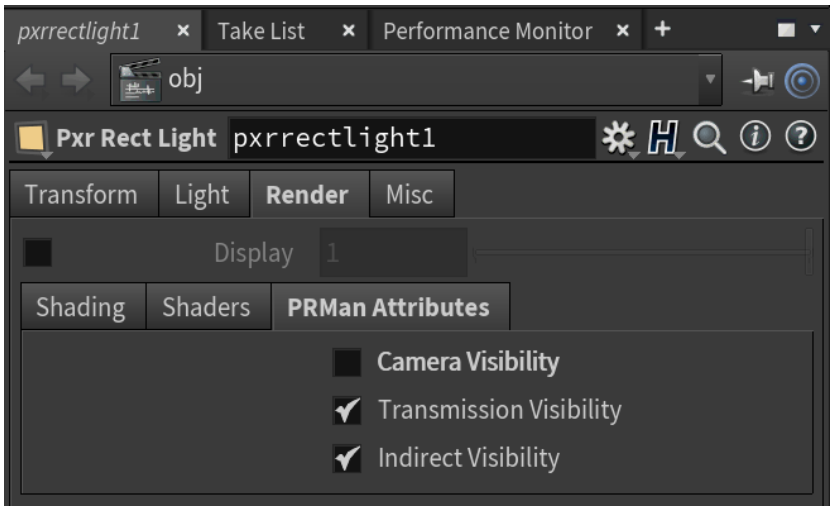
Mesh Light

To add a PxrMeshLight (using the geometry selected as the light source), select the mesh light tool from the RenderMan Shelf. This tool will ask you to pick an object for the mesh light. This is useful for creating things like extruded neon lights or fluorescent lighting with cylinders. The shelf tool automatically populates the *Light Geometry* parameter, which can also be set manually.



Light Attributes

The default attributes for lights can be seen below. Camera visibility is off by default to make for easy art direction where you may place lights in front of the camera.

- Camera Visibility - Makes the light visible to camera rays.
- Transmission Visibility - Makes the light visible in transmission/refraction.

- Indirect Visibility - Makes the light visible to indirect specular reflections.