

# What are these?

These shaders are the vanilla Koikatsu shaders with new features and a few fixes. You should be able to apply these shaders and maintain the vanilla koikatsu look.

These shaders, while designed for Koikatsu, will still work in Sunshine however they won't look exactly like Sunshine's lighting.

Currently there are shaders for main\_skin, hair, hair\_front, eye, and eyeW

## Changes to vanilla

- Support for multiple lights with a few limitations
  - **Limited to 4 point lights + 1 directional light**, this is due to a combination of how Koikatsu does its shading and Unity's renderer.
  - The additional point lights do not cast shadows to objects with these shaders, similar issue to above.
- Specular based on light color (a red light will give a red specular highlight), this can be disabled.
  - Also adds specular to hair
- Can set the overall darkness with the Custom Ambient property.
- Emission maps
  - RGB channels for color
  - Alpha channel for the mask, black = not emissive, white = emissive
  - Color and Intensity parameters
- Scale for normal maps which can be set higher than 1
- Colored hair gloss
  - Hair gloss can also be set so it's only shows when a light is reflecting it, similar to specular this is off by default
- **Fixes**
  - Lighting works properly in reflections, aka the mirror assets and reflection probes
    - It also works in 360 captures
  - Eyebrows and eyes appearing over hair won't have that colored outline issue, however they will still be a bit pixelated
    - This will depend on the eyebrow texture
  - Eye expressions (heart/stars) will follow the iris properly

## How to use

Simply replace the vanilla shaders with the vanilla plus shaders, you may need to manually set up the render queue to what it was before if things don't look right (mainly applies to hair). You can also try setting the see eyebrow/eyes through hair options again.

- Shader Forge/main\_skin → xukmi/SkinPlus
- Shader Forge/main\_hair → xukmi/HairPlus
- Shader Forge/main\_hair\_front → xukmi/HairFrontPlus
- Shader Forge/toon\_eye\_lod0 → xukmi/EyePlus
- Shader Forge/toon\_eyew\_lod0 → xukmi/EyeWPlus

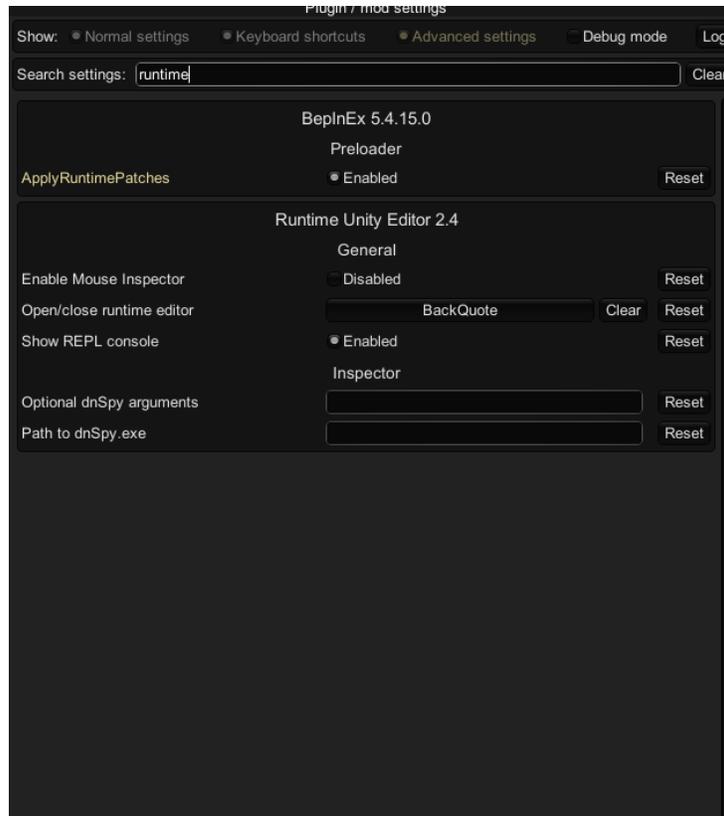
Shaders for clothes and accessories are still WIP so they have no shaders to replace at the moment, however if you *really* want the lighting for clothing the SkinPlus shader works but won't look the same.

There are a few shader options available in the various shaders, here is a quick description of what the new stuff does 1 = on, 0 = off

- UseLightColorSpecular (default on): Makes the specular reflections colored depending on light color
- UseRampForLights (default on): This will set it so the point lights's will lit based on Shadow Type in Scene Effects ramp. This is mainly for the sharp shadow options.
- UseRampForSpecular (default on): Same as above but for specular
- UseMeshSpecular (default off). Uses the mesh's specular for hair, similar to notusetexspecular.
- SpecularIsHighLights (default off): Will have the hairgloss only show if it's reflected light a specular light
  - SpecularIsHighlightsPow and SpecularIsHighlightsRange determines how diffused the specular light is (similar to how SpecularPower works)
- ExpressionDepth, ExpressionSize: Pretty self explanatory, affects the eye's expressions (heart/sparkling)

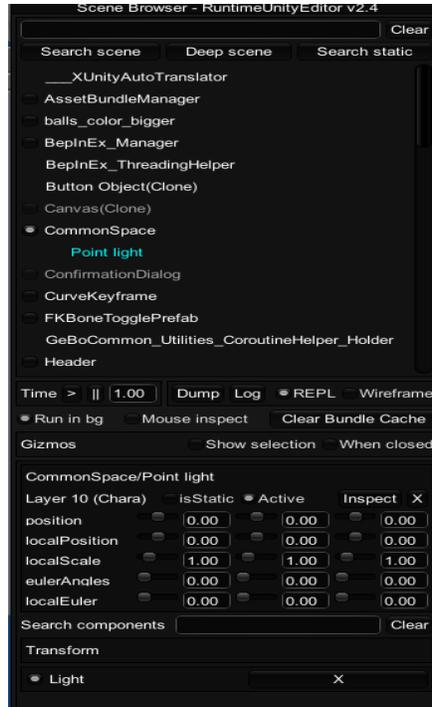
To use pointlights add the P-MODMAP lights under Map Lights

**NOTE:** You may run into issues where a light isn't lighting unless it's close enough or it's a certain color. This is because Unity is internally deciding which lights to use, this can be fixed with the Runtime Unity Editor plugin.

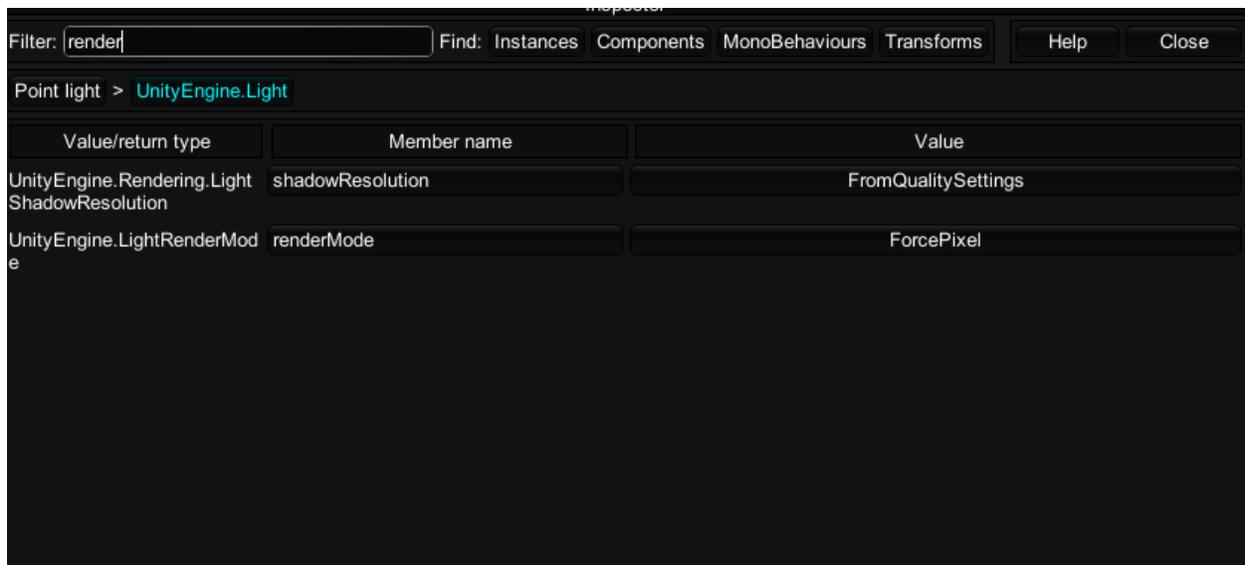


Make sure you can open the Runtime Editor with F1 and see if the hotkey to open it is set.

Once open find *Common Space* and press the checkbox near it to open the hierarchy. That is where studio objects are located and then select the light object (it will be highlighted if selected).



Click on light under transform near the bottom and it should open a new popup, at the top there will be a filter text field look up *render* and set the rendermode to forcepixel for every point light. **This is not saved to the scene**



**ALTERNATIVELY** you can not use any directional lights, you can disable the main directional light by finding StudioScene (not under CommonSpace, usually near the bottom), and finding Light Chara where you can uncheck Active.

**Note:** This persists between scenes so if you load up another scene it will not have Light Chara enabled, you can simply re-enable it or restart the game

Scene Browser - RuntimeUnityEditor v2.4

Clear

Search scene    Deep scene    Search static

StudioInfo

- StudioScene
  - Canvas Main Menu
  - GuideObjectWorkplace
  - Canvas Object List
  - Base Transform
    - Canvas System Menu
    - Canvas Guide Input
    - Canvas Works
    - Camera
    - CvsColor
    - Canvas Pattern
    - Canvas Frame Cap
  - Light Chara

Time > || 1.00    Dump    Log    ● REPL    Wireframe

● Run in bg    Mouse inspect    Clear Bundle Cache

Gizmos    Show selection    When closed

StudioScene/Light Chara

Layer 0 (Default)	isStatic	Active	Inspect	X
position	<input type="checkbox"/> 0.00	<input type="checkbox"/> 0.00	<input type="checkbox"/> 0.00	<input type="checkbox"/> 0.00
localPosition	<input type="checkbox"/> 0.00	<input type="checkbox"/> 0.00	<input type="checkbox"/> 0.00	<input type="checkbox"/> 0.00
localScale	<input type="checkbox"/> 1.00	<input type="checkbox"/> 1.00	<input type="checkbox"/> 1.00	<input type="checkbox"/> 1.00
eulerAngles	<input type="checkbox"/> 0.00	<input type="checkbox"/> 0.00	<input type="checkbox"/> 0.00	<input type="checkbox"/> 0.00
localEuler	<input type="checkbox"/> 0.00	<input type="checkbox"/> 0.00	<input type="checkbox"/> 0.00	<input type="checkbox"/> 0.00

Search components  Clear

Transform