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Point Density Node

The *Point Density* node is available in volume shaders, to render volumetric points for each particle or vertex of another object.

Inputs

Vector

Texture coordinate to sample texture at; defaults to global position (*Position* output of *Geometry* node) if the socket is left unconnected.

Properties

Point Data

Where to get points from.

Particle System

Use each particle position from the specified particle system.

Object Vertices

Use each vertex position from the specified object.

Object

Which object's vertices or particle system will be used.

Particle System

Particle positions from this system will be used.

Space

The coordinate system for mapping points.

World Space:

Map each point exactly where the source particle or vertex is.

Object Space:

Fit the points from the source particles/vertices inside the bounding box of the object with the point density texture.

Radius

Size of the points.

Interpolation

Texel filtering type.

Closest:

No interpolation, use nearest texel. Produces blocky looking points.

Linear:

Interpolate linearly between texels, producing soft, round points.

Cubic:

Use cubic falloff, producing very soft points. Useful when points are very densely packed.

Resolution

The dimensions of the texture holding the point data.

Color Source

Which attribute of the particle system or mesh is used to color the output.

Particle Color Sources

Particle Age:

Lifetime mapped as (0.0 - 1.0) intensity.

Particle Speed:

Particle speed (absolute magnitude of velocity) mapped as (0.0 - 1.0) intensity.

Particle Velocity:
XYZ velocity mapped to RGB colors.

Vertex Color Sources

Vertex Color:
Use a Color Attribute for coloring the point density texture.

> Note
>
> Color Attributes are defined per face corner. A single vertex can have as many different colors as faces it is part of. The actual colo of the point density texture is averaged from all vertex corners.

Vertex Weight:
Use weights from a vertex group as intensity values.

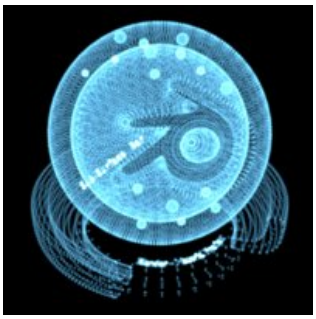
Vertex Normals:
Use object-space vertex normals as RGB values.

Outputs

Color
Texture color output.

Density
Density of volume.

Examples



Domain object with Point Density texture using vertices from ball as points.

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N
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Made with Furo
Last updated on 2025-05-10

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