

Table of Contents

Table of Contents	1
GreasePencilSimplifyModifier(Modifier)	3
Inherited Properties	5
Inherited Functions	5
LayerObjects(bpy_struct)	79
Inherited Properties	79
Inherited Functions	79
References	80
LayoutPanelState(bpy_struct)	81
Inherited Properties	81
Inherited Functions	81
Library(ID)	83
Inherited Properties	84
Inherited Functions	84
References	85
LibraryWeakReference(bpy_struct)	86
Inherited Properties	86
Inherited Functions	86
References	87
Light(ID)	88
Inherited Properties	89
Inherited Functions	90
References	90
Lightgroup(bpy_struct)	91
Inherited Properties	91
Inherited Functions	91
References	91
Lightgroups(bpy_struct)	93
Inherited Properties	93
Inherited Functions	93
References	94
LightProbe(ID)	95
Inherited Properties	97
Inherited Functions	97
References	97
LightProbePlane(LightProbe)	99
Inherited Properties	99
Inherited Functions	99
LightProbeSphere(LightProbe)	101
Inherited Properties	102
Inherited Functions	102
LightProbeVolume(LightProbe)	104
Inherited Properties	106
Inherited Functions	107
LimitDistanceConstraint(Constraint)	108
Inherited Properties	109
Inherited Functions	109
LimitLocationConstraint(Constraint)	110
Inherited Properties	111
Inherited Functions	112
LimitRotationConstraint(Constraint)	113
Inherited Properties	114
Inherited Functions	115
LimitScaleConstraint(Constraint)	116
Inherited Properties	117
Inherited Functions	118
Linesets(bpy_struct)	119
Inherited Properties	120

Inherited Functions	120
References	120
LineStyleAlphaModifier(LineStyleModifier)	121
Inherited Properties	121
Inherited Functions	121
References	122
LineStyleAlphaModifier_AlongStroke(LineStyleAlphaModifier)	123
Inherited Properties	124
Inherited Functions	124
LineStyleAlphaModifier_CreaseAngle(LineStyleAlphaModifier)	125
Inherited Properties	126
Inherited Functions	126
LineStyleAlphaModifier_Curvature_3D(LineStyleAlphaModifier)	128
Inherited Properties	129
Inherited Functions	129
LineStyleAlphaModifier_DistanceFromCamera(LineStyleAlphaModifier)	131
Inherited Properties	132
Inherited Functions	132
LineStyleAlphaModifier_DistanceFromObject(LineStyleAlphaModifier)	134
Inherited Properties	135
Inherited Functions	135
LineStyleAlphaModifier_Material(LineStyleAlphaModifier)	137
Inherited Properties	138
Inherited Functions	138
LineStyleAlphaModifier_Noise(LineStyleAlphaModifier)	140
Inherited Properties	141
Inherited Functions	141
LineStyleAlphaModifier_Tangent(LineStyleAlphaModifier)	143
Inherited Properties	144
Inherited Functions	144
LineStyleAlphaModifiers(bpy_struct)	145
Inherited Properties	145
Inherited Functions	145
References	146
LineStyleColorModifier(LineStyleModifier)	147
Inherited Properties	147
Inherited Functions	147
References	148

[Skip to content](#)

GreasePencilSimplifyModifier(Modifier)

base classes — [bpy_struct](#), [Modifier](#)

class bpy.types.GreasePencilSimplifyModifier(Modifier)

Simplify Stroke modifier

distance

Distance between points

TYPE:

float in [0, inf], default 0.1

factor

Factor of Simplify

TYPE:

float in [0, 100], default 0.0

invert_layer_filter

Invert layer filter

TYPE:

boolean, default False

invert_layer_pass_filter

Invert layer pass filter

TYPE:

boolean, default False

invert_material_filter

Invert material filter

TYPE:

boolean, default False

invert_material_pass_filter

Invert material pass filter

TYPE:

boolean, default False

invert_vertex_group

Invert vertex group weights

TYPE:

boolean, default False

layer_filter

Layer name

TYPE:

string, default “”, (never None)

layer_pass_filter

Layer pass filter

TYPE:

int in [0, 100], default 0

length

Length of each segment

TYPE:

float in [0, inf], default 0.1

material_filter

Material used for filtering

TYPE:

`Material`

material_pass_filter

Material pass

TYPE:

int in [0, 100], default 0

mode

How to simplify the stroke

- `FIXED` Fixed – Delete alternating vertices in the stroke, except extremes.
- `ADAPTIVE` Adaptive – Use a Ramer-Douglas-Peucker algorithm to simplify the stroke preserving main shape.
- `SAMPLE` Sample – Re-sample the stroke with segments of the specified length.
- `MERGE` Merge – Simplify the stroke by merging vertices closer than a given distance.

TYPE:

enum in ['FIXED', 'ADAPTIVE', 'SAMPLE', 'MERGE'], default 'FIXED'

open_influence_panel

TYPE:

boolean, default False

sharp_threshold

Preserve corners that have sharper angle than this threshold

TYPE:

float in [0, 3.14159], default 0.0

step

Number of times to apply simplify

TYPE:

int in [1, 50], default 1

use_layer_pass_filter

Use layer pass filter

TYPE:

boolean, default False

use_material_pass_filter

Use material pass filter

Use material pass index

TYPE:

boolean, default False

vertex_group_name

Vertex group name for modulating the deform

TYPE:

string, default "", (never None)

classmethod bl_rna_get_subclass(id, default=None)

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

`bpy.types.Struct` subclass

classmethod bl_rna_get_subclass_py(id, default=None)

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

type

Inherited Properties

- `bpy_struct.id_data`
- `Modifier.name`
- `Modifier.type`
- `Modifier.show_viewport`
- `Modifier.show_render`
- `Modifier.show_in_editmode`
- `Modifier.show_on_cage`
- `Modifier.show_expanded`
- `Modifier.is_active`
- `Modifier.use_pin_to_last`
- `Modifier.is_override_data`
- `Modifier.use_apply_on_spline`
- `Modifier.execution_time`
- `Modifier.persistent_uid`

Inherited Functions

- `bpy_struct.as_pointer`
- `bpy_struct.driver_add`
- `bpy_struct.driver_remove`
- `bpy_struct.get`
- `bpy_struct.id_properties_clear`
- `bpy_struct.id_properties_ensure`
- `bpy_struct.id_properties_ui`
- `bpy_struct.is_property_hidden`
- `bpy_struct.is_property_overridable_library`
- `bpy_struct.is_property_readonly`
- `bpy_struct.keyframe_delete`
- `bpy_struct.keyframe_insert`
- `bpy_struct.keys`
- `bpy_struct.path_from_id`
- `bpy_struct.path_resolve`
- `bpy_struct.pop`
- `bpy_struct.property_overridable_library_set`
- `bpy_struct.property_unset`
- `bpy_struct.type_recast`
- `bpy_struct.values`

- [bpy_struct.is_property_set](#)
- [bpy_struct.items](#)

- [Modifier.bl_rna_get_subclass](#)
- [Modifier.bl_rna_get_subclass_py](#)

[Previous](#)
[GreasePencilShrinkwrapModifier\(Modifier\)](#)
[Report issue on this page](#)

Copyright © Blender Authors
Made with [Furo](#)

[Next](#)
[GreasePencilSmoothModifier\(Modifier\)](#)

[Skip to content](#)

LayerObjects(bpy_struct)

base class — `bpy_struct`

class `bpy.types.LayerObjects(bpy_struct)`

Collections of objects

active

Active object for this layer

TYPE:

`Object`

selected

All the selected objects of this layer

TYPE:

`bpy_prop_collection` of `Object`, (readonly)

classmethod `bl_ma_get_subclass(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

`bpy.types.Struct` subclass

classmethod `bl_ma_get_subclass_py(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

type

Inherited Properties

- `bpy_struct.id_data`

Inherited Functions

- `bpy_struct.as_pointer`
- `bpy_struct.driver_add`
- `bpy_struct.driver_remove`
- `bpy_struct.get`
- `bpy_struct.id_properties_clear`
- `bpy_struct.id_properties_ensure`
- `bpy_struct.id_properties_ui`
- `bpy_struct.is_property_hidden`
- `bpy_struct.items`
- `bpy_struct.keyframe_delete`
- `bpy_struct.keyframe_insert`
- `bpy_struct.keys`
- `bpy_struct.path_from_id`
- `bpy_struct.path_resolve`
- `bpy_struct.pop`
- `bpy_struct.property_overridable_library_set`

- [bpy_struct.is_property_hidden](#)
- [bpy_struct.is_property_overridable_library](#)
- [bpy_struct.is_property_readonly](#)
- [bpy_struct.is_property_set](#)
- [bpy_struct.property_overridable_library_set](#)
- [bpy_struct.property_unset](#)
- [bpy_struct.type_recast](#)
- [bpy_struct.values](#)

References

- [ViewLayer.objects](#)

LayoutPanelState(bpy_struct)

base class — [bpy_struct](#)

class `bpy.types.LayoutPanelState(bpy_struct)`

is_open

TYPE:

boolean, default False

classmethod `bl_rna_get_subclass(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

[bpy.types.Struct](#) subclass

classmethod `bl_rna_get_subclass_py(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

type

Inherited Properties

- [bpy_struct.id_data](#)

Inherited Functions

- | | |
|--|---|
| • bpy_struct.as_pointer | • bpy_struct.items |
| • bpy_struct.driver_add | • bpy_struct.keyframe_delete |
| • bpy_struct.driver_remove | • bpy_struct.keyframe_insert |
| • bpy_struct.get | • bpy_struct.keys |
| • bpy_struct.id_properties_clear | • bpy_struct.path_from_id |
| • bpy_struct.id_properties_ensure | • bpy_struct.path_resolve |
| • bpy_struct.id_properties_ui | • bpy_struct.pop |
| • bpy_struct.is_property_hidden | • bpy_struct.property_overridable_library_set |
| • bpy_struct.is_property_overridable_library | • bpy_struct.property_unset |
| • bpy_struct.is_property_readonly | • bpy_struct.type_recast |
| • bpy_struct.is_property_set | • bpy_struct.values |

[Skip to content](#)

Library(ID)

base classes — [bpy_struct](#), [ID](#)

class bpy.types.**Library**(ID)

External .blend file from which data is linked

filepath

Path to the library .blend file

TYPE:

string, default ‘’, (never None)

is_editable

Datablocks in this library are editable despite being linked. Used by brush assets and their dependencies.

TYPE:

boolean, default False, (readonly)

needs_liboverride_resync

True if this library contains library overrides that are linked in current blendfile, and that had to be recursively resynced on load (it is recommended to open and re-save that library blendfile then)

TYPE:

boolean, default False

packed_file

TYPE:

[PackedFile](#), (readonly)

parent

TYPE:

[Library](#), (readonly)

version

Version of Blender the library .blend was saved with

TYPE:

int array of 3 items in [0, inf], default (0, 0, 0), (readonly)

users_id

ID data blocks which use this library

(readonly)

reload()

Reload this library and all its linked data-blocks

classmethod [bl_rna_get_subclass](#)(id, default=None)

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

`bpy.types.Struct` subclass

classmethod `bl_rna_get_subclass_py(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

type

Inherited Properties

- `bpy_struct.id_data`
- `ID.name`
- `ID.name_full`
- `ID.id_type`
- `ID.session_uid`
- `ID.is_evaluated`
- `ID.original`
- `ID.users`
- `ID.use_fake_user`
- `ID.use_extra_user`
- `ID.is_embedded_data`
- `ID.is_missing`
- `ID.is_runtime_data`
- `ID.is_editable`
- `ID.tag`
- `ID.is_library_indirect`
- `ID.library`
- `ID.library_weak_reference`
- `ID.asset_data`
- `ID.override_library`
- `ID.preview`

Inherited Functions

- `bpy_struct.as_pointer`
- `bpy_struct.driver_add`
- `bpy_struct.driver_remove`
- `bpy_struct.get`
- `bpy_struct.id_properties_clear`
- `bpy_struct.id_properties_ensure`
- `bpy_struct.id_properties_ui`
- `bpy_struct.is_property_hidden`
- `bpy_struct.is_property_overridable_library`
- `bpy_struct.is_property_readonly`
- `bpy_struct.is_property_set`
- `bpy_struct.items`
- `bpy_struct.keyframe_delete`
- `bpy_struct.keyframe_insert`
- `bpy_struct.keys`
- `bpy_struct.path_from_id`
- `bpy_struct.path_resolve`
- `bpy_struct.pop`
- `bpy_struct.property_overridable_library_set`
- `bpy_struct.property_unset`
- `bpy_struct.type_recast`
- `bpy_struct.values`
- `ID.rename`
- `ID.evaluated_get`
- `ID.copy`
- `ID.asset_mark`
- `ID.asset_clear`
- `ID.asset_generate_preview`
- `ID.override_create`
- `ID.override_hierarchy_create`
- `ID.user_clear`
- `ID.user_remap`
- `ID.make_local`
- `ID.user_of_id`
- `ID.animation_data_create`
- `ID.animation_data_clear`
- `ID.update_tag`
- `ID.preview_ensure`
- `ID.bl_rna_get_subclass`
- `ID.bl_rna_get_subclass_py`

References

- [BlendData.libraries](#)
- [BlendDataLibraries.remove](#)
- [BlendImportContextItem.source_library](#)
- [ID.library](#)
- [Library.parent](#)

[Skip to content](#)

LibraryWeakReference(bpy_struct)

base class — [bpy_struct](#)

class `bpy.types.LibraryWeakReference(bpy_struct)`

Read-only external reference to a linked data-block and its library file

filepath

Path to the library .blend file

TYPE:

string, default ‘’, (readonly, never None)

id_name

Full ID name in the library .blend file (including the two leading ‘id type’ chars)

TYPE:

string, default ‘’, (readonly, never None)

classmethod `bl_ma_get_subclass(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

[bpy.types.Struct](#) subclass

classmethod `bl_ma_get_subclass_py(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

type

Inherited Properties

- [bpy_struct.id_data](#)

Inherited Functions

- [bpy_struct.as_pointer](#)
- [bpy_struct.driver_add](#)
- [bpy_struct.driver_remove](#)
- [bpy_struct.get](#)
- [bpy_struct.id_properties_clear](#)
- [bpy_struct.id_properties_ensure](#)
- [bpy_struct.id_properties_ui](#)
- [bpy_struct.is_property_hidden](#)
- [bpy_struct.items](#)
- [bpy_struct.keyframe_delete](#)
- [bpy_struct.keyframe_insert](#)
- [bpy_struct.keys](#)
- [bpy_struct.path_from_id](#)
- [bpy_struct.path_resolve](#)
- [bpy_struct.pop](#)
- [bpy_struct.property_overridable_library_get](#)

- `bpy_struct.is_property_hidden`
- `bpy_struct.is_property_overridable_library`
- `bpy_struct.is_property_readonly`
- `bpy_struct.is_property_set`
- `bpy_struct.property_overridable_library_set`
- `bpy_struct.property_unset`
- `bpy_struct.type_recast`
- `bpy_struct.values`

References

- `ID.library_weak_reference`

[Previous](#)
[Library\(ID\)](#)

[Report issue on this page](#)

Copyright © Blender Authors
Made with [Furo](#)

[No](#)
[Light\(I](#)

[Skip to content](#)

Light(ID)

base classes — [bpy_struct](#), [ID](#)

subclasses — [AreaLight](#), [PointLight](#), [SpotLight](#), [SunLight](#)

class bpy.types.Light(ID)

Light data-block for lighting a scene

animation_data

Animation data for this data-block

TYPE:

[AnimData](#), (readonly)

color

Light color

TYPE:

[mathutils.Color](#) of 3 items in [0, inf], default (1.0, 1.0, 1.0)

cutoff_distance

Distance at which the light influence will be set to 0

TYPE:

float in [0, inf], default 40.0

cycles

Cycles light settings

TYPE:

[CyclesLightSettings](#), (readonly)

diffuse_factor

Diffuse reflection multiplier

TYPE:

float in [0, inf], default 1.0

node_tree

Node tree for node based lights

TYPE:

[NodeTree](#), (readonly)

specular_factor

Specular reflection multiplier

TYPE:

float in [0, inf], default 1.0

transmission_factor

Transmission light multiplier

TYPE:

float in [0, inf], default 1.0

type

Type of light

TYPE:

enum in [Light Type Items](#), default 'POINT'

use_custom_distance

Use custom attenuation distance instead of global light threshold

TYPE:

boolean, default False

use_nodes

Use shader nodes to render the light

TYPE:

boolean, default False

use_shadow

TYPE:

boolean, default True

volume_factor

Volume light multiplier

TYPE:

float in [0, inf], default 1.0

classmethod bl_ma_get_subclass(id, default=None)

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

[bpy.types.Struct](#) subclass

classmethod bl_ma_get_subclass_py(id, default=None)

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

[type](#)

Inherited Properties

- [bpy_struct.id_data](#)
- [ID.name](#)
- [ID.name_full](#)
- [ID.id_type](#)
- [ID.session_uid](#)
- [ID.is_evaluated](#)
- [ID.is_missing](#)
- [ID.is_runtime_data](#)
- [ID.is_editable](#)
- [ID.tag](#)
- [ID.is_library_indirect](#)
- [ID.is_library_direct](#)

- `ID.original`
- `ID.users`
- `ID.use_fake_user`
- `ID.use_extra_user`
- `ID.is_embedded_data`
- `ID.library`
- `ID.library_weak_reference`
- `ID.asset_data`
- `ID.override_library`
- `ID.preview`

Inherited Functions

- `bpy_struct.as_pointer`
- `bpy_struct.driver_add`
- `bpy_struct.driver_remove`
- `bpy_struct.get`
- `bpy_struct.id_properties_clear`
- `bpy_struct.id_properties_ensure`
- `bpy_struct.id_properties_ui`
- `bpy_struct.is_property_hidden`
- `bpy_struct.is_property_overridable_library`
- `bpy_struct.is_property_readonly`
- `bpy_struct.is_property_set`
- `bpy_struct.items`
- `bpy_struct.keyframe_delete`
- `bpy_struct.keyframe_insert`
- `bpy_struct.keys`
- `bpy_struct.path_from_id`
- `bpy_struct.path_resolve`
- `bpy_struct.pop`
- `bpy_struct.property_overridable_library_set`
- `bpy_struct.property_unset`
- `bpy_struct.type_recast`
- `bpy_struct.values`
- `ID.rename`
- `ID.evaluated_get`
- `ID.copy`
- `ID.asset_mark`
- `ID.asset_clear`
- `ID.asset_generate_preview`
- `ID.override_create`
- `ID.override_hierarchy_create`
- `ID.user_clear`
- `ID.user_remap`
- `ID.make_local`
- `ID.user_of_id`
- `ID.animation_data_create`
- `ID.animation_data_clear`
- `ID.update_tag`
- `ID.preview_ensure`
- `ID.bl_rna_get_subclass`
- `ID.bl_rna_get_subclass_py`

References

- `bpy.context.light`
- `BlendDataLights.new`
- `BlendData.lights`
- `BlendDataLights.remove`

[Skip to content](#)

Lightgroup(bpy_struct)

base class — `bpy_struct`

class `bpy.types.Lightgroup(bpy_struct)`

name

Name of the Lightgroup

TYPE:

string, default “”, (never None)

classmethod `bl_rna_get_subclass(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

`bpy.types.Struct` subclass

classmethod `bl_rna_get_subclass_py(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

type

Inherited Properties

- `bpy_struct.id_data`

Inherited Functions

- `bpy_struct.as_pointer`
- `bpy_struct.driver_add`
- `bpy_struct.driver_remove`
- `bpy_struct.get`
- `bpy_struct.id_properties_clear`
- `bpy_struct.id_properties_ensure`
- `bpy_struct.id_properties_ui`
- `bpy_struct.is_property_hidden`
- `bpy_struct.is_property_overridable_library`
- `bpy_struct.is_property_readonly`
- `bpy_struct.is_property_set`
- `bpy_struct.items`
- `bpy_struct.keyframe_delete`
- `bpy_struct.keyframe_insert`
- `bpy_struct.keys`
- `bpy_struct.path_from_id`
- `bpy_struct.path_resolve`
- `bpy_struct.pop`
- `bpy_struct.property_overridable_library_set`
- `bpy_struct.property_unset`
- `bpy_struct.type_recast`
- `bpy_struct.values`

References

- `Lightgroups.add`
- `ViewLayer.active_lightgroup`
- `Lightgroups.remove`
- `ViewLayer.lightgroups`

[Previous](#)
[LightProbeVolume\(LightProbe\)](#)
[Report issue on this page](#)

Copyright © Blender Authors
Made with [Furo](#)

[Next](#)
[Lightgroups\(bpy_struct\)](#)

[Skip to content](#)

Lightgroups(bpy_struct)

base class — [bpy_struct](#)

class bpy.types.Lightgroups(bpy_struct)

Collection of Lightgroups

add(*, name='')

add

PARAMETERS:

name (*string, (optional, never None)*) – Name, Name of newly created lightgroup

RETURNS:

Newly created Lightgroup

RETURN TYPE:

[Lightgroup](#)

remove(lightgroup)

Remove given light group

PARAMETERS:

lightgroup ([Lightgroup](#) , (never None)) – Lightgroup to remove

classmethod bl_ma_get_subclass(id, default=None)

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

[bpy.types.Struct](#) subclass

classmethod bl_ma_get_subclass_py(id, default=None)

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

type

Inherited Properties

- [bpy_struct.id_data](#)

Inherited Functions

- [bpy_struct.as_pointer](#)
- [bpy_struct.driver_add](#)
- [bpy_struct.driver_remove](#)
- [bpy_struct.items](#)
- [bpy_struct.keyframe_delete](#)
- [bpy_struct.keyframe_insert](#)

- `bpy_struct.get`
- `bpy_struct.id_properties_clear`
- `bpy_struct.id_properties_ensure`
- `bpy_struct.id_properties_ui`
- `bpy_struct.is_property_hidden`
- `bpy_struct.is_property_overridable_library`
- `bpy_struct.is_property_readonly`
- `bpy_struct.is_property_set`
- `bpy_struct.keys`
- `bpy_struct.path_from_id`
- `bpy_struct.path_resolve`
- `bpy_struct.pop`
- `bpy_struct.property_overridable_library_set`
- `bpy_struct.property_unset`
- `bpy_struct.type_recast`
- `bpy_struct.values`

References

- `ViewLayer.lightgroups`

[Skip to content](#)

LightProbe(ID)

base classes — [bpy_struct](#), [ID](#)

subclasses — [LightProbePlane](#), [LightProbeSphere](#), [LightProbeVolume](#)

class bpy.types.LightProbe(ID)

Light Probe data-block for lighting capture objects

animation_data

Animation data for this data-block

TYPE:

[AnimData](#), (readonly)

clip_start

Probe clip start, below which objects will not appear in reflections

TYPE:

float in [1e-06, inf], default 0.8

data_display_size

Viewport display size of the sampled data

TYPE:

float in [0, inf], default 0.1

influence_distance

Influence distance of the probe

TYPE:

float in [0, inf], default 2.5

invert_visibility_collection

Invert visibility collection (Deprecated)

TYPE:

boolean, default False

show_clip

Show the clipping distances in the 3D view

TYPE:

boolean, default False

show_data

Deprecated, use use_data_display instead

TYPE:

boolean, default False

show_influence

Show the influence volume in the 3D view

TYPE:

boolean, default True

type

Type of light probe

- `SPHERE` Sphere – Light probe that captures precise lighting from all directions at a single point in space.
- `PLANE` Plane – Light probe that captures incoming light from a single direction on a plane.
- `VOLUME` Volume – Light probe that captures low frequency lighting inside a volume.

TYPE:

enum in ['SPHERE', 'PLANE', 'VOLUME'], default 'SPHERE', (readonly)

use_data_display

Display sampled data in the viewport to debug captured light

TYPE:

boolean, default False

visibility_bleed_bias

Bias for reducing light-bleed on variance shadow maps (Deprecated)

TYPE:

float in [0, 1], default 0.0

visibility_blur

Filter size of the visibility blur (Deprecated)

TYPE:

float in [0, 1], default 0.2

visibility_buffer_bias

Bias for reducing self shadowing (Deprecated)

TYPE:

float in [0.001, 9999], default 1.0

visibility_collection

Restrict objects visible for this probe (Deprecated)

TYPE:

`Collection`

classmethod bl_ma_get_subclass(id, default=None)

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

`bpy.types.Struct` subclass

classmethod bl_ma_get_subclass_py(id, default=None)

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

Inherited Properties

- `bpy_struct.id_data`
- `ID.name`
- `ID.name_full`
- `ID.id_type`
- `ID.session_uid`
- `ID.is_evaluated`
- `ID.original`
- `ID.users`
- `ID.use_fake_user`
- `ID.use_extra_user`
- `ID.is_embedded_data`
- `ID.is_missing`
- `ID.is_runtime_data`
- `ID.is_editable`
- `ID.tag`
- `ID.is_library_indirect`
- `ID.library`
- `ID.library_weak_reference`
- `ID.asset_data`
- `ID.override_library`
- `ID.preview`

Inherited Functions

- `bpy_struct.as_pointer`
- `bpy_struct.driver_add`
- `bpy_struct.driver_remove`
- `bpy_struct.get`
- `bpy_struct.id_properties_clear`
- `bpy_struct.id_properties_ensure`
- `bpy_struct.id_properties_ui`
- `bpy_struct.is_property_hidden`
- `bpy_struct.is_property_overridable_library`
- `bpy_struct.is_property_readonly`
- `bpy_struct.is_property_set`
- `bpy_struct.items`
- `bpy_struct.keyframe_delete`
- `bpy_struct.keyframe_insert`
- `bpy_struct.keys`
- `bpy_struct.path_from_id`
- `bpy_struct.path_resolve`
- `bpy_struct.pop`
- `bpy_struct.property_overridable_library_set`
- `bpy_struct.property_unset`
- `bpy_struct.type_recast`
- `bpy_struct.values`
- `ID.rename`
- `ID.evaluated_get`
- `ID.copy`
- `ID.asset_mark`
- `ID.asset_clear`
- `ID.asset_generate_preview`
- `ID.override_create`
- `ID.override_hierarchy_create`
- `ID.user_clear`
- `ID.user_remap`
- `ID.make_local`
- `ID.user_of_id`
- `ID.animation_data_create`
- `ID.animation_data_clear`
- `ID.update_tag`
- `ID.preview_ensure`
- `ID.bl_rna_get_subclass`
- `ID.bl_rna_get_subclass_py`

References

- `bpy.context.lightprobe`
- `BlendDataProbes.new`
- `BlendData.lightprobes`
- `BlendDataProbes.remove`

[Skip to content](#)

LightProbePlane(LightProbe)

base classes — `bpy_struct`, `ID`, `LightProbe`

class `bpy.types.LightProbePlane(LightProbe)`

Light probe that captures incoming light from a single direction on a plane

classmethod `bl_ma_get_subclass(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

`bpy.types.Struct` subclass

classmethod `bl_ma_get_subclass_py(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

type

Inherited Properties

- `bpy_struct.id_data`
- `ID.name`
- `ID.name_full`
- `ID.id_type`
- `ID.session_uid`
- `ID.is_evaluated`
- `ID.original`
- `ID.users`
- `ID.use_fake_user`
- `ID.use_extra_user`
- `ID.is_embedded_data`
- `ID.is_missing`
- `ID.is_runtime_data`
- `ID.is_editable`
- `ID.tag`
- `ID.is_library_indirect`
- `ID.library`
- `ID.library_weak_reference`
- `ID.asset_data`
- `ID.override_library`
- `ID.preview`
- `LightProbe.type`
- `LightProbe.clip_start`
- `LightProbe.show_clip`
- `LightProbe.show_influence`
- `LightProbe.influence_distance`
- `LightProbe.visibility_buffer_bias`
- `LightProbe.visibility_bleed_bias`
- `LightProbe.visibility_blur`
- `LightProbe.visibility_collection`
- `LightProbe.invert_visibility_collection`
- `LightProbe.show_data`
- `LightProbe.use_data_display`
- `LightProbe.data_display_size`
- `LightProbe.animation_data`

Inherited Functions

- `bpy_struct.as_pointer`
- `bpy_struct.values`

- bpy_struct.as_pointer
- bpy_struct.driver_add
- bpy_struct.driver_remove
- bpy_struct.get
- bpy_struct.id_properties_clear
- bpy_struct.id_properties_ensure
- bpy_struct.id_properties_ui
- bpy_struct.is_property_hidden
- bpy_struct.is_property_overridable_library
- bpy_struct.is_property_readonly
- bpy_struct.is_property_set
- bpy_struct.items
- bpy_struct.keyframe_delete
- bpy_struct.keyframe_insert
- bpy_struct.keys
- bpy_struct.path_from_id
- bpy_struct.path_resolve
- bpy_struct.pop
- bpy_struct.property_overridable_library_set
- bpy_struct.property_unset
- bpy_struct.type_recast
- bpy_struct.values
- ID.rename
- ID.evaluated_get
- ID.copy
- ID.asset_mark
- ID.asset_clear
- ID.asset_generate_preview
- ID.override_create
- ID.override_hierarchy_create
- ID.user_clear
- ID.user_remap
- ID.make_local
- ID.user_of_id
- ID.animation_data_create
- ID.animation_data_clear
- ID.update_tag
- ID.preview_ensure
- ID.bl_rna_get_subclass
- ID.bl_rna_get_subclass_py
- LightProbe.bl_rna_get_subclass
- LightProbe.bl_rna_get_subclass_py

[Skip to content](#)

LightProbeSphere(LightProbe)

base classes — `bpy_struct`, `ID`, `LightProbe`

class bpy.types.**LightProbeSphere(LightProbe)**

Light probe that captures precise lighting from all directions at a single point in space

clip_end

Probe clip end, beyond which objects will not appear in reflections

TYPE:

float in [1e-06, inf], default 20.0

falloff

Control how fast the probe influence decreases

TYPE:

float in [0, 1], default 0.2

influence_type

Type of influence volume

TYPE:

enum in ['ELIPSOID', 'BOX'], default 'ELIPSOID'

parallax_distance

Lowest corner of the parallax bounding box

TYPE:

float in [0, inf], default 2.5

parallax_type

Type of parallax volume

TYPE:

enum in ['ELIPSOID', 'BOX'], default 'ELIPSOID'

show_parallax

Show the parallax correction volume in the 3D view

TYPE:

boolean, default False

use_custom_parallax

Enable custom settings for the parallax correction volume

TYPE:

boolean, default False

classmethod bl_ma_get_subclass(id, default=None)

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

`bpy.types.Struct` subclass

classmethod `bl_ma_get_subclass_py(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

type

Inherited Properties

- `bpy_struct.id_data`
- `ID.name`
- `ID.name_full`
- `ID.id_type`
- `ID.session_uid`
- `ID.is_evaluated`
- `ID.original`
- `ID.users`
- `ID.use_fake_user`
- `ID.use_extra_user`
- `ID.is_embedded_data`
- `ID.is_missing`
- `ID.is_runtime_data`
- `ID.is_editable`
- `ID.tag`
- `ID.is_library_indirect`
- `ID.library`
- `ID.library_weak_reference`
- `ID.asset_data`
- `ID.override_library`
- `ID.preview`
- `LightProbe.type`
- `LightProbe.clip_start`
- `LightProbe.show_clip`
- `LightProbe.show_influence`
- `LightProbe.influence_distance`
- `LightProbe.visibility_buffer_bias`
- `LightProbe.visibility_bleed_bias`
- `LightProbe.visibility_blur`
- `LightProbe.visibility_collection`
- `LightProbe.invert_visibility_collection`
- `LightProbe.show_data`
- `LightProbe.use_data_display`
- `LightProbe.data_display_size`
- `LightProbe.animation_data`

Inherited Functions

- `bpy_struct.as_pointer`
- `bpy_struct.driver_add`
- `bpy_struct.driver_remove`
- `bpy_struct.get`
- `bpy_struct.id_properties_clear`
- `bpy_struct.id_properties_ensure`
- `bpy_struct.id_properties_ui`
- `bpy_struct.is_property_hidden`
- `bpy_struct.is_property_overridable_library`
- `bpy_struct.is_property_readonly`
- `bpy_struct.is_property_set`
- `bpy_struct.items`
- `bpy_struct.keyframe_delete`
- `bpy_struct.keyframe_insert`
- `bpy_struct.values`
- `ID.rename`
- `ID.evaluated_get`
- `ID.copy`
- `ID.asset_mark`
- `ID.asset_clear`
- `ID.asset_generate_preview`
- `ID.override_create`
- `ID.override_hierarchy_create`
- `ID.user_clear`
- `ID.user_remap`
- `ID.make_local`
- `ID.user_of_id`
- `ID.animation_data_create`

- [bpy_struct.keys](#)
- [bpy_struct.path_from_id](#)
- [bpy_struct.path_resolve](#)
- [bpy_struct.pop](#)
- [bpy_struct.property_overridable_library_set](#)
- [bpy_struct.property_unset](#)
- [bpy_struct.type_recast](#)
- [ID.animation_data_clear](#)
- [ID.update_tag](#)
- [ID.preview_ensure](#)
- [ID.bl_rna_get_subclass](#)
- [ID.bl_rna_get_subclass_py](#)
- [LightProbe.bl_rna_get_subclass](#)
- [LightProbe.bl_rna_get_subclass_py](#)

[Skip to content](#)

LightProbeVolume(LightProbe)

base classes — [bpy_struct](#), [ID](#), [LightProbe](#)

class bpy.types.**LightProbeVolume(LightProbe)**

Light probe that captures low frequency lighting inside a volume

bake_samples

Number of ray directions to evaluate when baking

TYPE:

int in [1, inf], default 2048

capture_distance

Distance around the probe volume that will be considered during the bake

TYPE:

float in [1e-06, inf], default 20.0

capture_emission

Bake emissive surfaces for more accurate lighting

TYPE:

boolean, default True

capture_indirect

Bake light bounces from light sources for more accurate lighting

TYPE:

boolean, default True

capture_world

Bake incoming light from the world instead of just the visibility for more accurate lighting, but lose correct blending to surrounding irradiance volumes

TYPE:

boolean, default False

clamp_direct

Clamp the direct lighting intensity to reduce noise (0 to disable)

TYPE:

float in [0, inf], default 0.0

clamp_indirect

Clamp the indirect lighting intensity to reduce noise (0 to disable)

TYPE:

float in [0, inf], default 10.0

dilation_radius

Radius in grid sample to search valid grid samples to copy into invalid grid samples

TYPE:

float in [1, 5], default 1.0

.. : : ..

dilation_threshold

Ratio of front-facing surface hits under which a grid sample will reuse neighbors grid sample lighting

TYPE:

float in [0, 1], default 0.5

escape_bias

Distance to search for valid capture positions to prevent lighting artifacts

TYPE:

float in [0, 1], default 0.1

facing_bias

Smoother irradiance interpolation but introduce light bleeding

TYPE:

float in [0, inf], default 0.5

intensity

Modify the intensity of the lighting captured by this probe

TYPE:

float in [0, inf], default 1.0

normal_bias

Offset sampling of the irradiance grid in the surface normal direction to reduce light bleeding

TYPE:

float in [0, inf], default 0.3

resolution_x

Number of samples along the x axis of the volume

TYPE:

int in [1, 256], default 4

resolution_y

Number of samples along the y axis of the volume

TYPE:

int in [1, 256], default 4

resolution_z

Number of samples along the z axis of the volume

TYPE:

int in [1, 256], default 4

surface_bias

Moves capture points away from surfaces to prevent artifacts

TYPE:

float in [0, 1], default 0.05

surfel_density

Number of surfels to spawn in one local unit distance (higher values improve quality)

TYPE:

int in [1, 1000000], default 1000

int in [1, int], default 20

validity_threshold

Ratio of front-facing surface hits under which a grid sample will not be considered for lighting

TYPE:

float in [0, 1], default 0.4

view_bias

Offset sampling of the irradiance grid in the viewing direction to reduce light bleeding

TYPE:

float in [0, inf], default 0.0

classmethod bl_ma_get_subclass(id, default=None)

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

`bpy.types.Struct` subclass

classmethod bl_ma_get_subclass_py(id, default=None)

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

type

Inherited Properties

- `bpy_struct.id_data`
- `ID.name`
- `ID.name_full`
- `ID.id_type`
- `ID.session_uid`
- `ID.is_evaluated`
- `ID.original`
- `ID.users`
- `ID.use_fake_user`
- `ID.use_extra_user`
- `ID.is_embedded_data`
- `ID.is_missing`
- `ID.is_runtime_data`
- `ID.is_editable`
- `ID.tag`
- `ID.is_library_indirect`
- `ID.library`
- `ID.library_weak_reference`
- `ID.asset_data`
- `ID.override_library`
- `ID.preview`
- `LightProbe.type`
- `LightProbe.clip_start`
- `LightProbe.show_clip`
- `LightProbe.show_influence`
- `LightProbe.influence_distance`
- `LightProbe.visibility_buffer_bias`
- `LightProbe.visibility_bleed_bias`
- `LightProbe.visibility_blur`
- `LightProbe.visibility_collection`
- `LightProbe.invert_visibility_collection`
- `LightProbe.show_data`
- `LightProbe.use_data_display`
- `LightProbe.data_display_size`
- `LightProbe.animation_data`

Inherited Functions

- `bpy_struct.as_pointer`
- `bpy_struct.driver_add`
- `bpy_struct.driver_remove`
- `bpy_struct.get`
- `bpy_struct.id_properties_clear`
- `bpy_struct.id_properties_ensure`
- `bpy_struct.id_properties_ui`
- `bpy_struct.is_property_hidden`
- `bpy_struct.is_property_overridable_library`
- `bpy_struct.is_property_readonly`
- `bpy_struct.is_property_set`
- `bpy_struct.items`
- `bpy_struct.keyframe_delete`
- `bpy_struct.keyframe_insert`
- `bpy_struct.keys`
- `bpy_struct.path_from_id`
- `bpy_struct.path_resolve`
- `bpy_struct.pop`
- `bpy_struct.property_overridable_library_set`
- `bpy_struct.property_unset`
- `bpy_struct.type_recast`
- `bpy_struct.values`
- `ID.rename`
- `ID.evaluated_get`
- `ID.copy`
- `ID.asset_mark`
- `ID.asset_clear`
- `ID.asset_generate_preview`
- `ID.override_create`
- `ID.override_hierarchy_create`
- `ID.user_clear`
- `ID.user_remap`
- `ID.make_local`
- `ID.user_of_id`
- `ID.animation_data_create`
- `ID.animation_data_clear`
- `ID.update_tag`
- `ID.preview_ensure`
- `ID.bl_rna_get_subclass`
- `ID.bl_rna_get_subclass_py`
- `LightProbe.bl_rna_get_subclass`
- `LightProbe.bl_rna_get_subclass_py`

[Skip to content](#)

LimitDistanceConstraint(Constraint)

base classes — [bpy_struct](#), [Constraint](#)

class bpy.types.**LimitDistanceConstraint**(**Constraint**)

Limit the distance from target object

distance

Radius of limiting sphere

TYPE:

float in $[-\infty, \infty]$, default 0.0

head_tail

Target along length of bone: Head is 0, Tail is 1

TYPE:

float in $[0, 1]$, default 0.0

limit_mode

Distances in relation to sphere of influence to allow

- `LIMITDIST_INSIDE` Inside – The object is constrained inside a virtual sphere around the target object, with a radius defined by the limit distance.
- `LIMITDIST_OUTSIDE` Outside – The object is constrained outside a virtual sphere around the target object, with a radius defined by the limit distance.
- `LIMITDIST_ONSURFACE` On Surface – The object is constrained on the surface of a virtual sphere around the target object, with a radius defined by the limit distance.

TYPE:

enum in `['LIMITDIST_INSIDE', 'LIMITDIST_OUTSIDE', 'LIMITDIST_ONSURFACE']`, default `'LIMITDIST_INSIDE'`

subtarget

Armature bone, mesh or lattice vertex group, ...

TYPE:

string, default `""`, (never None)

target

Target object

TYPE:

[Object](#)

use_bbone_shape

Follow shape of B-Bone segments when calculating Head/Tail position

TYPE:

boolean, default False

use_transform_limit

Transforms are affected by this constraint as well

TYPE:

boolean, default False

classmethod `bl_rna_get_subclass(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

`bpy.types.Struct` subclass

classmethod `bl_rna_get_subclass_py(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

type

Inherited Properties

- `bpy_struct.id_data`
- `Constraint.name`
- `Constraint.type`
- `Constraint.is_override_data`
- `Constraint.owner_space`
- `Constraint.target_space`
- `Constraint.space_object`
- `Constraint.space_subtarget`
- `Constraint.mute`
- `Constraint.enabled`
- `Constraint.show_expanded`
- `Constraint.is_valid`
- `Constraint.active`
- `Constraint.influence`
- `Constraint.error_location`
- `Constraint.error_rotation`

Inherited Functions

- `bpy_struct.as_pointer`
- `bpy_struct.driver_add`
- `bpy_struct.driver_remove`
- `bpy_struct.get`
- `bpy_struct.id_properties_clear`
- `bpy_struct.id_properties_ensure`
- `bpy_struct.id_properties_ui`
- `bpy_struct.is_property_hidden`
- `bpy_struct.is_property_overridable_library`
- `bpy_struct.is_property_readonly`
- `bpy_struct.is_property_set`
- `bpy_struct.items`
- `bpy_struct.keyframe_delete`
- `bpy_struct.keyframe_insert`
- `bpy_struct.keys`
- `bpy_struct.path_from_id`
- `bpy_struct.path_resolve`
- `bpy_struct.pop`
- `bpy_struct.property_overridable_library_set`
- `bpy_struct.property_unset`
- `bpy_struct.type_recast`
- `bpy_struct.values`
- `Constraint.bl_rna_get_subclass`
- `Constraint.bl_rna_get_subclass_py`

[Skip to content](#)

LimitLocationConstraint(Constraint)

base classes — [bpy_struct](#), [Constraint](#)

class bpy.types.**LimitLocationConstraint**(**Constraint**)

Limit the location of the constrained object

max_x

Highest X value to allow

TYPE:

float in $[-\text{inf}, \text{inf}]$, default 0.0

max_y

Highest Y value to allow

TYPE:

float in $[-\text{inf}, \text{inf}]$, default 0.0

max_z

Highest Z value to allow

TYPE:

float in $[-\text{inf}, \text{inf}]$, default 0.0

min_x

Lowest X value to allow

TYPE:

float in $[-\text{inf}, \text{inf}]$, default 0.0

min_y

Lowest Y value to allow

TYPE:

float in $[-\text{inf}, \text{inf}]$, default 0.0

min_z

Lowest Z value to allow

TYPE:

float in $[-\text{inf}, \text{inf}]$, default 0.0

use_max_x

Use the maximum X value

TYPE:

boolean, default False

use_max_y

Use the maximum Y value

TYPE:

boolean, default False

use_max_z

Use the maximum Z value

TYPE:

boolean, default False

use_min_x

Use the minimum X value

TYPE:

boolean, default False

use_min_y

Use the minimum Y value

TYPE:

boolean, default False

use_min_z

Use the minimum Z value

TYPE:

boolean, default False

use_transform_limit

Transform tools are affected by this constraint as well

TYPE:

boolean, default False

classmethod bl_ma_get_subclass(id, default=None)

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

`bpy.types.Struct` subclass

classmethod bl_ma_get_subclass_py(id, default=None)

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

type

Inherited Properties

- `bpy_struct.id_data`
- `Constraint.name`
- `Constraint.type`
- `Constraint.is_override_data`
- `Constraint.owner_space`
- `Constraint.target_space`
- `Constraint.mute`
- `Constraint.enabled`
- `Constraint.show_expanded`
- `Constraint.is_valid`
- `Constraint.active`
- `Constraint.influence`

- `Constraint.space_object`
- `Constraint.error_location`
- `Constraint.space_subtarget`
- `Constraint.error_rotation`

Inherited Functions

- `bpy_struct.as_pointer`
- `bpy_struct.driver_add`
- `bpy_struct.driver_remove`
- `bpy_struct.get`
- `bpy_struct.id_properties_clear`
- `bpy_struct.id_properties_ensure`
- `bpy_struct.id_properties_ui`
- `bpy_struct.is_property_hidden`
- `bpy_struct.is_property_overridable_library`
- `bpy_struct.is_property_readonly`
- `bpy_struct.is_property_set`
- `bpy_struct.items`
- `bpy_struct.keyframe_delete`
- `bpy_struct.keyframe_insert`
- `bpy_struct.keys`
- `bpy_struct.path_from_id`
- `bpy_struct.path_resolve`
- `bpy_struct.pop`
- `bpy_struct.property_overridable_library_set`
- `bpy_struct.property_unset`
- `bpy_struct.type_recast`
- `bpy_struct.values`
- `Constraint.bl_rna_get_subclass`
- `Constraint.bl_rna_get_subclass_py`

LimitRotationConstraint(Constraint)

base classes — [bpy_struct](#), [Constraint](#)

class bpy.types.**LimitRotationConstraint**(**Constraint**)

Limit the rotation of the constrained object

euler_order

Explicitly specify the euler rotation order

- `AUTO` Default – Euler using the default rotation order.
- `XYZ` XYZ Euler – Euler using the XYZ rotation order.
- `XZY` XZY Euler – Euler using the XZY rotation order.
- `YXZ` YXZ Euler – Euler using the YXZ rotation order.
- `YZX` YZX Euler – Euler using the YZX rotation order.
- `ZXY` ZXY Euler – Euler using the ZXY rotation order.
- `ZYX` ZYX Euler – Euler using the ZYX rotation order.

TYPE:

enum in [`'AUTO'`, `'XYZ'`, `'XZY'`, `'YXZ'`, `'YZX'`, `'ZXY'`, `'ZYX'`], default `'AUTO'`

max_x

Upper X angle bound

TYPE:

float in [-1000, 1000], default 0.0

max_y

Upper Y angle bound

TYPE:

float in [-1000, 1000], default 0.0

max_z

Upper Z angle bound

TYPE:

float in [-1000, 1000], default 0.0

min_x

Lower X angle bound

TYPE:

float in [-1000, 1000], default 0.0

min_y

Lower Y angle bound

TYPE:

float in [-1000, 1000], default 0.0

min_z

Lower Z angle bound

TYPE:

float in [-1000, 1000], default 0.0

Use the minimum λ value

hookup default rule

Use the minimum t value

Table 1. Demographic characteristics of study population

TYPE: _____

boolean, default False

— — — — — () ,

The RNA type of default when not found.

RETURN FILE: 1-1

$$-\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |\nabla u|^2 dx = \frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} u^2 dx,$$

PARAMETERS:

id (*str*) – The RNA type identifier.

REFERENCES:

- `Constraint.is_override_data`
- `Constraint.is_valid`
- `Constraint.owner_space`
- `Constraint.active`
- `Constraint.target_space`
- `Constraint.influence`
- `Constraint.space_object`
- `Constraint.error_location`
- `Constraint.space_subtarget`
- `Constraint.error_rotation`

Inherited Functions

- `bpy_struct.as_pointer`
- `bpy_struct.driver_add`
- `bpy_struct.driver_remove`
- `bpy_struct.get`
- `bpy_struct.id_properties_clear`
- `bpy_struct.id_properties_ensure`
- `bpy_struct.id_properties_ui`
- `bpy_struct.is_property_hidden`
- `bpy_struct.is_property_overridable_library`
- `bpy_struct.is_property_readonly`
- `bpy_struct.is_property_set`
- `bpy_struct.items`
- `bpy_struct.keyframe_delete`
- `bpy_struct.keyframe_insert`
- `bpy_struct.keys`
- `bpy_struct.path_from_id`
- `bpy_struct.path_resolve`
- `bpy_struct.pop`
- `bpy_struct.property_overridable_library_set`
- `bpy_struct.property_unset`
- `bpy_struct.type_recast`
- `bpy_struct.values`
- `Constraint.bl_rna_get_subclass`
- `Constraint.bl_rna_get_subclass_py`

[Skip to content](#)

LimitScaleConstraint(Constraint)

base classes — [bpy_struct](#), [Constraint](#)

class bpy.types.**LimitScaleConstraint**(**Constraint**)

Limit the scaling of the constrained object

max_x

Highest X value to allow

TYPE:

float in [-1000, 1000], default 0.0

max_y

Highest Y value to allow

TYPE:

float in [-1000, 1000], default 0.0

max_z

Highest Z value to allow

TYPE:

float in [-1000, 1000], default 0.0

min_x

Lowest X value to allow

TYPE:

float in [-1000, 1000], default 0.0

min_y

Lowest Y value to allow

TYPE:

float in [-1000, 1000], default 0.0

min_z

Lowest Z value to allow

TYPE:

float in [-1000, 1000], default 0.0

use_max_x

Use the maximum X value

TYPE:

boolean, default False

use_max_y

Use the maximum Y value

TYPE:

boolean, default False

use_max_z

Use the maximum Z value

TYPE:

boolean, default False

use_min_x

Use the minimum X value

TYPE:

boolean, default False

use_min_y

Use the minimum Y value

TYPE:

boolean, default False

use_min_z

Use the minimum Z value

TYPE:

boolean, default False

use_transform_limit

Transform tools are affected by this constraint as well

TYPE:

boolean, default False

classmethod bl_ma_get_subclass(id, default=None)

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

`bpy.types.Struct` subclass

classmethod bl_ma_get_subclass_py(id, default=None)

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

type

Inherited Properties

- `bpy_struct.id_data`
- `Constraint.name`
- `Constraint.type`
- `Constraint.is_override_data`
- `Constraint.owner_space`
- `Constraint.target_space`
- `Constraint.mute`
- `Constraint.enabled`
- `Constraint.show_expanded`
- `Constraint.is_valid`
- `Constraint.active`
- `Constraint.influence`

- `Constraint.space_object`
- `Constraint.error_location`
- `Constraint.space_subtarget`
- `Constraint.error_rotation`

Inherited Functions

- `bpy_struct.as_pointer`
- `bpy_struct.driver_add`
- `bpy_struct.driver_remove`
- `bpy_struct.get`
- `bpy_struct.id_properties_clear`
- `bpy_struct.id_properties_ensure`
- `bpy_struct.id_properties_ui`
- `bpy_struct.is_property_hidden`
- `bpy_struct.is_property_overridable_library`
- `bpy_struct.is_property_readonly`
- `bpy_struct.is_property_set`
- `bpy_struct.items`
- `bpy_struct.keyframe_delete`
- `bpy_struct.keyframe_insert`
- `bpy_struct.keys`
- `bpy_struct.path_from_id`
- `bpy_struct.path_resolve`
- `bpy_struct.pop`
- `bpy_struct.property_overridable_library_set`
- `bpy_struct.property_unset`
- `bpy_struct.type_recast`
- `bpy_struct.values`
- `Constraint.bl_rna_get_subclass`
- `Constraint.bl_rna_get_subclass_py`

[Skip to content](#)

Linesets(bpy_struct)

base class — `bpy_struct`

class `bpy.types.Linesets(bpy_struct)`

Line sets for associating lines and style parameters

active

Active line set being displayed

TYPE:

`FreestyleLineSet`, (readonly)

active_index

Index of active line set slot

TYPE:

int in [0, inf], default 0

new(name)

Add a line set to scene render layer Freestyle settings

PARAMETERS:

name (*string, (never None)*) – New name for the line set (not unique)

RETURNS:

Newly created line set

RETURN TYPE:

`FreestyleLineSet`

remove(lineset)

Remove a line set from scene render layer Freestyle settings

PARAMETERS:

lineset (`FreestyleLineSet`, (never None)) – Line set to remove

classmethod `bl_ma_get_subclass(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

`bpy.types.Struct` subclass

classmethod `bl_ma_get_subclass_py(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

type

Inherited Properties

- `bpy_struct.id_data`

Inherited Functions

- | | |
|---|--|
| • <code>bpy_struct.as_pointer</code> | • <code>bpy_struct.items</code> |
| • <code>bpy_struct.driver_add</code> | • <code>bpy_struct.keyframe_delete</code> |
| • <code>bpy_struct.driver_remove</code> | • <code>bpy_struct.keyframe_insert</code> |
| • <code>bpy_struct.get</code> | • <code>bpy_struct.keys</code> |
| • <code>bpy_struct.id_properties_clear</code> | • <code>bpy_struct.path_from_id</code> |
| • <code>bpy_struct.id_properties_ensure</code> | • <code>bpy_struct.path_resolve</code> |
| • <code>bpy_struct.id_properties_ui</code> | • <code>bpy_struct.pop</code> |
| • <code>bpy_struct.is_property_hidden</code> | • <code>bpy_struct.property_overridable_library_set</code> |
| • <code>bpy_struct.is_property_overridable_library</code> | • <code>bpy_struct.property_unset</code> |
| • <code>bpy_struct.is_property_readonly</code> | • <code>bpy_struct.type_recast</code> |
| • <code>bpy_struct.is_property_set</code> | • <code>bpy_struct.values</code> |

References

- `FreestyleSettings.linesets`

[Skip to content](#)

LineStyleAlphaModifier(LineStyleModifier)

base classes — [bpy_struct](#), [LineStyleModifier](#)

subclasses — [LineStyleAlphaModifier_AlongStroke](#), [LineStyleAlphaModifier_CreaseAngle](#), [LineStyleAlphaModifier_Curvature_3D](#), [LineStyleAlphaModifier_DistanceFromCamera](#), [LineStyleAlphaModifier_DistanceFromObject](#), [LineStyleAlphaModifier_Material](#), [LineStyleAlphaModifier_Noise](#), [LineStyleAlphaModifier_Tangent](#)

class `bpy.types.LineStyleAlphaModifier`(`LineStyleModifier`)

Base type to define alpha transparency modifiers

name

Name of the modifier

TYPE:

string, default “”, (never None)

classmethod `bl_ma_get_subclass(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

[bpy.types.Struct](#) subclass

classmethod `bl_ma_get_subclass_py(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

type

Inherited Properties

- [bpy_struct.id_data](#)

Inherited Functions

- [bpy_struct.as_pointer](#)
- [bpy_struct.driver_add](#)
- [bpy_struct.driver_remove](#)
- [bpy_struct.get](#)
- [bpy_struct.id_properties_clear](#)
- [bpy_struct.id_properties_ensure](#)
- [bpy_struct.id_properties_ui](#)
- [bpy_struct.is_property_hidden](#)
- [bpy_struct.is_property_overridable_library](#)
- [bpy_struct.keyframe_delete](#)
- [bpy_struct.keyframe_insert](#)
- [bpy_struct.keys](#)
- [bpy_struct.path_from_id](#)
- [bpy_struct.path_resolve](#)
- [bpy_struct.pop](#)
- [bpy_struct.property_overridable_library_set](#)
- [bpy_struct.property_unset](#)
- [bpy_struct.type_recast](#)

- `bpy_struct.is_property_readonly`
- `bpy_struct.is_property_set`
- `bpy_struct.items`
- `bpy_struct.values`
- `LineStyleModifier.bl_rna_get_subclass`
- `LineStyleModifier.bl_rna_get_subclass_py`

References

- `FreestyleLineStyle.alpha_modifiers`
- `LineStyleAlphaModifiers.new`
- `LineStyleAlphaModifiers.remove`

[Skip to content](#)

LineStyleAlphaModifier_AlongStroke(LineStyleAlphaModifier)

base classes — [bpy_struct](#), [LineStyleModifier](#), [LineStyleAlphaModifier](#)

class bpy.types.LineStyleAlphaModifier_AlongStroke(LineStyleAlphaModifier)

Change alpha transparency along stroke

blend

Specify how the modifier value is blended into the base value

TYPE:

enum in ['MIX', 'ADD', 'SUBTRACT', 'MULTIPLY', 'DIVIDE', 'DIFFERENCE', 'MINIMUM', 'MAXIMUM'], default 'MIX'

curve

Curve used for the curve mapping

TYPE:

[CurveMapping](#), (readonly)

expanded

True if the modifier tab is expanded

TYPE:

boolean, default False

influence

Influence factor by which the modifier changes the property

TYPE:

float in [0, 1], default 0.0

invert

Invert the fade-out direction of the linear mapping

TYPE:

boolean, default False

mapping

Select the mapping type

- `LINEAR` Linear – Use linear mapping.
- `CURVE` Curve – Use curve mapping.

TYPE:

enum in ['LINEAR', 'CURVE'], default 'LINEAR'

type

Type of the modifier

TYPE:

enum in [LineStyle Alpha Modifier Type Items](#), default 'ALONG_STROKE', (readonly)

use

Enable or disable this modifier during stroke rendering

TYPE:

boolean, default True

boolean, default False

classmethod `bl_rna_get_subclass(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

`bpy.types.Struct` subclass

classmethod `bl_rna_get_subclass_py(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

`type`

Inherited Properties

- `bpy_struct.id_data`
- `LineStyleAlphaModifier.name`

Inherited Functions

- `bpy_struct.as_pointer`
- `bpy_struct.driver_add`
- `bpy_struct.driver_remove`
- `bpy_struct.get`
- `bpy_struct.id_properties_clear`
- `bpy_struct.id_properties_ensure`
- `bpy_struct.id_properties_ui`
- `bpy_struct.is_property_hidden`
- `bpy_struct.is_property_overridable_library`
- `bpy_struct.is_property_readonly`
- `bpy_struct.is_property_set`
- `bpy_struct.items`
- `bpy_struct.keyframe_delete`
- `bpy_struct.keyframe_insert`
- `bpy_struct.keys`
- `bpy_struct.path_from_id`
- `bpy_struct.path_resolve`
- `bpy_struct.pop`
- `bpy_struct.property_overridable_library_set`
- `bpy_struct.property_unset`
- `bpy_struct.type_recast`
- `bpy_struct.values`
- `LineStyleModifier.bl_rna_get_subclass`
- `LineStyleModifier.bl_rna_get_subclass_py`
- `LineStyleAlphaModifier.bl_rna_get_subclass`
- `LineStyleAlphaModifier.bl_rna_get_subclass_py`

LineStyleAlphaModifier_CreaseAngle(LineStyleAlphaModifier)

base classes — [bpy_struct](#), [LineStyleModifier](#), [LineStyleAlphaModifier](#)

class bpy.types.LineStyleAlphaModifier_CreaseAngle(LineStyleAlphaModifier)

Alpha transparency based on the angle between two adjacent faces

angle_max

Maximum angle to modify thickness

TYPE:

float in $[-\text{inf}, \text{inf}]$, default 0.0

angle_min

Minimum angle to modify thickness

TYPE:

float in $[-\text{inf}, \text{inf}]$, default 0.0

blend

Specify how the modifier value is blended into the base value

TYPE:

enum in ['MIX', 'ADD', 'SUBTRACT', 'MULTIPLY', 'DIVIDE', 'DIFFERENCE', 'MINIMUM', 'MAXIMUM'], default 'MIX'

curve

Curve used for the curve mapping

TYPE:

[CurveMapping](#), (readonly)

expanded

True if the modifier tab is expanded

TYPE:

boolean, default False

influence

Influence factor by which the modifier changes the property

TYPE:

float in $[0, 1]$, default 0.0

invert

Invert the fade-out direction of the linear mapping

TYPE:

boolean, default False

mapping

Select the mapping type

- `LINEAR` Linear – Use linear mapping.
- `CURVE` Curve – Use curve mapping.

TYPE:

enum in ['LINEAR', 'CURVE'], default 'LINEAR'

enum in ['LINEAR', 'CURVE'], default 'LINEAR'

type

Type of the modifier

TYPE:

enum in [LineStyleAlpha Modifier Type Items](#), default 'ALONG_STROKE', (readonly)

use

Enable or disable this modifier during stroke rendering

TYPE:

boolean, default False

classmethod `bl_rna_get_subclass(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

`bpy.types.Struct` subclass

classmethod `bl_rna_get_subclass_py(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

`type`

Inherited Properties

- `bpy_struct.id_data` • `LineStyleAlphaModifier.name`

Inherited Functions

- `bpy_struct.as_pointer`
- `bpy_struct.driver_add`
- `bpy_struct.driver_remove`
- `bpy_struct.get`
- `bpy_struct.id_properties_clear`
- `bpy_struct.id_properties_ensure`
- `bpy_struct.id_properties_ui`
- `bpy_struct.is_property_hidden`
- `bpy_struct.is_property_overridable_library`
- `bpy_struct.is_property_readonly`
- `bpy_struct.is_property_set`
- `bpy_struct.items`
- `bpy_struct.keyframe_delete`
- `bpy_struct.keyframe_insert`
- `bpy_struct.keys`
- `bpy_struct.path_from_id`
- `bpy_struct.path_resolve`
- `bpy_struct.pop`
- `bpy_struct.property_overridable_library_set`
- `bpy_struct.property_unset`
- `bpy_struct.type_recast`
- `bpy_struct.values`
- `LineStyleModifier.bl_rna_get_subclass`
- `LineStyleModifier.bl_rna_get_subclass_py`
- `LineStyleAlphaModifier.bl_rna_get_subclass`
- `LineStyleAlphaModifier.bl_rna_get_subclass_py`

[Previous](#)[LineStyleAlphaModifier_AlongStroke\(LineStyleAlphaModifier\)](#)

Copyright © Blender

[LineStyleAlphaModifier_Curvature_3D\(LineStyleAlphaModifi](#)

Authors

Made with [Furo](#)[Report issue on this page](#)

LineStyleAlphaModifier_Curvature_3D(LineStyleAlphaModifier)

base classes — [bpy_struct](#), [LineStyleModifier](#), [LineStyleAlphaModifier](#)

class bpy.types.LineStyleAlphaModifier_Curvature_3D(LineStyleAlphaModifier)

Alpha transparency based on the radial curvature of 3D mesh surfaces

blend

Specify how the modifier value is blended into the base value

TYPE:

enum in ['MIX', 'ADD', 'SUBTRACT', 'MULTIPLY', 'DIVIDE', 'DIFFERENCE', 'MINIMUM', 'MAXIMUM'], default 'MIX'

curvature_max

Maximum Curvature

TYPE:

float in [0, 10000], default 0.0

curvature_min

Minimum Curvature

TYPE:

float in [0, 10000], default 0.0

curve

Curve used for the curve mapping

TYPE:

[CurveMapping](#), (readonly)

expanded

True if the modifier tab is expanded

TYPE:

boolean, default False

influence

Influence factor by which the modifier changes the property

TYPE:

float in [0, 1], default 0.0

invert

Invert the fade-out direction of the linear mapping

TYPE:

boolean, default False

mapping

Select the mapping type

- `LINEAR` Linear – Use linear mapping.
- `CURVE` Curve – Use curve mapping.

TYPE:

enum in ['LINEAR', 'CURVE'], default 'LINEAR'

type

Type of the modifier

TYPE:

enum in [LineStyle Alpha Modifier Type Items](#), default 'ALONG_STROKE', (readonly)

use

Enable or disable this modifier during stroke rendering

TYPE:

boolean, default False

classmethod `bl_rna_get_subclass(id, default=None)`**PARAMETERS:**

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

`bpy.types.Struct` subclass

classmethod `bl_rna_get_subclass_py(id, default=None)`**PARAMETERS:**

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

`type`

Inherited Properties

- `bpy_struct.id_data` • `LineStyleAlphaModifier.name`

Inherited Functions

- | | |
|---|--|
| • <code>bpy_struct.as_pointer</code> | • <code>bpy_struct.keyframe_insert</code> |
| • <code>bpy_struct.driver_add</code> | • <code>bpy_struct.keys</code> |
| • <code>bpy_struct.driver_remove</code> | • <code>bpy_struct.path_from_id</code> |
| • <code>bpy_struct.get</code> | • <code>bpy_struct.path_resolve</code> |
| • <code>bpy_struct.id_properties_clear</code> | • <code>bpy_struct.pop</code> |
| • <code>bpy_struct.id_properties_ensure</code> | • <code>bpy_struct.property_overridable_library_set</code> |
| • <code>bpy_struct.id_properties_ui</code> | • <code>bpy_struct.property_unset</code> |
| • <code>bpy_struct.is_property_hidden</code> | • <code>bpy_struct.type_recast</code> |
| • <code>bpy_struct.is_property_overridable_library</code> | • <code>bpy_struct.values</code> |
| • <code>bpy_struct.is_property_readonly</code> | • <code>LineStyleModifier.bl_rna_get_subclass</code> |
| • <code>bpy_struct.is_property_set</code> | • <code>LineStyleModifier.bl_rna_get_subclass_py</code> |
| • <code>bpy_struct.items</code> | • <code>LineStyleAlphaModifier.bl_rna_get_subclass</code> |

- `bpy_struct.keyframe_delete`

- `LineStyleAlphaModifier.bl_rna_get_subclass_p`

[Previous](#)

[LineStyleAlphaModifier_CreaseAngle\(LineStyleAlphaModifier\)](#)

Copyright ©

[LineStyleAlphaModifier_DistanceFromCamera\(LineStyleAlphaModifi](#)

Blender Authors

Made with [Furo](#)

[Report issue on this page](#)

LineStyleAlphaModifier_DistanceFromCamera(LineStyleAlphaM

base classes — [bpy_struct](#), [LineStyleModifier](#), [LineStyleAlphaModifier](#)

class bpy.types.LineStyleAlphaModifier_DistanceFromCamera(LineStyleAlphaModifier)

Change alpha transparency based on the distance from the camera

blend

Specify how the modifier value is blended into the base value

TYPE:

enum in ['MIX', 'ADD', 'SUBTRACT', 'MULTIPLY', 'DIVIDE', 'DIFFERENCE', 'MINIMUM', 'MAXIMUM'], default 'MIX'

curve

Curve used for the curve mapping

TYPE:

[CurveMapping](#), (readonly)

expanded

True if the modifier tab is expanded

TYPE:

boolean, default False

influence

Influence factor by which the modifier changes the property

TYPE:

float in [0, 1], default 0.0

invert

Invert the fade-out direction of the linear mapping

TYPE:

boolean, default False

mapping

Select the mapping type

- `LINEAR` Linear – Use linear mapping.
- `CURVE` Curve – Use curve mapping.

TYPE:

enum in ['LINEAR', 'CURVE'], default 'LINEAR'

range_max

Upper bound of the input range the mapping is applied

TYPE:

float in [-inf, inf], default 0.0

range_min

Lower bound of the input range the mapping is applied

TYPE:

float in `[-inf, inf]`, default 0.0

type

Type of the modifier

TYPE:

enum in [LineStyle Alpha Modifier Type Items](#), default `'ALONG_STROKE'`, (readonly)

use

Enable or disable this modifier during stroke rendering

TYPE:

boolean, default False

classmethod `bl_rna_get_subclass(id, default=None)`**PARAMETERS:**

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

`bpy.types.Struct` subclass

classmethod `bl_rna_get_subclass_py(id, default=None)`**PARAMETERS:**

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

`type`

Inherited Properties

- `bpy_struct.id_data` • `LineStyleAlphaModifier.name`

Inherited Functions

- `bpy_struct.as_pointer`
- `bpy_struct.driver_add`
- `bpy_struct.driver_remove`
- `bpy_struct.get`
- `bpy_struct.id_properties_clear`
- `bpy_struct.id_properties_ensure`
- `bpy_struct.id_properties_ui`
- `bpy_struct.is_property_hidden`
- `bpy_struct.is_property_overridable_library`
- `bpy_struct.is_property_readonly`
- `bpy_struct.is_property_set`
- `bpy_struct.items`
- `bpy_struct.keyframe_insert`
- `bpy_struct.keys`
- `bpy_struct.path_from_id`
- `bpy_struct.path_resolve`
- `bpy_struct.pop`
- `bpy_struct.property_overridable_library_set`
- `bpy_struct.property_unset`
- `bpy_struct.type_recast`
- `bpy_struct.values`
- `LineStyleModifier.bl_rna_get_subclass`
- `LineStyleModifier.bl_rna_get_subclass_py`
- `LineStyleAlphaModifier.bl_rna_get_subclass`

- [bpy_struct.keyframe_delete](#)

- [LineStyleAlphaModifier.bl_rna_get_subclass_p](#)

[Previous](#)

[LineStyleAlphaModifier_Curvature_3D\(Lin](#)

Copyright ©

[LineStyleAlphaModifier_DistanceFromObject\(Lin](#)

Blender Authors

Made with [Furo](#)

[Report issue on this page](#)



LineStyleAlphaModifier_DistanceFromObject(LineStyleAlphaMo

base classes — [bpy_struct](#), [LineStyleModifier](#), [LineStyleAlphaModifier](#)

class bpy.types.LineStyleAlphaModifier_DistanceFromObject(LineStyleAlphaModifier)

Change alpha transparency based on the distance from an object

blend

Specify how the modifier value is blended into the base value

TYPE:

enum in ['MIX', 'ADD', 'SUBTRACT', 'MULTIPLY', 'DIVIDE', 'DIFFERENCE', 'MINIMUM', 'MAXIMUM'], default 'MIX'

curve

Curve used for the curve mapping

TYPE:

[CurveMapping](#), (readonly)

expanded

True if the modifier tab is expanded

TYPE:

boolean, default False

influence

Influence factor by which the modifier changes the property

TYPE:

float in [0, 1], default 0.0

invert

Invert the fade-out direction of the linear mapping

TYPE:

boolean, default False

mapping

Select the mapping type

- `LINEAR` Linear – Use linear mapping.
- `CURVE` Curve – Use curve mapping.

TYPE:

enum in ['LINEAR', 'CURVE'], default 'LINEAR'

range_max

Upper bound of the input range the mapping is applied

TYPE:

float in [-inf, inf], default 0.0

range_min

Lower bound of the input range the mapping is applied

TYPE:

float in [-inf, inf], default 0.0

target

Target object from which the distance is measured

TYPE:

[Object](#)

type

Type of the modifier

TYPE:

enum in [Linestyle Alpha Modifier Type Items](#), default 'ALONG_STROKE', (readonly)

use

Enable or disable this modifier during stroke rendering

TYPE:

boolean, default False

classmethod `bl_rna_get_subclass(id, default=None)`**PARAMETERS:**

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

[bpy.types.Struct](#) subclass

classmethod `bl_rna_get_subclass_py(id, default=None)`**PARAMETERS:**

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

[type](#)

Inherited Properties

- [bpy_struct.id_data](#)
- [LineStyleAlphaModifier.name](#)

Inherited Functions

- [bpy_struct.as_pointer](#)
- [bpy_struct.driver_add](#)
- [bpy_struct.driver_remove](#)
- [bpy_struct.get](#)
- [bpy_struct.id_properties_clear](#)
- [bpy_struct.id_properties_ensure](#)
- [bpy_struct.id_properties_ui](#)
- [bpy_struct.keyframe_insert](#)
- [bpy_struct.keys](#)
- [bpy_struct.path_from_id](#)
- [bpy_struct.path_resolve](#)
- [bpy_struct.pop](#)
- [bpy_struct.property_overridable_library_set](#)
- [bpy_struct.property_unset](#)

- `bpy_struct.is_property_hidden`
- `bpy_struct.is_property_overridable_library`
- `bpy_struct.is_property_readonly`
- `bpy_struct.is_property_set`
- `bpy_struct.items`
- `bpy_struct.keyframe_delete`
- `bpy_struct.type_recast`
- `bpy_struct.values`
- `LineStyleModifier.bl_rna_get_subclass`
- `LineStyleModifier.bl_rna_get_subclass_py`
- `LineStyleAlphaModifier.bl_rna_get_subclass`
- `LineStyleAlphaModifier.bl_rna_get_subclass_p`

[Previous](#)

[LineStyleAlphaModifier_DistanceFromCamera\(LineStyleAlphaModifier\)](#)

Copyright © Blender [LineStyleAlphaModifier_Material\(LineStyleAlphaModifi](#)

[Authors](#)

Made with [Furo](#)

[Report issue on this page](#)

[Skip to content](#)

LineStyleAlphaModifier_Material(LineStyleAlphaModifier)

base classes — [bpy_struct](#), [LineStyleModifier](#), [LineStyleAlphaModifier](#)

class bpy.types.LineStyleAlphaModifier_Material(LineStyleAlphaModifier)

Change alpha transparency based on a material attribute

blend

Specify how the modifier value is blended into the base value

TYPE:

enum in ['MIX', 'ADD', 'SUBTRACT', 'MULTIPLY', 'DIVIDE', 'DIFFERENCE', 'MINIMUM', 'MAXIMUM'], default 'MIX'

curve

Curve used for the curve mapping

TYPE:

[CurveMapping](#), (readonly)

expanded

True if the modifier tab is expanded

TYPE:

boolean, default False

influence

Influence factor by which the modifier changes the property

TYPE:

float in [0, 1], default 0.0

invert

Invert the fade-out direction of the linear mapping

TYPE:

boolean, default False

mapping

Select the mapping type

- `LINEAR` Linear – Use linear mapping.
- `CURVE` Curve – Use curve mapping.

TYPE:

enum in ['LINEAR', 'CURVE'], default 'LINEAR'

material_attribute

Specify which material attribute is used

TYPE:

enum in ['LINE', 'LINE_R', 'LINE_G', 'LINE_B', 'LINE_A', 'DIFF', 'DIFF_R', 'DIFF_G', 'DIFF_B', 'SPEC', 'SPEC_R', 'SPEC_G', 'SPEC_B', 'SPEC_HARD', 'ALPHA'], default 'LINE'

type

Type of the modifier

TYPE:

TYPE:

enum in [LineStyle Alpha Modifier Type Items](#), default ‘ALONG_STROKE’, (readonly)

use

Enable or disable this modifier during stroke rendering

TYPE:

boolean, default False

classmethod `bl_rna_get_subclass(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

[bpy.types.Struct](#) subclass

classmethod `bl_rna_get_subclass_py(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

[type](#)

Inherited Properties

- [bpy_struct.id_data](#) • [LineStyleAlphaModifier.name](#)

Inherited Functions

- | | |
|--|--|
| • bpy_struct.as_pointer | • bpy_struct.keyframe_insert |
| • bpy_struct.driver_add | • bpy_struct.keys |
| • bpy_struct.driver_remove | • bpy_struct.path_from_id |
| • bpy_struct.get | • bpy_struct.path_resolve |
| • bpy_struct.id_properties_clear | • bpy_struct.pop |
| • bpy_struct.id_properties_ensure | • bpy_struct.property_overridable_library_set |
| • bpy_struct.id_properties_ui | • bpy_struct.property_unset |
| • bpy_struct.is_property_hidden | • bpy_struct.type_recast |
| • bpy_struct.is_property_overridable_library | • bpy_struct.values |
| • bpy_struct.is_property_readonly | • LineStyleModifier.bl_rna_get_subclass |
| • bpy_struct.is_property_set | • LineStyleModifier.bl_rna_get_subclass_py |
| • bpy_struct.items | • LineStyleAlphaModifier.bl_rna_get_subclass |
| • bpy_struct.keyframe_delete | • LineStyleAlphaModifier.bl_rna_get_subclass_p |

[Skip to content](#)

LineStyleAlphaModifier_Noise(LineStyleAlphaModifier)

base classes — [bpy_struct](#), [LineStyleModifier](#), [LineStyleAlphaModifier](#)

class bpy.types.LineStyleAlphaModifier_Noise(LineStyleAlphaModifier)

Alpha transparency based on random noise

amplitude

Amplitude of the noise

TYPE:

float in $[-\infty, \infty]$, default 0.0

blend

Specify how the modifier value is blended into the base value

TYPE:

enum in ['MIX', 'ADD', 'SUBTRACT', 'MULTIPLY', 'DIVIDE', 'DIFFERENCE', 'MINIMUM', 'MAXIMUM'], default 'MIX'

curve

Curve used for the curve mapping

TYPE:

[CurveMapping](#), (readonly)

expanded

True if the modifier tab is expanded

TYPE:

boolean, default False

influence

Influence factor by which the modifier changes the property

TYPE:

float in $[0, 1]$, default 0.0

invert

Invert the fade-out direction of the linear mapping

TYPE:

boolean, default False

mapping

Select the mapping type

- `LINEAR` Linear – Use linear mapping.
- `CURVE` Curve – Use curve mapping.

TYPE:

enum in ['LINEAR', 'CURVE'], default 'LINEAR'

period

Period of the noise

TYPE:

float in $[0, 1000]$, default 1000

float in [-int, int], default 0.0

seed

Seed for the noise generation

TYPE:

int in [1, 32767], default 0

type

Type of the modifier

TYPE:

enum in [Linestyle Alpha Modifier Type Items](#), default 'ALONG_STROKE', (readonly)

use

Enable or disable this modifier during stroke rendering

TYPE:

boolean, default False

classmethod `bl_ma_get_subclass(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

`bpy.types.Struct` subclass

classmethod `bl_ma_get_subclass_py(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

`type`

Inherited Properties

- `bpy_struct.id_data` • `LineStyleAlphaModifier.name`

Inherited Functions

- `bpy_struct.as_pointer`
- `bpy_struct.driver_add`
- `bpy_struct.driver_remove`
- `bpy_struct.get`
- `bpy_struct.id_properties_clear`
- `bpy_struct.id_properties_ensure`
- `bpy_struct.id_properties_ui`
- `bpy_struct.is_property_hidden`
- `bpy_struct.is_property_overridable_library`
- `bpy_struct.keyframe_insert`
- `bpy_struct.keys`
- `bpy_struct.path_from_id`
- `bpy_struct.path_resolve`
- `bpy_struct.pop`
- `bpy_struct.property_overridable_library_set`
- `bpy_struct.property_unset`
- `bpy_struct.type_recast`
- `bpy_struct.values`

- [bpy_struct.is_property_overridable_library](#)
- [bpy_struct.is_property_readonly](#)
- [bpy_struct.is_property_set](#)
- [bpy_struct.items](#)
- [bpy_struct.keyframe_delete](#)
- [bpy_struct.values](#)
- [LineStyleModifier.bl_rna_get_subclass](#)
- [LineStyleModifier.bl_rna_get_subclass_py](#)
- [LineStyleAlphaModifier.bl_rna_get_subclass](#)
- [LineStyleAlphaModifier.bl_rna_get_subclass_p](#)

[Skip to content](#)

LineStyleAlphaModifier_Tangent(LineStyleAlphaModifier)

base classes — [bpy_struct](#), [LineStyleModifier](#), [LineStyleAlphaModifier](#)

class bpy.types.LineStyleAlphaModifier_Tangent(LineStyleAlphaModifier)

Alpha transparency based on the direction of the stroke

blend

Specify how the modifier value is blended into the base value

TYPE:

enum in ['MIX', 'ADD', 'SUBTRACT', 'MULTIPLY', 'DIVIDE', 'DIFFERENCE', 'MINIMUM', 'MAXIMUM'], default 'MIX'

curve

Curve used for the curve mapping

TYPE:

[CurveMapping](#), (readonly)

expanded

True if the modifier tab is expanded

TYPE:

boolean, default False

influence

Influence factor by which the modifier changes the property

TYPE:

float in [0, 1], default 0.0

invert

Invert the fade-out direction of the linear mapping

TYPE:

boolean, default False

mapping

Select the mapping type

- `LINEAR` Linear – Use linear mapping.
- `CURVE` Curve – Use curve mapping.

TYPE:

enum in ['LINEAR', 'CURVE'], default 'LINEAR'

type

Type of the modifier

TYPE:

enum in [LineStyle Alpha Modifier Type Items](#), default 'ALONG_STROKE', (readonly)

use

Enable or disable this modifier during stroke rendering

TYPE:

boolean, default True

boolean, default False

classmethod `bl_rna_get_subclass(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

`bpy.types.Struct` subclass

classmethod `bl_rna_get_subclass_py(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

`type`

Inherited Properties

- `bpy_struct.id_data`
- `LineStyleAlphaModifier.name`

Inherited Functions

- `bpy_struct.as_pointer`
- `bpy_struct.driver_add`
- `bpy_struct.driver_remove`
- `bpy_struct.get`
- `bpy_struct.id_properties_clear`
- `bpy_struct.id_properties_ensure`
- `bpy_struct.id_properties_ui`
- `bpy_struct.is_property_hidden`
- `bpy_struct.is_property_overridable_library`
- `bpy_struct.is_property_readonly`
- `bpy_struct.is_property_set`
- `bpy_struct.items`
- `bpy_struct.keyframe_delete`
- `bpy_struct.keyframe_insert`
- `bpy_struct.keys`
- `bpy_struct.path_from_id`
- `bpy_struct.path_resolve`
- `bpy_struct.pop`
- `bpy_struct.property_overridable_library_set`
- `bpy_struct.property_unset`
- `bpy_struct.type_recast`
- `bpy_struct.values`
- `LineStyleModifier.bl_rna_get_subclass`
- `LineStyleModifier.bl_rna_get_subclass_py`
- `LineStyleAlphaModifier.bl_rna_get_subclass`
- `LineStyleAlphaModifier.bl_rna_get_subclass_py`

[Skip to content](#)

LineStyleAlphaModifiers(bpy_struct)

base class — [bpy_struct](#)

class `bpy.types.LineStyleAlphaModifiers(bpy_struct)`

Alpha modifiers for changing line alphas

new(name, type)

Add a alpha modifier to line style

PARAMETERS:

- **name** (*string, (never None)*) – New name for the alpha modifier (not unique)
- **type** (enum in [LineStyle Alpha Modifier Type Items](#)) – Alpha modifier type to add

RETURNS:

Newly added alpha modifier

RETURN TYPE:

[LineStyleAlphaModifier](#)

remove(modifier)

Remove a alpha modifier from line style

PARAMETERS:

modifier ([LineStyleAlphaModifier](#), (never None)) – Alpha modifier to remove

classmethod `bl_ma_get_subclass(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

[bpy.types.Struct](#) subclass

classmethod `bl_ma_get_subclass_py(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

type

Inherited Properties

- [bpy_struct.id_data](#)

Inherited Functions

- [bpy_struct.as_pointer](#)
- [bpy_struct.driver_add](#)
- [bpy_struct.items](#)
- [bpy_struct.keyframe_delete](#)

- `bpy_struct.driver_remove`
- `bpy_struct.get`
- `bpy_struct.id_properties_clear`
- `bpy_struct.id_properties_ensure`
- `bpy_struct.id_properties_ui`
- `bpy_struct.is_property_hidden`
- `bpy_struct.is_property_overridable_library`
- `bpy_struct.is_property_readonly`
- `bpy_struct.is_property_set`
- `bpy_struct.keyframe_insert`
- `bpy_struct.keys`
- `bpy_struct.path_from_id`
- `bpy_struct.path_resolve`
- `bpy_struct.pop`
- `bpy_struct.property_overridable_library_set`
- `bpy_struct.property_unset`
- `bpy_struct.type_recast`
- `bpy_struct.values`

References

- `FreestyleLineStyle.alpha_modifiers`

[Skip to content](#)

LineStyleColorModifier(LineStyleModifier)

base classes — `bpy_struct`, `LineStyleModifier`

subclasses — `LineStyleColorModifier_AlongStroke`, `LineStyleColorModifier_CreaseAngle`, `LineStyleColorModifier_Curvature_3D`, `LineStyleColorModifier_DistanceFromCamera`, `LineStyleColorModifier_DistanceFromObject`, `LineStyleColorModifier_Material`, `LineStyleColorModifier_Noise`, `LineStyleColorModifier_Tangent`

class `bpy.types.LineStyleColorModifier(LineStyleModifier)`

Base type to define line color modifiers

name

Name of the modifier

TYPE:

string, default “”, (never None)

classmethod `bl_ma_get_subclass(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found.

RETURN TYPE:

`bpy.types.Struct` subclass

classmethod `bl_ma_get_subclass_py(id, default=None)`

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The class or default when not found.

RETURN TYPE:

type

Inherited Properties

- `bpy_struct.id_data`

Inherited Functions

- `bpy_struct.as_pointer`
- `bpy_struct.driver_add`
- `bpy_struct.driver_remove`
- `bpy_struct.get`
- `bpy_struct.id_properties_clear`
- `bpy_struct.id_properties_ensure`
- `bpy_struct.id_properties_ui`
- `bpy_struct.is_property_hidden`
- `bpy_struct.is_property_overridable_library`
- `bpy_struct.keyframe_delete`
- `bpy_struct.keyframe_insert`
- `bpy_struct.keys`
- `bpy_struct.path_from_id`
- `bpy_struct.path_resolve`
- `bpy_struct.pop`
- `bpy_struct.property_overridable_library_set`
- `bpy_struct.property_unset`
- `bpy_struct.type_recast`

- `bpy_struct.is_property_readonly`
- `bpy_struct.is_property_set`
- `bpy_struct.items`
- `bpy_struct.values`
- `LineStyleModifier.bl_rna_get_subclass`
- `LineStyleModifier.bl_rna_get_subclass_py`

References

- `FreestyleLineStyle.color_modifiers`
- `LineStyleColorModifiers.remove`
- `LineStyleColorModifiers.new`