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GeometryNodeSetCurveHandlePositions(GeometryNode)

base classes — `bpy_struct`, `Node`, `NodeInternal`, `GeometryNode`

class bpy.types.**GeometryNodeSetCurveHandlePositions(GeometryNode)**

Set the positions for the handles of Bézier curves

mode

Whether to update left and right handles

TYPE:
enum in Node Geometry Curve Handle Side Items, default 'LEFT'

classmethod is_registered_node_type()

True if a registered node type

RETURNS:
Result

RETURN TYPE:
boolean

classmethod input_template(index)

Input socket template

PARAMETERS:
index (*int in [0, inf]*) – Index

RETURNS:
result

RETURN TYPE:
`NodeInternalSocketTemplate`

classmethod output_template(index)

Output socket template

PARAMETERS:
index (*int in [0, inf]*) – Index

RETURNS:
result

RETURN TYPE:
`NodeInternalSocketTemplate`

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
- Node.type
- Node.location
- Node.location_absolute
- Node.width
- Node.height
- Node.dimensions
- Node.name
- Node.label
- Node.inputs
- Node.outputs
- Node.internal_links
- Node.parent
- Node.warning_propagation
- Node.use_custom_color
- Node.color
- Node.color_tag
- Node.select
- Node.show_options
- Node.show_preview
- Node.hide
- Node.mute
- Node.show_texture
- Node.bl_idname
- Node.bl_label
- Node.bl_description
- Node.bl_icon
- Node.bl_static_type
- Node.bl_width_default
- Node.bl_width_min
- Node.bl_width_max
- Node.bl_height_default
- Node.bl_height_min
- Node.bl_height_max

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
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- bpy_struct.items
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- bpy_struct.path_from_id
- bpy_struct.path_resolve
- bpy_struct.pop
- bpy_struct.property_overridable_library_set
- Node.poll_instance
- Node.update
- Node.insert_link
- Node.init
- Node.copy
- Node.free
- Node.draw_buttons
- Node.draw_buttons_ext
- Node.draw_label
- Node.debug_zone_body_lazy_function_graph
- Node.debug_zone_lazy_function_graph
- Node.poll
- Node.bl_rna_get_subclass
- Node.bl_rna_get_subclass_py
- NodeInternal.poll
- NodeInternal.poll_instance
- NodeInternal.update
- NodeInternal.draw_buttons

- bpy_struct.property_unset
- bpy_struct.type_recast
- bpy_struct.values
- Node.socket_value_update
- Node.is_registered_node_type
- Node.poll

- NodeInternal.draw_buttons_ext
- NodeInternal.bl_rna_get_subclass
- NodeInternal.bl_rna_get_subclass_py
- GeometryNode.poll
- GeometryNode.bl_rna_get_subclass
- GeometryNode.bl_rna_get_subclass_py

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GREASE_PENCIL_UL_masks(UIList)

base classes — `bpy_struct`, `UIList`

class bpy.types.**GREASE_PENCIL_UL_masks(UIList)**

> **draw_item(_context, layout, _data, item, icon, _active_data, _active_propname, _index)**

> **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`
- `UIList.bl_idname`
- `UIList.list_id`
- `UIList.layout_type`
- `UIList.use_filter_show`
- `UIList.filter_name`
- `UIList.use_filter_invert`
- `UIList.use_filter_sort_alpha`
- `UIList.use_filter_sort_reverse`
- `UIList.use_filter_sort_lock`
- `UIList.bitflag_filter_item`

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.path_resolve`
- `bpy_struct.pop`
- `bpy_struct.property_overridable_library_set`
- `bpy_struct.property_unset`
- `bpy_struct.type_recast`
- `bpy_struct.values`
- `UIList.draw_item`
- `UIList.draw_filter`
- `UIList.filter_items`
- `UIList.append`
- `UIList.is_extended`
- `UIList.prepend`

- `bpy_struct.keyframe_delete`
- `bpy_struct.keyframe_insert`
- `bpy_struct.keys`
- `bpy_struct.path_from_id`

- `UIList.remove`
- `UIList.bl_rna_get_subclass`
- `UIList.bl_rna_get_subclass_py`

GreasePencil(ID)

base classes — `bpy_struct`, `ID`

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

> Freehand annotation sketchbook

> ### animation_data

> > Animation data for this data-block

> > **TYPE:**

> > > `AnimData`, (readonly)

> ### layers

> > **TYPE:**

> > > `GreasePencilLayers` `bpy_prop_collection` of `GPencilLayer`, (readonly)

> **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

- bpy.context.annotation_data
- bpy.context.gpencil
- BlendData.grease_pencils
- BlendDataGreasePencils.new
- BlendDataGreasePencils.remove
- MovieClip.grease_pencil
- MovieTrackingTrack.grease_pencil
- NodeTree.grease_pencil
- Scene.grease_pencil
- SpaceImageEditor.grease_pencil
- SpaceSequenceEditor.grease_pencil

GreasePencilArmatureModifier(Modifier)

base classes — `bpy_struct`, `Modifier`

class bpy.types.**GreasePencilArmatureModifier(Modifier)**

Deform stroke points using armature object

invert_vertex_group

Invert vertex group weights

TYPE:

boolean, default False

object

Armature object to deform with

TYPE:

`Object`

open_influence_panel

TYPE:

boolean, default False

use_bone_envelopes

Bind Bone envelopes to armature modifier

TYPE:

boolean, default False

use_deform_preserve_volume

Deform rotation interpolation with quaternions

TYPE:

boolean, default False

use_vertex_groups

Bind vertex groups to armature modifier

TYPE:

boolean, default True

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.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`
- `Modifier.bl_rna_get_subclass`
- `Modifier.bl_rna_get_subclass_py`

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GreasePencilArrayModifier(Modifier)

base classes — `bpy_struct`, `Modifier`

class bpy.types.**GreasePencilArrayModifier(Modifier)**

> Create grid of duplicate instances
>
> **constant_offset**
>
> > Value for the distance between items
> >
> > **TYPE:**
> >
> > > `mathutils.Vector` of 3 items in [-inf, inf], default (0.0, 0.0, 0.0)
>
> **count**
>
> > Number of items
> >
> > **TYPE:**
> >
> > > int in [1, 32767], default 2
>
> **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
>
> **layer_filter**
>
> > Layer name
> >
> > **TYPE:**
> >
> > > string, default "", (never None)
>
> **layer_pass_filter**
>
> > Layer pass filter
> >
> > **TYPE:**
> >
> > > int in [0, 100], default 0
>
> **material_filter**

Material used for filtering

TYPE:
    Material

material_pass_filter

Material pass

TYPE:
    int in [0, 100], default 0

offset_object

Use the location and rotation of another object to determine the distance and rotational change between arrayed items

TYPE:
    Object

open_constant_offset_panel

TYPE:
    boolean, default False

open_influence_panel

TYPE:
    boolean, default False

open_object_offset_panel

TYPE:
    boolean, default False

open_randomize_panel

TYPE:
    boolean, default False

open_relative_offset_panel

TYPE:
    boolean, default False

random_offset

Value for changes in location

TYPE:
    mathutils.Vector of 3 items in [-inf, inf], default (0.0, 0.0, 0.0)

random_rotation

Value for changes in rotation

TYPE:
    mathutils.Euler rotation of 3 items in [-inf, inf], default (0.0, 0.0, 0.0)

random_scale

Value for changes in scale

TYPE:
    mathutils.Vector of 3 items in [-inf, inf], default (0.0, 0.0, 0.0)

relative_offset

The size of the geometry will determine the distance between arrayed items

The size of the geometry will determine the distance between arrayed items

TYPE:

mathutils.Vector of 3 items in [-inf, inf], default (1.0, 0.0, 0.0)

replace_material

Index of the material used for generated strokes (0 keep original material)

TYPE:

int in [0, 32767], default 0

seed

Random seed

TYPE:

int in [0, inf], default 1

use_constant_offset

Enable offset

TYPE:

boolean, default False

use_layer_pass_filter

Use layer pass filter

TYPE:

boolean, default False

use_material_pass_filter

Use material pass filter

TYPE:

boolean, default False

use_object_offset

Add another object's transformation to the total offset

TYPE:

boolean, default False

use_relative_offset

Add an offset relative to the object's bounding box

TYPE:

boolean, default True

use_uniform_random_scale

Use the same random seed for each scale axis for a uniform scale

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

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.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`
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- `Modifier.bl_rna_get_subclass_py`

GreasePencilBuildModifier(Modifier)

base classes — `bpy_struct`, `Modifier`

class bpy.types.**GreasePencilBuildModifier(Modifier)**

Animate strokes appearing and disappearing

concurrent_time_alignment

How should strokes start to appear/disappear

- `START` Align Start – All strokes start at same time (i.e. short strokes finish earlier).
- `END` Align End – All strokes end at same time (i.e. short strokes start later).

TYPE:

enum in ['START', 'END'], default 'START'

fade_factor

Defines how much of the stroke is fading in/out

TYPE:

float in [0, 1], default 0.0

fade_opacity_strength

How much strength fading applies on top of stroke opacity

TYPE:

float in [0, 1], default 0.0

fade_thickness_strength

How much strength fading applies on top of stroke thickness

TYPE:

float in [0, 1], default 0.0

frame_end

End Frame (when Restrict Frame Range is enabled)

TYPE:

float in [-1.04857e+06, 1.04857e+06], default 125.0

frame_start

Start Frame (when Restrict Frame Range is enabled)

TYPE:

float in [-1.04857e+06, 1.04857e+06], default 1.0

invert_layer_filter

Invert layer filter

TYPE:

boolean, default False

invert_layer_pass_filter

Invert layer pass filter

TYPE:

boolean, default False

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

layer_filter

Layer name

TYPE:

string, default "", (never None)

layer_pass_filter

Layer pass filter

TYPE:

int in [0, 100], default 0

length

Maximum number of frames that the build effect can run for (unless another GP keyframe occurs before this time has elapsed)

TYPE:

float in [1, 1.04857e+06], default 100.0

material_filter

Material used for filtering

TYPE:

Material

material_pass_filter

Material pass

TYPE:

int in [0, 100], default 0

mode

How strokes are being built

- `SEQUENTIAL` Sequential – Strokes appear/disappear one after the other, but only a single one changes at a time.
- `CONCURRENT` Concurrent – Multiple strokes appear/disappear at once.
- `ADDITIVE` Additive – Builds only new strokes (assuming 'additive' drawing).

TYPE:

enum in ['SEQUENTIAL', 'CONCURRENT', 'ADDITIVE'], default 'SEQUENTIAL'

object

Object used as build starting position

TYPE:

open_fading_panel

> **TYPE:**
>
>> boolean, default False

open_frame_range_panel

> **TYPE:**
>
>> boolean, default False

open_influence_panel

> **TYPE:**
>
>> boolean, default False

percentage_factor

> Defines how much of the stroke is visible
>
> **TYPE:**
>
>> float in [0, 1], default 0.0

speed_factor

> Multiply recorded drawing speed by a factor
>
> **TYPE:**
>
>> float in [0, 100], default 1.2

speed_maxgap

> The maximum gap between strokes in seconds
>
> **TYPE:**
>
>> float in [0, 100], default 0.5

start_delay

> Number of frames after each GP keyframe before the modifier has any effect
>
> **TYPE:**
>
>> float in [0, 1.04857e+06], default 0.0

target_vertex_group

> Output Vertex group
>
> **TYPE:**
>
>> string, default "", (never None)

time_mode

> Use drawing speed, a number of frames, or a manual factor to build strokes
>
> - DRAWSPEED Natural Drawing Speed – Use recorded speed multiplied by a factor.
> - FRAMES Number of Frames – Set a fixed number of frames for all build animations.
> - PERCENTAGE Percentage Factor – Set a manual percentage to build.
>
> **TYPE:**
>
>> enum in ['DRAWSPEED', 'FRAMES', 'PERCENTAGE'], default 'FRAMES'

transition

> How are strokes animated (i.e. are they appearing or disappearing)

- `GROW` Grow – Show points in the order they occur in each stroke (e.g. for animating lines being drawn).
- `SHRINK` Shrink – Hide points from the end of each stroke to the start (e.g. for animating lines being erased).
- `FADE` Vanish – Hide points in the order they occur in each stroke (e.g. for animating ink fading or vanishing after getting drawn).

TYPE:

enum in ['GROW', 'SHRINK', 'FADE'], default 'GROW'

use_fading

Fade out strokes instead of directly cutting off

TYPE:

boolean, default False

use_layer_pass_filter

Use layer pass filter

TYPE:

boolean, default False

use_material_pass_filter

Use material pass filter

TYPE:

boolean, default False

use_percentage

Use a percentage factor to determine the visible points

TYPE:

boolean, default False

use_restrict_frame_range

Only modify strokes during the specified frame range

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
- 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
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GreasePencilColorModifier(Modifier)

GreasePencilColorModifier(Modifier)

base classes — `bpy_struct`, `Modifier`

class bpy.types.**GreasePencilColorModifier(Modifier)**

color_mode

Attributes to modify

- `BOTH` Stroke & Fill – Modify fill and stroke colors.
- `STROKE` Stroke – Modify stroke color only.
- `FILL` Fill – Modify fill color only.

TYPE:

enum in ['BOTH', 'STROKE', 'FILL'], default 'BOTH'

custom_curve

Custom curve to apply effect

TYPE:

`CurveMapping`, (readonly)

hue

Color hue offset

TYPE:

float in [0, 1], default 0.5

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

layer_filter

Layer name

TYPE:

string, default "", (never None)

layer_pass_filter

Layer pass filter

TYPE:

int in [0, 100], default 0

material_filter

Material used for filtering

TYPE:

Material

material_pass_filter

Material pass

TYPE:

int in [0, 100], default 0

open_influence_panel

TYPE:

boolean, default False

saturation

Color saturation factor

TYPE:

float in [0, inf], default 0.5

use_custom_curve

Use a custom curve to define a factor along the strokes

TYPE:

boolean, default False

use_layer_pass_filter

Use layer pass filter

TYPE:

boolean, default False

use_material_pass_filter

Use material pass filter

TYPE:

boolean, default False

value

Color value factor

TYPE:

float in [0, inf], default 0.5

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.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`
- `Modifier.bl_rna_get_subclass`
- `Modifier.bl_rna_get_subclass_py`

GreasePencilDashModifierData(Modifier)

base classes — `bpy_struct`, `Modifier`

class bpy.types.**GreasePencilDashModifierData(Modifier)**

Create dot-dash effect for strokes

dash_offset

Offset into each stroke before the beginning of the dashed segment generation

TYPE:

int in [-inf, inf], default 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

layer_filter

Layer name

TYPE:

string, default "", (never None)

layer_pass_filter

Layer pass filter

TYPE:

int in [0, 100], default 0

material_filter

Material used for filtering

TYPE:

`Material`

material_pass_filter

Material pass

TYPE:

int in [0, 100], default 0

open_influence_panel

TYPE:

boolean, default False

segment_active_index

Active index in the segment list

TYPE:

int in [0, inf], default 0

segments

TYPE:

`bpy_prop_collection` of `GreasePencilDashModifierSegment` , (readonly)

use_layer_pass_filter

Use layer pass filter

TYPE:

boolean, default False

use_material_pass_filter

Use material pass filter

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`
- `Modifier.name`
- `Modifier.type`
- `Modifier.show_viewport`
- `Modifier.show_expanded`
- `Modifier.is_active`
- `Modifier.use_pin_to_last`
- `Modifier.is_override_data`

- Modifier.show_viewport
- Modifier.is_override_data
- Modifier.show_render
- Modifier.use_apply_on_spline
- Modifier.show_in_editmode
- Modifier.execution_time
- Modifier.show_on_cage
- Modifier.persistent_uid

Inherited Functions

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

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GreasePencilDashModifierSegment(bpy_struct)

base class — `bpy_struct`

class bpy.types.**GreasePencilDashModifierSegment(bpy_struct)**

Configuration for a single dash segment

dash

The number of consecutive points from the original stroke to include in this segment

TYPE:

int in [1, 32767], default 2

gap

The number of points skipped after this segment

TYPE:

int in [0, 32767], default 1

material_index

Use this index on generated segment. -1 means using the existing material.

TYPE:

int in [-1, 32767], default -1

name

Name of the dash segment

TYPE:

string, default "", (never None)

opacity

The factor to apply to the original point's opacity for the new points

TYPE:

float in [0, 1], default 1.0

radius

The factor to apply to the original point's radius for the new points

TYPE:

float in [0, 1], default 1.0

use_cyclic

Enable cyclic on individual stroke dashes

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.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

- GreasePencilDashModifierData.segments

Previous
GreasePencilDashModifierData(Modifier)

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Ne
GreasePencilDrawing(bpy_stru

GreasePencilDrawing(bpy_struct)

base class — `bpy_struct`

class bpy.types.**GreasePencilDrawing(bpy_struct)**

A Grease Pencil drawing

attributes

Geometry attributes

TYPE:

`AttributeGroupGreasePencilDrawing bpy_prop_collection` of `Attribute`, (readonly)

color_attributes

Geometry color attributes

TYPE:

`AttributeGroupGreasePencilDrawing bpy_prop_collection` of `Attribute`, (readonly)

curve_offsets

Offset indices of the first point of each curve

TYPE:

`bpy_prop_collection` of `IntAttributeValue`, (readonly)

type

Drawing type

TYPE:

enum in ['DRAWING', 'REFERENCE'], default 'DRAWING', (readonly)

user_count

The number of keyframes this drawing is used by

TYPE:

int in [-inf, inf], default 0, (readonly)

strokes

Return a collection of all the Grease Pencil strokes in this drawing.

> Note
>
> This API should *not* be used for performance critical operations. Use the `GreasePencilDrawing.attributes` API instead.

> Note
>
> When point/curves count of a drawing is changed, the slice returned by this call prior to the change is no longer valid. You need to get the new stroke slice via *drawing.strokes[n]*.

(readonly)

add_strokes(sizes)

Add new strokes with provided sizes at the end

PARAMETERS:

sizes (*int array of 1 items in [1, inf]*) – Sizes, The number of points in each stroke

remove_strokes(*, indices=(0,))

Remove all strokes. If indices are provided, remove only the strokes with the given indices.

> **PARAMETERS:**
>> **indices** (*int array of 1 items in [0, inf], (optional)*) – Indices, The indices of the strokes to remove

resize_strokes(sizes, *, indices=(0,))

Resize all existing strokes. If indices are provided, resize only the strokes with the given indices. If the new size for a stroke is smaller, the stroke is trimmed. If the new size for a stroke is larger, the new end values are default initialized.

> **PARAMETERS:**
>> - **sizes** (*int array of 1 items in [1, inf]*) – Sizes, The number of points in each stroke
>> - **indices** (*int array of 1 items in [0, inf], (optional)*) – Indices, The indices of the stroke to resize

reorder_strokes(new_indices)

Reorder the strokes by the new indices.

> **PARAMETERS:**
>> **new_indices** (*int array of 1 items in [0, inf]*) – New indices, The new index for each of the strokes

set_types(*, type='CATMULL_ROM', indices=(0,))

Set the curve type. If indices are provided, set only the types with the given curve indices.

> **PARAMETERS:**
>> - **type** (enum in Curves Type Items, (optional)) – Type
>> - **indices** (*int array of 1 items in [0, inf], (optional)*) – Indices, The indices of the curves to resize

tag_positions_changed()

Indicate that the positions of points in the drawing have changed

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

- `GreasePencilFrame.drawing`

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GreasePencilEnvelopeModifier(Modifier)

base classes — `bpy_struct`, `Modifier`

class bpy.types.**GreasePencilEnvelopeModifier(Modifier)**

Envelope stroke effect modifier

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

mat_nr

The material to use for the new strokes

TYPE:

int in [-1, 32767], default -1

material_filter

Material used for filtering

TYPE:
> Material

material_pass_filter

Material pass

TYPE:
> int in [0, 100], default 0

mode

Algorithm to use for generating the envelope

- `DEFORM` Deform – Deform the stroke to best match the envelope shape.
- `SEGMENTS` Segments – Add segments to create the envelope. Keep the original stroke..
- `FILLS` Fills – Add fill segments to create the envelope. Don't keep the original stroke..

TYPE:
> enum in ['DEFORM', 'SEGMENTS', 'FILLS'], default 'SEGMENTS'

open_influence_panel

TYPE:
> boolean, default False

skip

The number of generated segments to skip to reduce complexity

TYPE:
> int in [0, inf], default 0

spread

The number of points to skip to create straight segments

TYPE:
> int in [1, inf], default 10

strength

Multiplier for the strength of the new strokes

TYPE:
> float in [0, inf], default 1.0

thickness

Multiplier for the thickness of the new strokes

TYPE:
> float in [0, inf], default 1.0

use_layer_pass_filter

Use layer pass filter

TYPE:
> boolean, default False

use_material_pass_filter

Use material pass filter

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.is_property_set`
- `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`
- `Modifier.bl_rna_get_subclass`

- `bpy_struct.items`
- `Modifier.bl_rna_get_subclass_py`

- `bpy_struct.items`
- `Modifier.bl_rna_get_subclass_py`

GreasePencilFrame(bpy_struct)

base class — `bpy_struct`

class bpy.types.**GreasePencilFrame(bpy_struct)**

> A Grease Pencil keyframe

> **drawing**
>> A Grease Pencil drawing
>>
>> **TYPE:**
>>> `GreasePencilDrawing`

> **frame_number**
>> The frame number in the scene
>>
>> **TYPE:**
>>> int in [-1048574, 1048574], default 0, (readonly)

> **keyframe_type**
>> Type of keyframe
>>
>> - `KEYFRAME` Keyframe – Normal keyframe, e.g. for key poses.
>> - `BREAKDOWN` Breakdown – A breakdown pose, e.g. for transitions between key poses.
>> - `MOVING_HOLD` Moving Hold – A keyframe that is part of a moving hold.
>> - `EXTREME` Extreme – An 'extreme' pose, or some other purpose as needed.
>> - `JITTER` Jitter – A filler or baked keyframe for keying on ones, or some other purpose as needed.
>> - `GENERATED` Generated – A key generated automatically by a tool, not manually created.
>>
>> **TYPE:**
>>> enum in ['KEYFRAME', 'BREAKDOWN', 'MOVING_HOLD', 'EXTREME', 'JITTER', 'GENERATED'], default 'KEYFRAME

> **select**
>> Frame Selection in the Dope Sheet
>>
>> **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.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

- `GreasePencilFrames.copy`
- `GreasePencilFrames.move`
- `GreasePencilFrames.new`
- `GreasePencilLayer.current_frame`
- `GreasePencilLayer.frames`
- `GreasePencilLayer.get_frame_at`

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GreasePencilFrames(bpy_struct)

base class — `bpy_struct`

class bpy.types.**GreasePencilFrames(bpy_struct)**

Collection of Grease Pencil frames

new(frame_number)

Add a new Grease Pencil frame

PARAMETERS:

frame_number (*int in [-1048574, 1048574]*) – Frame Number, The frame on which the drawing appears

RETURNS:

The newly created frame

RETURN TYPE:

`GreasePencilFrame`

remove(frame_number)

Remove a Grease Pencil frame

PARAMETERS:

frame_number (*int in [-1048574, 1048574]*) – Frame Number, The frame number of the frame to remove

copy(from_frame_number, to_frame_number, *, instance_drawing=False)

Copy a Grease Pencil frame

PARAMETERS:

- **from_frame_number** (*int in [-1048574, 1048574]*) – Source Frame Number, The frame number of the source frame
- **to_frame_number** (*int in [-1048574, 1048574]*) – Frame Number of Copy, The frame number to copy the frame to
- **instance_drawing** (*boolean, (optional)*) – Instance Drawing, Let the copied frame use the same drawing as the source

RETURNS:

The newly copied frame

RETURN TYPE:

`GreasePencilFrame`

move(from_frame_number, to_frame_number)

Move a Grease Pencil frame

PARAMETERS:

- **from_frame_number** (*int in [-1048574, 1048574]*) – Source Frame Number, The frame number of the source frame
- **to_frame_number** (*int in [-1048574, 1048574]*) – Target Frame Number, The frame number to move the frame to

RETURNS:

The moved frame

RETURN TYPE:

`GreasePencilFrame`

classmethod bl_rna_get_subclass(id, default=None)

PARAMETERS:

id (*str*) – The RNA type identifier.

RETURNS:

The RNA type or default when not found

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

- GreasePencilLayer.frames

Previous
GreasePencilFrame(bpy_struct)

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No
GreasePencilHookModifier(Modifi

GreasePencilHookModifier(Modifier)

base classes — `bpy_struct`, `Modifier`

class bpy.types.**GreasePencilHookModifier(Modifier)**

Hook modifier to modify the location of stroke points

center

TYPE:

float array of 3 items in [-inf, inf], default (0.0, 0.0, 0.0)

custom_curve

Custom curve to apply effect

TYPE:

`CurveMapping`, (readonly)

falloff_radius

If not zero, the distance from the hook where influence ends

TYPE:

float in [0, inf], default 0.0

falloff_type

TYPE:

enum in ['NONE', 'CURVE', 'SMOOTH', 'SPHERE', 'ROOT', 'INVERSE_SQUARE', 'SHARP', 'LINEAR', 'CONSTANT'], default 'SMOOTH'

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

material_filter

Material used for filtering

TYPE:

[Material](#)

material_pass_filter

Material pass

TYPE:

int in [0, 100], default 0

matrix_inverse

Reverse the transformation between this object and its target

TYPE:

[mathutils.Matrix](#) of 4 * 4 items in [-inf, inf], default ((1.0, 0.0, 0.0, 0.0), (0.0, 1.0, 0.0, 0.0), (0.0, 0.0, 1.0, 0.0), (0.0, 0.0, 0, 1.0))

object

Parent Object for hook, also recalculates and clears offset

TYPE:

[Object](#)

open_falloff_panel

TYPE:

boolean, default False

open_influence_panel

TYPE:

boolean, default False

strength

Relative force of the hook

TYPE:

float in [0, 1], default 0.5

subtarget

Name of Parent Bone for hook (if applicable), also recalculates and clears offset

TYPE:

string, default "", (never None)

use_custom_curve

Use a custom curve to define a factor along the strokes

TYPE:

boolean, default False

use_falloff_uniform

Compensate for non-uniform object scale

TYPE:

boolean, default False

use_layer_pass_filter

Use layer pass filter

TYPE:

boolean, default False

use_material_pass_filter

Use material pass filter

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_expanded`
- `Modifier.is_active`
- `Modifier.use_pin_to_last`

- Modifier.show_viewport
- Modifier.show_render
- Modifier.show_in_editmode
- Modifier.show_on_cage
- 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.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
- Modifier.bl_rna_get_subclass
- Modifier.bl_rna_get_subclass_py

GreasePencilLatticeModifier(Modifier)

base classes — `bpy_struct`, `Modifier`

class bpy.types.**GreasePencilLatticeModifier(Modifier)**

Deform strokes using a lattice object

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

material_filter

Material used for filtering

TYPE:

`Material`

material_pass_filter

Material pass

TYPE:
    int in [0, 100], default 0

object
    Lattice object to deform with

    TYPE:
        `Object`

open_influence_panel
    TYPE:
        boolean, default False

strength
    Strength of modifier effect

    TYPE:
        float in [-inf, inf], default 1.0

use_layer_pass_filter
    Use layer pass filter

    TYPE:
        boolean, default False

use_material_pass_filter
    Use material pass filter

    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.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
- Modifier.bl_rna_get_subclass
- Modifier.bl_rna_get_subclass_py

Report issue on this page

GreasePencilLayer(bpy_struct)

base class — `bpy_struct`

class bpy.types.**GreasePencilLayer(bpy_struct)**

Collection of related drawings

blend_mode

Blend mode

TYPE:

enum in ['REGULAR', 'HARDLIGHT', 'ADD', 'SUBTRACT', 'MULTIPLY', 'DIVIDE'], default 'REGULAR'

channel_color

TYPE:

`mathutils.Color` of 3 items in [0, inf], default (0.0, 0.0, 0.0)

frames

Grease Pencil frames

TYPE:

`GreasePencilFrames bpy_prop_collection` of `GreasePencilFrame`, (readonly)

hide

Set layer visibility

TYPE:

boolean, default False

ignore_locked_materials

Allow editing strokes even if they use locked materials

TYPE:

boolean, default False

lock

Protect layer from further editing and/or frame changes

TYPE:

boolean, default False

lock_frame

Lock current frame displayed by layer

TYPE:

boolean, default False

mask_layers

List of Masking Layers

TYPE:

`GreasePencilLayerMasks bpy_prop_collection` of `GreasePencilLayerMask`, (readonly)

matrix_local

Local transformation matrix of the layer

TYPE:

`mathutils.Matrix` of 4 * 4 items in [-inf, inf], default ((0.0, 0.0, 0.0, 0.0), (0.0, 0.0, 0.0, 0.0), (0.0, 0.0, 0.0, 0.0), (0.0, 0.0, 0
0.0)), (readonly)

matrix_parent_inverse

Inverse of layer's parent transformation matrix

TYPE:

`mathutils.Matrix` of 4 * 4 items in [-inf, inf], default ((0.0, 0.0, 0.0, 0.0), (0.0, 0.0, 0.0, 0.0), (0.0, 0.0, 0.0, 0.0), (0.0, 0.0, 0
0.0)), (readonly)

name

Layer name

TYPE:

string, default "", (never None)

opacity

Layer Opacity

TYPE:

float in [0, 1], default 0.0

parent

Parent object

TYPE:

`Object`

parent_bone

Name of parent bone. Only used when the parent object is an armature.

TYPE:

string, default "", (never None)

parent_group

The parent layer group this layer is part of

TYPE:

`GreasePencilLayerGroup`, (readonly)

pass_index

Index number for the "Layer Index" pass

TYPE:

int in [0, inf], default 0

radius_offset

Radius change to apply to current strokes

TYPE:

float in [-inf, inf], default 0.0

rotation

Euler rotation of the layer

TYPE:

`mathutils.Euler` rotation of 3 items in [-inf, inf], default (0.0, 0.0, 0.0)

scale

Scale of the layer

TYPE:

`mathutils.Vector` of 3 items in [-inf, inf], default (1.0, 1.0, 1.0)

select

Layer is selected for editing in the Dope Sheet

TYPE:

boolean, default False

tint_color

Color for tinting stroke colors

TYPE:

`mathutils.Color` of 3 items in [0, 1], default (0.0, 0.0, 0.0)

tint_factor

Factor of tinting color

TYPE:

float in [0, 1], default 0.0

translation

Translation of the layer

TYPE:

`mathutils.Vector` of 3 items in [-inf, inf], default (0.0, 0.0, 0.0)

use_lights

Enable the use of lights on stroke and fill materials

TYPE:

boolean, default False

use_masks

The visibility of drawings on this layer is affected by the layers in its masks list

TYPE:

boolean, default False

use_onion_skinning

Display onion skins before and after the current frame

TYPE:

boolean, default False

use_viewlayer_masks

Include the mask layers when rendering the view-layer

TYPE:

boolean, default False

viewlayer_render

Only include Layer in this View Layer render output (leave blank to include always)

TYPE:

string, default "", (never None)

get_frame_at(frame_number)

Get the frame at given frame number

PARAMETERS:

frame_number (*int in [-1048574, 1048574]*) – Frame Number

RETURNS:

Frame

RETURN TYPE:

GreasePencilFrame

current_frame()

The Grease Pencil frame at the current scene time on this layer

RETURN TYPE:

GreasePencilFrame

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.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_overridable_library`
- `bpy_struct.is_property_readonly`
- `bpy_struct.is_property_set`
- `bpy_struct.property_unset`
- `bpy_struct.type_recast`
- `bpy_struct.values`

References

- `GreasePencilv3.layers`
- `GreasePencilv3Layers.active`
- `GreasePencilv3Layers.move`
- `GreasePencilv3Layers.move_bottom`
- `GreasePencilv3Layers.move_to_layer_group`
- `GreasePencilv3Layers.move_top`
- `GreasePencilv3Layers.new`
- `GreasePencilv3Layers.remove`

Report issue on this page

GreasePencilLayerGroup(bpy_struct)

base class — `bpy_struct`

class bpy.types.**GreasePencilLayerGroup(bpy_struct)**

Group of Grease Pencil layers

channel_color

TYPE:

`mathutils.Color` of 3 items in [0, inf], default (0.0, 0.0, 0.0)

color_tag

TYPE:

enum in ['NONE', 'COLOR1', 'COLOR2', 'COLOR3', 'COLOR4', 'COLOR5', 'COLOR6', 'COLOR7', 'COLOR8'], default 'COLOR1'

hide

Set layer group visibility

TYPE:

boolean, default False

is_expanded

The layer groups is expanded in the UI

TYPE:

boolean, default False

lock

Protect group from further editing and/or frame changes

TYPE:

boolean, default False

name

Group name

TYPE:

string, default "", (never None)

parent_group

The parent group this group is part of

TYPE:

`GreasePencilLayerGroup`, (readonly)

use_masks

The visibility of drawings in the layers in this group is affected by the layers in the masks lists

TYPE:

boolean, default False

use_onion_skinning

Display onion skins before and after the current frame

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.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

- `GreasePencilLayer.parent_group`
- `GreasePencilLayerGroup.parent_group`
- `GreasePencilv3.layer_groups`
- `GreasePencilv3LayerGroup.active`
- `GreasePencilv3LayerGroup.move`
- `GreasePencilv3LayerGroup.move_bottom`
- `GreasePencilv3LayerGroup.move_to_layer_group`

- `GreasePencilv3LayerGroup.move_to_layer_gro`
- `GreasePencilv3LayerGroup.move_top`
- `GreasePencilv3LayerGroup.new`
- `GreasePencilv3LayerGroup.new`
- `GreasePencilv3LayerGroup.remove`
- `GreasePencilv3Layers.move_to_layer_group`
- `GreasePencilv3Layers.new`

GreasePencilLayerMask(bpy_struct)

base class — `bpy_struct`

class bpy.types.**GreasePencilLayerMask(bpy_struct)**

List of Mask Layers

hide

Set mask Visibility

TYPE:

boolean, default False

invert

Invert mask

TYPE:

boolean, default False

name

Mask layer name

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.items`
- `bpy_struct.keyframe_delete`
- `bpy_struct.keyframe_insert`

- 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

- GreasePencilLayer.mask_layers

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GreasePencilLayerMasks(bpy_struct)

base class — `bpy_struct`

class bpy.types.**GreasePencilLayerMasks(bpy_struct)**

> Collection of Grease Pencil masking layers

> **active_mask_index**
>
>> Active index in layer mask array
>>
>> **TYPE:**
>>> int in [0, inf], default 0

> **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

- `GreasePencilLayer.mask_layers`

GreasePencilLayers(bpy_struct)

base class — `bpy_struct`

class bpy.types.**GreasePencilLayers(bpy_struct)**

> Collection of annotation layers

> **active_index**
>> Index of active annotation layer
>>
>> **TYPE:**
>>> int in [0, inf], default 0

> **active_note**
>> Note/Layer to add annotation strokes to
>>
>> **TYPE:**
>>> enum in ['DEFAULT'], default 'DEFAULT'

> **new(name, *, set_active=True)**
>> Add a new annotation layer
>>
>> **PARAMETERS:**
>>> - **name** (*string, (never None)*) – Name, Name of the layer
>>> - **set_active** (*boolean, (optional)*) – Set Active, Set the newly created layer to the active layer
>>
>> **RETURNS:**
>>> The newly created layer
>>
>> **RETURN TYPE:**
>>> `GPencilLayer`

> **remove(layer)**
>> Remove a annotation layer
>>
>> **PARAMETERS:**
>>> **layer** (`GPencilLayer`, (never None)) – The layer to remove

> **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

- GreasePencil.layers

GreasePencilLengthModifier(Modifier)

base classes — `bpy_struct`, `Modifier`

class bpy.types.**GreasePencilLengthModifier(Modifier)**

Stretch or shrink strokes

end_factor

Added length to the end of each stroke relative to its length

TYPE:

float in [-inf, inf], default 0.1

end_length

Absolute added length to the end of each stroke

TYPE:

float in [-inf, inf], default 0.1

invert_curvature

Invert the curvature of the stroke's extension

TYPE:

boolean, default False

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

layer_filter

Layer name

TYPE:

string, default "", (never None)

layer_pass_filter

Layer pass filter

TYPE:

int in [0, 100], default 0

material_filter

Material used for filtering

TYPE:

Material

material_pass_filter

Material pass

TYPE:

int in [0, 100], default 0

max_angle

Ignore points on the stroke that deviate from their neighbors by more than this angle when determining the extrapolation shape

TYPE:

float in [0, 3.14159], default 2.96706

mode

Mode to define length

- RELATIVE Relative – Length in ratio to the stroke's length.
- ABSOLUTE Absolute – Length in geometry space.

TYPE:

enum in ['RELATIVE', 'ABSOLUTE'], default 'RELATIVE'

open_curvature_panel

TYPE:

boolean, default False

open_influence_panel

TYPE:

boolean, default False

open_random_panel

TYPE:

boolean, default False

overshoot_factor

Defines what portion of the stroke is used for the calculation of the extension

TYPE:

float in [0, 1], default 0.1

point_density

Multiplied by Start/End for the total added point count

TYPE:

float in [0.1, 1000], default 30.0

random_end_factor

Size of random length added to the end of each stroke

TYPE:

float in [-inf, inf], default 0.0

random_offset

Smoothly offset each stroke's random value

TYPE:

float in [-inf, inf], default 0.0

random_start_factor

Size of random length added to the start of each stroke

TYPE:

float in [-inf, inf], default 0.0

seed

Random seed

TYPE:

int in [0, inf], default 0

segment_influence

Factor to determine how much the length of the individual segments should influence the final computed curvature. Higher factors makes small segments influence the overall curvature less.

TYPE:

float in [-2, 3], default 0.0

start_factor

Added length to the start of each stroke relative to its length

TYPE:

float in [-inf, inf], default 0.1

start_length

Absolute added length to the start of each stroke

TYPE:

float in [-inf, inf], default 0.1

step

Number of frames between randomization steps

TYPE:

int in [1, 100], default 4

use_curvature

Follow the curvature of the stroke

TYPE:

boolean, default True

use_layer_pass_filter

Use layer pass filter

TYPE:

boolean, default False

use_material_pass_filter

Use material pass filter

> **TYPE:**
> boolean, default False

use_random

Use random values over time

> **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`
- `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.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.is_property_hidden
- bpy_struct.is_property_overridable_library
- bpy_struct.is_property_readonly
- bpy_struct.is_property_set
- bpy_struct.items

- bpy_struct.property_unset
- bpy_struct.type_recast
- bpy_struct.values
- Modifier.bl_rna_get_subclass
- Modifier.bl_rna_get_subclass_py

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GreasePencilLineartModifier(Modifier)

base classes — `bpy_struct`, `Modifier`

class bpy.types.**GreasePencilLineartModifier(Modifier)**

Generate Line Art strokes from selected source

chaining_image_threshold

Segments with an image distance smaller than this will be chained together

TYPE:

float in [0, 0.3], default 0.001

crease_threshold

Angles smaller than this will be treated as creases. Crease angle priority: object Line Art crease override > mesh auto smooth angle > Line Ar default crease.

TYPE:

float in [0, 3.14159], default 2.44346

invert_source_vertex_group

Invert source vertex group values

TYPE:

boolean, default False

is_baked

This modifier has baked data

TYPE:

boolean, default False

level_end

Maximum number of occlusions for the generated strokes

TYPE:

int in [0, 128], default 0

level_start

Minimum number of occlusions for the generated strokes

TYPE:

int in [0, 128], default 0

light_contour_object

Use this light object to generate light contour

TYPE:

`Object`

opacity

The strength value for the generate strokes

TYPE:

float in [0, 1], default 1.0

overscan

A margin to prevent strokes from ending abruptly at the edge of the image

TYPE:

float in [0, 0.5], default 0.1

shadow_camera_far

Far clipping distance of shadow camera

TYPE:

float in [0, 10000], default 200.0

shadow_camera_near

Near clipping distance of shadow camera

TYPE:

float in [0, 10000], default 0.1

shadow_camera_size

Represents the "Orthographic Scale" of an orthographic camera. If the camera is positioned at the light's location with this scale, it will represe
the coverage of the shadow "camera".

TYPE:

float in [0, 10000], default 200.0

shadow_region_filtering

Select feature lines that comes from lit or shaded regions. Will not affect cast shadow and light contour since they are at the border.

- `NONE` None – Not filtering any lines based on illumination region.
- `ILLUMINATED` Illuminated – Only selecting lines from illuminated regions.
- `SHADED` Shaded – Only selecting lines from shaded regions.
- `ILLUMINATED_ENCLOSED` Illuminated (Enclosed Shapes) – Selecting lines from lit regions, and make the combination of contour, light contour and shadow lines into enclosed shapes.

TYPE:

enum in ['NONE', 'ILLUMINATED', 'SHADED', 'ILLUMINATED_ENCLOSED'], default 'NONE'

silhouette_filtering

Select contour or silhouette

TYPE:

enum in ['NONE', 'GROUP', 'INDIVIDUAL'], default 'NONE'

smooth_tolerance

Strength of smoothing applied on jagged chains

TYPE:

float in [0, 30], default 0.0

source_camera

Use specified camera object for generating Line Art strokes

TYPE:

Object

source_collection

Generate strokes from the objects in this collection

TYPE:

Collection

source_object

Generate strokes from this object

TYPE:

Object

source_type

Line Art stroke source type

TYPE:

enum in ['COLLECTION', 'OBJECT', 'SCENE'], default 'COLLECTION'

source_vertex_group

Match the beginning of vertex group names from mesh objects, match all when left empty

TYPE:

string, default "", (never None)

split_angle

Angle in screen space below which a stroke is split in two

TYPE:

float in [0, 3.14159], default 0.0

stroke_depth_offset

Move strokes slightly towards the camera to avoid clipping while preserve depth for the viewport

TYPE:

float in [-0.1, inf], default 0.05

target_layer

Grease Pencil layer to which assign the generated strokes

TYPE:

string, default "", (never None)

target_material

Grease Pencil material assigned to the generated strokes

TYPE:

Material

thickness

The thickness for the generated strokes

TYPE:

int in [1, 200], default 25

use_back_face_culling

Remove all back faces to speed up calculation, this will create edges in different occlusion levels than when disabled

TYPE:

boolean, default False

use_cache

Use cached scene data from the first Line Art modifier in the stack. Certain settings will be unavailable.

TYPE:

boolean, default False

use_clip_plane_boundaries

Allow lines generated by the near/far clipping plane to be shown

TYPE:

boolean, default True

use_contour

Generate strokes from contours lines

TYPE:

boolean, default False

use_crease

Generate strokes from creased edges

TYPE:

boolean, default False

use_crease_on_sharp

Allow crease to show on sharp edges

TYPE:

boolean, default True

use_crease_on_smooth

Allow crease edges to show inside smooth surfaces

TYPE:

boolean, default False

use_custom_camera

Use custom camera instead of the active camera

TYPE:

boolean, default False

use_detail_preserve

Keep the zig-zag "noise" in initial chaining

TYPE:

boolean, default False

use_edge_mark

Generate strokes from Freestyle marked edges

TYPE:

boolean, default False

use_edge_overlap

Allow edges in the same location (i.e. from edge split) to show properly. May run slower.

TYPE:

boolean, default False

use_face_mark

Filter feature lines using Freestyle face marks

TYPE:

boolean, default False

use_face_mark_boundaries

Filter feature lines based on face mark boundaries

TYPE:

boolean, default False

use_face_mark_invert

Invert face mark filtering

TYPE:

boolean, default False

use_face_mark_keep_contour

Preserve contour lines while filtering

TYPE:

boolean, default True

use_fuzzy_all

Treat all lines as the same line type so they can be chained together

TYPE:

boolean, default False

use_fuzzy_intersections

Treat intersection and contour lines as if they were the same type so they can be chained together

TYPE:

boolean, default False

use_geometry_space_chain

Use geometry distance for chaining instead of image space

TYPE:

boolean, default False

use_image_boundary_trimming

Trim all edges right at the boundary of image (including overscan region)

TYPE:

boolean, default False

use_intersection

Generate strokes from intersections

TYPE:

boolean, default False

use_intersection_mask

Mask bits to match from Collection Line Art settings

TYPE:

boolean array of 8 items, default (False, False, False, False, False, False, False, False)

use_intersection_match

Require matching all intersection masks instead of just one

TYPE:

boolean, default False

use_invert_collection

Select everything except lines from specified collection

TYPE:

boolean, default False

use_invert_silhouette

Select anti-silhouette lines

TYPE:

boolean, default False

use_light_contour

Generate light/shadow separation lines from a reference light object

TYPE:

boolean, default False

use_loose

Generate strokes from loose edges

TYPE:

boolean, default False

use_loose_as_contour

Loose edges will have contour type

TYPE:

boolean, default False

use_loose_edge_chain

Allow loose edges to be chained together

TYPE:

boolean, default False

use_material

Generate strokes from borders between materials

TYPE:

boolean, default False

use_material_mask

Use material masks to filter out occluded strokes

TYPE:

boolean, default False

use_material_mask_bits

Mask bits to match from Material Line Art settings

TYPE:

boolean array of 8 items, default (False, False, False, False, False, False, False, False)

use_material_mask_match

Require matching all material masks instead of just one

TYPE:

boolean, default False

use_multiple_levels

Generate strokes from a range of occlusion levels

TYPE:

boolean, default False

use_object_instances

Allow particle objects and face/vertex instances to show in Line Art

TYPE:

boolean, default True

use_offset_towards_custom_camera

Offset strokes towards selected camera instead of the active camera

TYPE:

boolean, default False

use_output_vertex_group_match_by_name

Match output vertex group based on name

TYPE:

boolean, default True

use_overlap_edge_type_support

Allow an edge to have multiple overlapping types. This will create a separate stroke for each overlapping type.

TYPE:

boolean, default False

use_shadow

Project contour lines using a light source object

TYPE:

boolean, default False

vertex_group

Vertex group name for selected strokes

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.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`
- `Modifier.bl_rna_get_subclass`
- `Modifier.bl_rna_get_subclass_py`

Previous
GreasePencilLengthModifier(Modifier)

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GreasePencilMirrorModifier(Modifi

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GreasePencilMirrorModifier(Modifier)

base classes — `bpy_struct`, `Modifier`

class bpy.types.**GreasePencilMirrorModifier(Modifier)**

> **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
>
> **layer_filter**
>
> > Layer name
> >
> > **TYPE:**
> >
> > > string, default "", (never None)
>
> **layer_pass_filter**
>
> > Layer pass filter
> >
> > **TYPE:**
> >
> > > int in [0, 100], default 0
>
> **material_filter**
>
> > Material used for filtering
> >
> > **TYPE:**
> >
> > > `Material`
>
> **material_pass_filter**
>
> > Material pass
> >
> > **TYPE:**
> >
> > > int in [0, 100], default 0
>
> **object**
>
> > Object used as center

TYPE:

> Object

open_influence_panel

> **TYPE:**
>
> > boolean, default False

use_axis_x

> Mirror the X axis
>
> **TYPE:**
>
> > boolean, default True

use_axis_y

> Mirror the Y axis
>
> **TYPE:**
>
> > boolean, default False

use_axis_z

> Mirror the Z axis
>
> **TYPE:**
>
> > boolean, default False

use_layer_pass_filter

> Use layer pass filter
>
> **TYPE:**
>
> > boolean, default False

use_material_pass_filter

> Use material pass filter
>
> **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
- 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.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
- Modifier.bl_rna_get_subclass
- Modifier.bl_rna_get_subclass_py

GreasePencilMultiplyModifier(Modifier)

base classes — `bpy_struct`, `Modifier`

class bpy.types.**GreasePencilMultiplyModifier(Modifier)**

Generate multiple strokes from one stroke

distance

Distance of duplications

TYPE:

float in [-inf, inf], default 0.1

duplicates

How many copies of strokes be displayed

TYPE:

int in [0, 999], default 3

fading_center

Fade center

TYPE:

float in [0, 1], default 0.5

fading_opacity

Fade influence of stroke's opacity

TYPE:

float in [0, 1], default 0.5

fading_thickness

Fade influence of stroke's thickness

TYPE:

float in [0, 1], default 0.5

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

layer_filter

Layer name

TYPE:

string, default "", (never None)

layer_pass_filter

Layer pass filter

TYPE:

int in [0, 100], default 0

material_filter

Material used for filtering

TYPE:

Material

material_pass_filter

Material pass

TYPE:

int in [0, 100], default 0

offset

Offset of duplicates, -1 to 1 (inner to outer)

TYPE:

float in [-inf, inf], default 0.0

open_fading_panel

TYPE:

boolean, default False

open_influence_panel

TYPE:

boolean, default False

use_fade

Fade the stroke thickness for each generated stroke

TYPE:

boolean, default False

use_layer_pass_filter

Use layer pass filter

TYPE:

boolean, default False

use_material_pass_filter

Use material pass filter

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`
- `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.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`
- `Modifier.bl_rna_get_subclass`
- `Modifier.bl_rna_get_subclass_py`

GreasePencilNoiseModifier(Modifier)

base classes — `bpy_struct`, `Modifier`

class bpy.types.**GreasePencilNoiseModifier(Modifier)**

Noise effect modifier

custom_curve

Custom curve to apply effect

TYPE:

`CurveMapping`, (readonly)

factor

Amount of noise to apply

TYPE:

float in [0, inf], default 0.5

factor_strength

Amount of noise to apply to opacity

TYPE:

float in [0, inf], default 0.0

factor_thickness

Amount of noise to apply to thickness

TYPE:

float in [0, inf], default 0.0

factor_uvs

Amount of noise to apply to UV rotation

TYPE:

float in [0, inf], 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

material_filter
> Material used for filtering

TYPE:
>   `Material`

material_pass_filter
> Material pass

TYPE:
>   int in [0, 100], default 0

noise_offset
> Offset the noise along the strokes

TYPE:
>   float in [0, inf], default 0.0

noise_scale
> Scale the noise frequency

TYPE:
>   float in [0, 1], default 0.0

open_influence_panel

TYPE:
>   boolean, default False

open_random_panel

TYPE:
>   boolean, default False

random_mode
> Where to perform randomization

- `STEP` Steps – Randomize every number of frames.
- `KEYFRAME` Keyframes – Randomize on keyframes only.

> **TYPE:**
> enum in ['STEP', 'KEYFRAME'], default 'STEP'

seed

Random seed

> **TYPE:**
> int in [0, inf], default 1

step

Number of frames between randomization steps

> **TYPE:**
> int in [1, 100], default 4

use_custom_curve

Use a custom curve to define a factor along the strokes

> **TYPE:**
> boolean, default False

use_layer_pass_filter

Use layer pass filter

> **TYPE:**
> boolean, default False

use_material_pass_filter

Use material pass filter

> **TYPE:**
> boolean, default False

use_random

Use random values over time

> **TYPE:**
> boolean, default True

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.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
- Modifier.bl_rna_get_subclass
- Modifier.bl_rna_get_subclass_py

GreasePencilOffsetModifier(Modifier)

base classes — `bpy_struct`, `Modifier`

class bpy.types.**GreasePencilOffsetModifier(Modifier)**

> **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
>
> **location**
>
> > Values for change location
> >
> > **TYPE:**
> > > `mathutils.Vector` of 3 items in [-inf, inf], default (0.0, 0.0, 0.0)
>
> **material_filter**
>
> > Material used for filtering

TYPE:

> `Material`

material_pass_filter

> Material pass

> **TYPE:**

> > int in [0, 100], default 0

offset_mode

- `RANDOM` Random – Randomize stroke offset.
- `LAYER` Layer – Offset layers by the same factor.
- `STROKE` Stroke – Offset strokes by the same factor based on stroke draw order.
- `MATERIAL` Material – Offset materials by the same factor.

> **TYPE:**

> > enum in ['RANDOM', 'LAYER', 'STROKE', 'MATERIAL'], default 'RANDOM'

open_general_panel

> **TYPE:**

> > boolean, default False

open_influence_panel

> **TYPE:**

> > boolean, default False

rotation

> Values for changes in rotation

> **TYPE:**

> > `mathutils.Euler` rotation of 3 items in [-inf, inf], default (0.0, 0.0, 0.0)

scale

> Values for changes in scale

> **TYPE:**

> > `mathutils.Vector` of 3 items in [-inf, inf], default (0.0, 0.0, 0.0)

seed

> Random seed

> **TYPE:**

> > int in [0, inf], default 0

stroke_location

> Value for changes in location

> **TYPE:**

> > `mathutils.Vector` of 3 items in [-inf, inf], default (0.0, 0.0, 0.0)

stroke_rotation

> Value for changes in rotation

> **TYPE:**

> > `mathutils.Euler` rotation of 3 items in [-inf, inf], default (0.0, 0.0, 0.0)

stroke_scale

Value for changes in scale

TYPE:

`mathutils.Vector` of 3 items in [-inf, inf], default (0.0, 0.0, 0.0)

stroke_start_offset

Offset starting point

TYPE:

int in [0, inf], default 0

stroke_step

Number of elements that will be grouped

TYPE:

int in [1, 500], default 1

use_layer_pass_filter

Use layer pass filter

TYPE:

boolean, default False

use_material_pass_filter

Use material pass filter

TYPE:

boolean, default False

use_uniform_random_scale

Use the same random seed for each scale axis for a uniform scale

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:

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.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`
- `Modifier.bl_rna_get_subclass`
- `Modifier.bl_rna_get_subclass_py`

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GreasePencilOpacityModifier(Modifier)

base classes — `bpy_struct`, `Modifier`

class bpy.types.**GreasePencilOpacityModifier(Modifier)**

> **color_factor**
>
> Factor of opacity
>
> > **TYPE:**
> >
> > > float in [-inf, inf], default 1.0
>
> **color_mode**
>
> Attributes to modify
>
> - `BOTH` Stroke & Fill – Modify fill and stroke colors.
> - `STROKE` Stroke – Modify stroke color only.
> - `FILL` Fill – Modify fill color only.
> - `HARDNESS` Hardness – Modify stroke hardness.
>
> > **TYPE:**
> >
> > > enum in ['BOTH', 'STROKE', 'FILL', 'HARDNESS'], default 'BOTH'
>
> **custom_curve**
>
> Custom curve to apply effect
>
> > **TYPE:**
> >
> > > `CurveMapping`, (readonly)
>
> **hardness_factor**
>
> Factor of stroke hardness
>
> > **TYPE:**
> >
> > > float in [0, inf], default 1.0
>
> **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

material_filter

Material used for filtering

TYPE:

Material

material_pass_filter

Material pass

TYPE:

int in [0, 100], default 0

open_influence_panel

TYPE:

boolean, default False

use_custom_curve

Use a custom curve to define a factor along the strokes

TYPE:

boolean, default False

use_layer_pass_filter

Use layer pass filter

TYPE:

boolean, default False

use_material_pass_filter

Use material pass filter

TYPE:

boolean, default False

use_uniform_opacity

Replace the stroke opacity instead of modulating each point

TYPE:

boolean, default False

use_weight_as_factor

Use vertex group weight as factor instead of influence

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.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.items
- bpy_struct.property_unset
- bpy_struct.type_recast
- bpy_struct.values
- Modifier.bl_rna_get_subclass
- Modifier.bl_rna_get_subclass_py

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GreasePencilOutlineModifier(Modifier)

base classes — `bpy_struct`, `Modifier`

class bpy.types.**GreasePencilOutlineModifier(Modifier)**

> Outline of Strokes modifier from camera view

> > **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
> >
> > **layer_filter**
> >
> > > Layer name
> > >
> > > > **TYPE:**
> > > >
> > > > > string, default "", (never None)
> >
> > **layer_pass_filter**
> >
> > > Layer pass filter
> > >
> > > > **TYPE:**
> > > >
> > > > > int in [0, 100], default 0
> >
> > **material_filter**
> >
> > > Material used for filtering
> > >
> > > > **TYPE:**
> > > >
> > > > > `Material`
> >
> > **material_pass_filter**
> >
> > > Material pass
> > >
> > > > **TYPE:**
> > > >
> > > > > int in [0, 100], default 0
> >
> > **object**

Target object to define stroke start

TYPE:
> Object

open_influence_panel

TYPE:
> boolean, default False

outline_material

Material used for outline strokes

TYPE:
> Material

sample_length

TYPE:
> float in [-inf, inf], default 0.0

subdivision

Number of subdivisions

TYPE:
> int in [0, 10], default 3

thickness

Thickness of the perimeter stroke

TYPE:
> int in [1, 1000], default 1

use_keep_shape

Try to keep global shape

TYPE:
> boolean, default True

use_layer_pass_filter

Use layer pass filter

TYPE:
> boolean, default False

use_material_pass_filter

Use material pass filter

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
- 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.is_property_set
- bpy_struct.items
- bpy_struct.keyframe_delete
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- bpy_struct.property_unset
- bpy_struct.type_recast
- bpy_struct.values
- Modifier.bl_rna_get_subclass
- Modifier.bl_rna_get_subclass_py

GreasePencilShrinkwrapModifier(Modifier)

base classes — `bpy_struct`, `Modifier`

class bpy.types.**GreasePencilShrinkwrapModifier(Modifier)**

Shrink wrapping modifier to shrink wrap an object to a target

> **auxiliary_target**
>
> Additional mesh target to shrink to
>
> **TYPE:**
>
> > `Object`
>
> **cull_face**
>
> Stop vertices from projecting to a face on the target when facing towards/away
>
> **TYPE:**
>
> > enum in Shrinkwrap Face Cull Items, default 'OFF'
>
> **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

material_filter

Material used for filtering

TYPE:

Material

material_pass_filter

Material pass

TYPE:

int in [0, 100], default 0

offset

Distance to keep from the target

TYPE:

float in [-inf, inf], default 0.05

open_influence_panel

TYPE:

boolean, default False

project_limit

Limit the distance used for projection (zero disables)

TYPE:

float in [0, inf], default 0.0

smooth_factor

Amount of smoothing to apply

TYPE:

float in [0, 1], default 0.05

smooth_step

Number of times to apply smooth (high numbers can reduce FPS)

TYPE:

int in [1, 10], default 1

subsurf_levels

Number of subdivisions that must be performed before extracting vertices' positions and normals

TYPE:

int in [0, 6], default 0

target

Mesh target to shrink to

TYPE:

Object

use_invert_cull

When projecting in the negative direction invert the face cull mode

TYPE:

boolean, default False

use_layer_pass_filter

Use layer pass filter

TYPE:

boolean, default False

use_material_pass_filter

Use material pass filter

TYPE:

boolean, default False

use_negative_direction

Allow vertices to move in the negative direction of axis

TYPE:

boolean, default False

use_positive_direction

Allow vertices to move in the positive direction of axis

TYPE:

boolean, default True

use_project_x

TYPE:

boolean, default False

use_project_y

TYPE:

boolean, default False

use_project_z

TYPE:

boolean, default False

vertex_group_name

Vertex group name for modulating the deform

TYPE:

string, default "", (never None)

wrap_method

TYPE:

enum in Shrinkwrap Type Items, default 'NEAREST_SURFACEPOINT'

wrap_mode

Select how vertices are constrained to the target surface

TYPE:

enum in Modifier Shrinkwrap Mode Items, default 'ON_SURFACE'

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`
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- `bpy_struct.is_property_hidden`
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- `bpy_struct.pop`
- `bpy_struct.property_overridable_library_set`
- `bpy_struct.property_unset`
- `bpy_struct.type_recast`
- `bpy_struct.values`
- `Modifier.bl_rna_get_subclass`
- `Modifier.bl_rna_get_subclass_py`