

KANEKA OLED Lighting Module SL

(LE-01L, LE-02L, LE-03L, LE-01H, LE-02H, LE-03H)

Instruction Manual

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To customers and dealers (installers):

- Thank you for purchasing this Kaneka product.
- When using this product be sure to follow the terms of use and safety precautions in this manual. Kaneka shall bear no responsibility for damage that occurs due to the product being used in a way that deviates from the contents of this manual and the safety precautions below.
- Kaneka shall bear no responsibility for the installation of this product. Installation shall be carried out under the responsibility of the dealer (installer). Contact the dealer (installer) about replacement parts.

To dealers (installers):

- After installing the product explain the safety precautions to the user and hand over this instruction manual.
- When installing the product etc. be sure to follow the instructions in this manual.

Safety Information

OLED module is to be supplied by an isolating power source of appropriate voltage and current limits. The intended DMX, DALI signal shall also be Class 2 type.

Be sure to read the cautions described here to prevent injury, malfunction, fire and similar.

	Warning	Not observing the cautions indicated by this symbol may cause death or serious injury.
	Caution	Not observing the cautions indicated by this symbol may cause light injury or property damage.

Be sure to follow the instructions indicated by the following symbols.

	Indicates that you must not perform the indicated task.		Indicates that you must perform the indicated task.
--	--	---	--



Warning



Ask installers to carry out installation or de-installation work.

Otherwise this may cause fire, electric shock, or injury if the product falls. Installation and de-installation of the module requires expert knowledge and skill, so ask installers to carry out the work.



Do not do the following.

- Go near the module when it is hot
- Forcedly bend, twist or pull on the module
- Place heavy objects on the module
- Bundle up Lighting Module SL, harnesses, etc.
- Secure the module with staples etc.

Otherwise this may cause module malfunction, short circuits, or electric shock.



Do not wash with water, dismantle, or modify the module.

Otherwise this may cause fire, electric shock, or malfunction.



Do not place, use, or store the module in an area where water may drip on it, or condensation may form. Do not touch the module with wet hands.

Otherwise this may cause electric shock, short circuits, or malfunction.



Do not cover with paper or cloth, or place the module near these and other flammable objects.

Otherwise this may cause fire or burns.



Do not install, remove, or clean the module while it is turned on.

Otherwise this may cause electric shock or malfunction.



Do not touch, plug in or unplug the electric supply parts while the module is turned on.

Otherwise this may cause electric shock or malfunction.

-  **Make sure that dirt, dust, or foreign objects do not collect on the connectors.**
If dirt, dust, or foreign objects collect on the module this may cause fire, electric shock, or malfunction.



Caution

-  **This product contains glass. Do not drop the product, hit it with objects, push it forcefully, or place heavy objects on it.**
Otherwise this may cause damage or injury.
-  **Do not suddenly heat or cool the module.**
Otherwise this may cause malfunction or damage.
-  **Do not use organic solvents, or any alkaline, strong acidic, or chlorinated detergents when cleaning the module.**
Otherwise this may weaken the module, causing damage or electric shock. It may also cause discoloration.
Clean with a soft dry cloth.
For stubborn stains, gently wipe the stained area with a well wrung soft cloth moistened with diluted neutral detergent, and then finish with a soft dry cloth.
-  **Do not directly touch the connectors and other metal terminals.**
Otherwise this may cause malfunction.
-  **Do not touch the module while it is lit or immediately after it is turned off.**
The module may be hot when lit or immediately after it has been turned off, and may cause burns.
-  **Inspect the module periodically.**
Using the module for a long time without inspection may occasionally cause fire or electric shock.
This product has a limited service life. After the product has been installed for 10 years, the internal structure will have deteriorated even if it looks normal externally. If any problems are discovered during inspections, or if 10 years have passed since the module was installed, we recommend replacing it. Consult with the installer about what is covered by the inspections.
-  **Secure the module correctly for use.**
If the module is not correctly secured, it may fall due to vibration, impact, earthquake, etc., and hit people, animals, plants, or property causing injury or damage.
-  **Use the specialized harnesses when connecting the product. Be sure to use a specialized dimming interface if you are using a dimming interface.**
Not using the specialized harnesses and dimming interfaces may cause malfunction.

IMPORTANT SAFETY INSTRUCTIONS-SAVE THESE INSTRUCTIONS

DANGER-TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, CAREFULLY FOLLOW THESE INSTRUCTIONS

If the shape of the plug does not fit the power outlet, use an attachment plug adaptor of the proper configuration for the power outlet.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

Other cautions

- Static electricity may cause damage or malfunction. Be sure to remove static electricity from the product and the person handling it (person performing work).
- When cleaning the product do not polish it using cleanser or a scrubbing brush. Otherwise this may cause scratches and corrosion.
- The product is incombustible. Follow municipal regulations when disposing of the module.
- The OLED panel cannot be replaced by itself. If it needs replacing, the whole Lighting Module SL must be replaced.

1

Product Overview

This lighting module contains an organic EL lighting panel (OLED). It is referred to as Lighting Module SL in this manual.

Lighting Module SL

The lineup is as follows.

●Normal type

Model Number	Color Temperature
LE-01L	3000K
LE-02L	3000K high color rendering
LE-03L	4000K high color rendering

●High luminance type

Model Number	Color Temperature
LE-01H	3000K
LE-02H	3000K high color rendering
LE-03H	4000K high color rendering

CAUTION

If you are linking Lightning Module SL, use the same types. Do not mix the normal type and the high luminance type.

Accessory List

The specialized accessories for this product are as follows. Be sure to use specialized accessories.

Type	Name	Main specifications, etc.
Installation bases	Installation Base S	Allows the module to be installed on a surface behind the light-emitting side
	Installation Base A	Allows the module to be installed on a surface either in front of or behind the light-emitting side
Dimming interfaces	PWM Dimming Interface	Use for PWM dimming
	DALI/DMX Dimming Interface	Use for DALI/DMX dimming
-	Power unit	MEAN WELL PLC-100-24
Harnesses	Linking harness	Used to connect Lighting Module SL together
	Conversion harness	Used for the following: - Connecting the Lighting Module SL to the extension harness - Connecting the Lighting Module SL to the power harness
	Extension harness	Used for the following: - Connecting the conversion harness to the dimming interface - Connecting the conversion harness to the connection harness - Connecting the conversion harness to the branch harness - Connecting PWM dimming interfaces together
	Branch harness	When used with the dimming interface, increases the number of Lighting Module SL that can be connected*
	Connection harness	Used for the following: - Connecting the power harness to the extension harness - Connecting the power harness to the branch harness
	Power harness	Used for the following: - Connecting the DC output side of the power unit to the dimming interface - Connecting the DC output side of the power unit to the conversion harness - Connecting the DC output side of the power unit to the connection harness

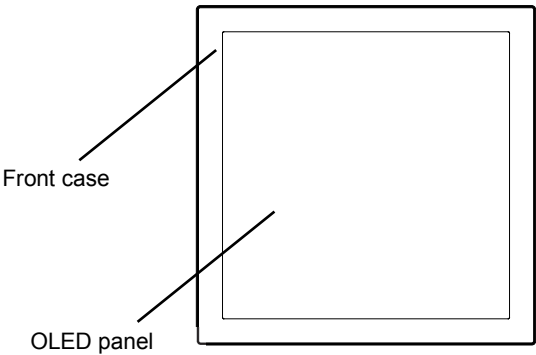
*: The branch harness alone cannot be used to increase the number of connections.

CAUTION

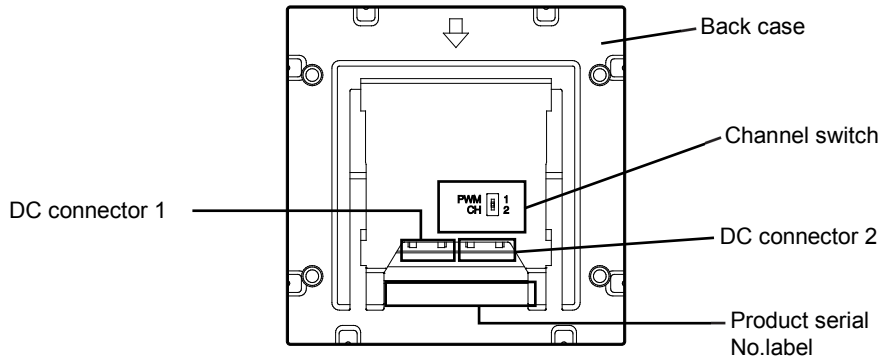
The power cable to be connected to the AC IN of the power unit should be provided by the dealer (installer).

Part Names

Light-Emitting Side of Lighting Module SL



Back of Lighting Module SL



DC connectors 1 and 2	Connect the conversion or linking harness (when connecting another Lighting Module SL). Connect to either connector 1 or 2. The unused connector can be used to connect the linking harness of the next Lighting Module SL when connecting multiple modules.
Channel switch	Select the channel from ch1 or ch2. Select the channel based on the channel settings of the connected dimming interface.

CAUTION

- The channel switch is set to ch1 when shipped.
- It will not be possible to dim the lights correctly if the channel switch and dimming interface channel setting do not match.
- When using a branch harness, the channel switch settings will be ignored, and the channels set by each branch of the branch harness will be used.
- Use a thin flathead screwdriver, clip, or similar to switch the channel switch. Do not use sharp pointed objects as they may damage the switch.

2

Connections and Wiring (when dimming is required)

NOTE

If dimming is not required refer to “3 Connections and Wiring (when dimming is not required)” .

Wiring Overview

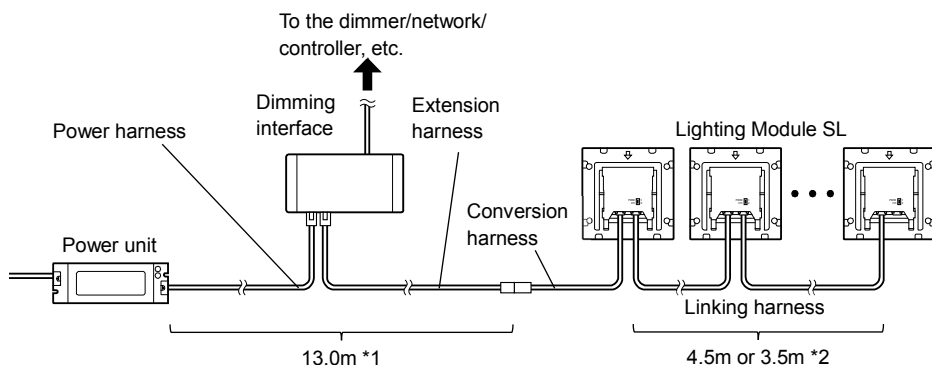
The power unit, dimming interface, Lighting Module SL etc. should be connected as shown below.

- The length of the wiring may cause the voltage to drop. Make sure that the wiring is the same or shorter than the lengths indicated in the connection diagrams.
- The number of Lighting Module SL that can be connected to one power unit differs depending on the connection method used. Refer to "Maximum number of Lighting Module SL that can be connected (with dimming)".
- Be sure to use the specialized harnesses to connect the modules.

CAUTION

When wiring leave enough leeway so that excessive force is not placed on the harness cables and connectors. Placing excessive force on the cables or connectors may cause damage or malfunction.

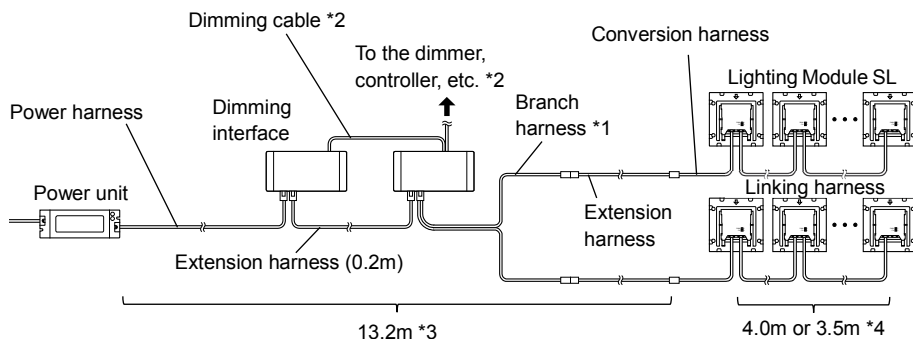
- When using PWM dimming or DALI/DMX dimming with no branching



*1: The wiring lengths indicated in the diagram above do not include the length of the dimming interface.

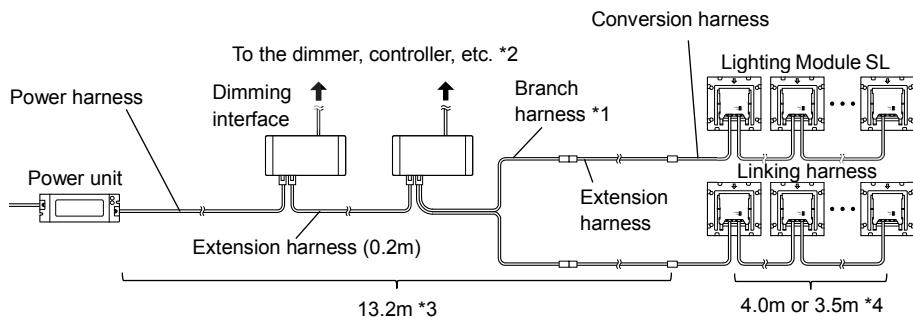
*2: The maximum length for the normal type is 4.5m, and 3.5m for the high luminance type.

●When using PWM dimming with branching and one dimmer



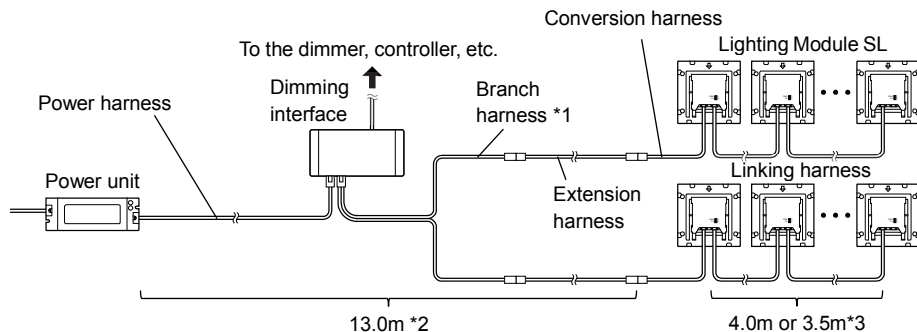
- *1: The channels are decided based on the branch connected to, regardless of the Lighting Module SL ch settings.
- *2: Connect the dimmer to one of the PWM dimming interfaces, and connect the PWM dimming interfaces with a dimming cable.
The dimming cable should be provided by the dealer (installer).
- *3: The wiring lengths indicated in the diagram above do not include the length of the dimming interface or branch harness.
- *4: The maximum length for the normal type is 4.0m, and 3.5m for the high luminance type.

●When using PWM dimming with branching and two dimmers



- *1: The channels are decided based on the branch connected to, regardless of the Lighting Module SL ch settings.
- *2: Connect a dimmer to each of the two PWM dimming interfaces.
- *3: The wiring lengths indicated in the diagram above do not include the length of the dimming interface or branch harness.
- *4: The maximum length for the normal type is 4.0m, and 3.5m for the high luminance type.

●When using DALI/DMX dimming with branching



*1: The channels are decided based on the branch connected to, regardless of the Lighting Module SL ch settings.

*2: The wiring lengths indicated in the diagram above do not include the length of the dimming interface or branch harness.

*3: The maximum length for the normal type is 4.0m, and 3.5m for the high luminance type.

Maximum number of Lighting Module SL that can be connected (with dimming interface)

When using dimming interface the maximum number of Lighting Module SL that can be connected is as follows.

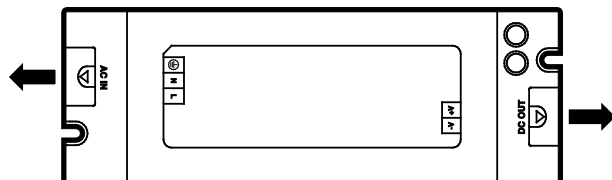
Model number	Branch harness	Max. no. per branch	Max. no.
LE-01L, LE-02L, LE-03L	Not used	-	10
	Used	9	18 (9 + 9)
LE-01H, LE-02H, LE-03H	Not used	-	8
	Used	8	16 (8 + 8)

Connecting the Power Unit

Refer to the power unit instruction manual for details.

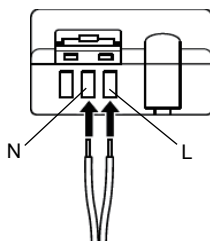
1 Remove the 'AC IN' and 'DC OUT' covers from the power unit

Slide in the direction indicated by the arrows to remove the covers.



2 Connect the power cable to 'AC IN'

Use a flathead screwdriver to loosen the terminal screw, insert the power cable so the polarity is correct, and tighten the terminal screw to secure the power cable. Make sure that you do not forget to loosen and tighten the screw.

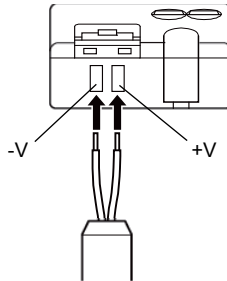


CAUTION

- The power cable to be connected to the AC IN of the power unit should be provided by the dealer (installer).
- Connection to the AC IN of the power unit must be performed by a qualified electrician.

3 Connect the power harness to 'DC OUT'

Use a flathead screwdriver to loosen the terminal screw, insert the power harness so the polarity (BK: -V, WT: +V) is correct, and tighten the terminal screw to secure the power harness.



4 Reattach the 'AC IN' and 'DC OUT' covers

CAUTION

Before reattaching the covers, make sure that no wires are sticking out of the power unit, and that the right and left wires are not touching. If the wires are sticking out or the right and left wires are touching, rewire the connections.

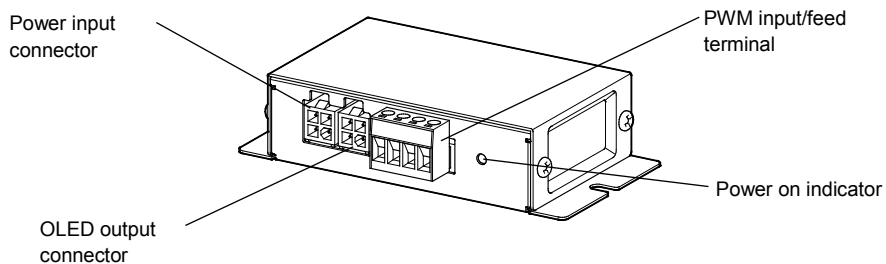
Connecting Dimming Interfaces

Connect the PWM dimming interface or DALI/DMX dimming interface according to the type of dimming required.

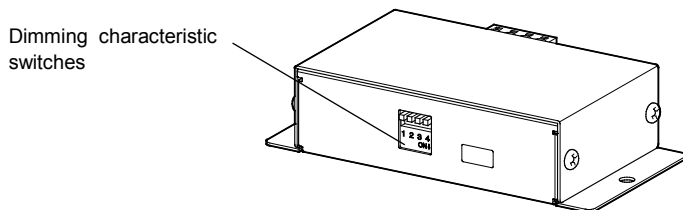
Dimming Interface Part Names

● PWM Dimming Interface

• Front

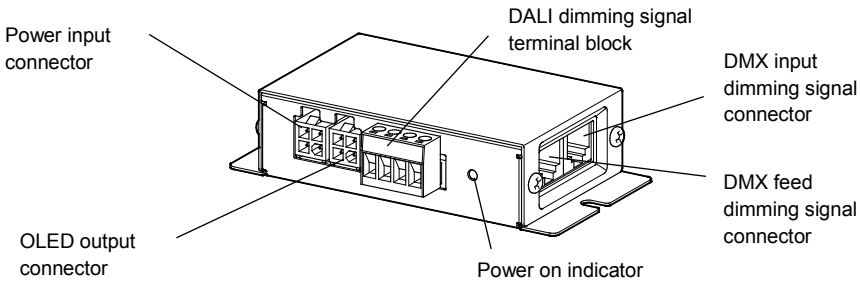


• Back

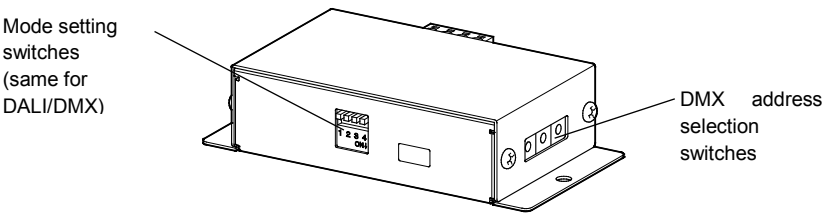


●DALI/DMX Dimming Interface

• Front



• Back

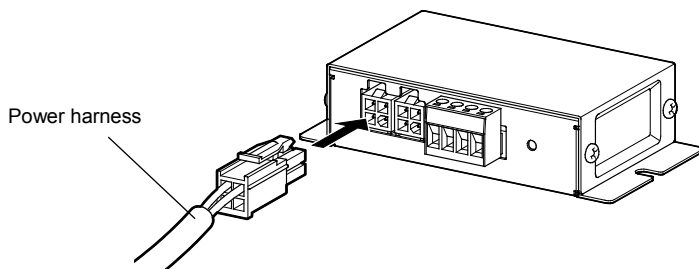


Connecting Dimming Interfaces (for PWM dimming)

If you wish to use PWM dimming: Use the PWM dimming interface and connect to a PWM dimmer. Use a commercially available PWM dimmer that conforms to JISC8120 or IEC60929.

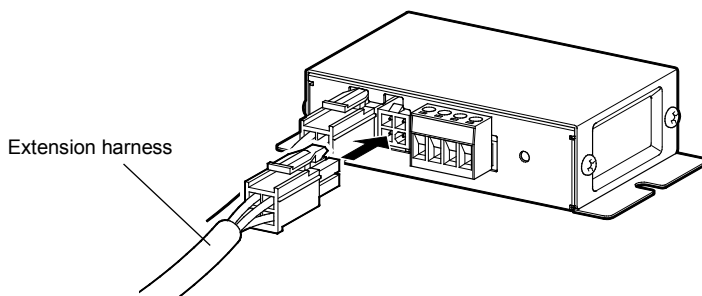
1 Connect the power harness connected to the power unit to the power input connector

Be sure to insert the connector facing the right way, until it is secured by the tab.



2 Connect the extension harness to the OLED output connector

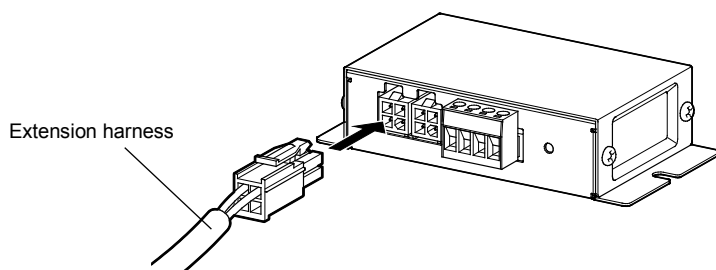
Be sure to insert the connector facing the right way, until it is secured by the tab.



When using a branch harness, two PWM dimming interfaces must be used. Proceed to step 3 and connect two PWM dimming interfaces. When not using a branch harness proceed to step 6.

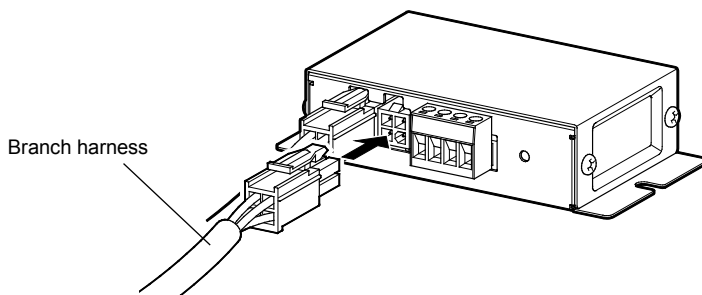
3 Connect the extension harness connected to the first PWM dimming interface to the power input connector of the second PWM dimming interface

Be sure to insert the connector facing the right way, until it is secured by the tab.



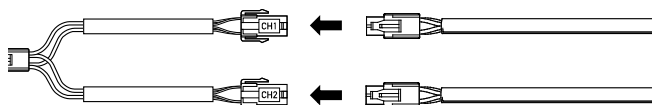
4 Connect the branch harness to the OLED output connector of the second PWM dimming interface

Be sure to insert the connector facing the right way, until it is secured by the tab.



5 Connect an extension harness to the end of each branch of the branch harness

Be sure to insert the connector facing the right way, until it is secured by the tab.

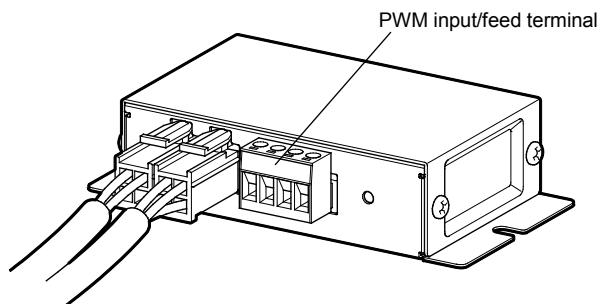


6 Connect the dimming signal cable of the PWM dimmer to the PWM input/feed terminal

Use a flathead screwdriver to loosen the terminal screw, check that the dimming signal input and output are correct, and insert the signal cable from the dimmer. Tighten the terminal screw to secure the signal cable.

When using a branch harness it is necessary to either connect a dimmer to each of the PWM dimming interfaces, or connect a dimmer to one PWM dimming interface and connect the interfaces with a dimming cable. Refer to "2 Connections and Wiring (when dimming is required)" (p.10).

Refer to the instruction manual for the PWM dimmer you are using for more details about connecting the PWM dimmer.



7 Set the dimming characteristic switches on the dimming interface according to the construction specifications

Refer to "PWM Dimming Interface Settings and Dimming Characteristics" in "5 Appendix/Technical Specifications" for the dimming interface settings.

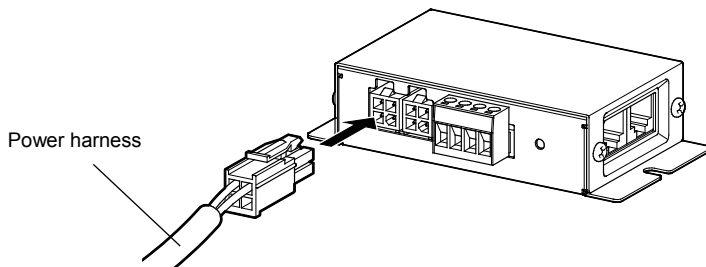
Connecting Dimming Interfaces (for DALI/DMX dimming)

If you wish to use DALI or DMX dimming: Use a DALI/DMX dimming interface and connect to a DALI network or DMX controller.

The DALI/DMX dimming interface can be used for both DALI and DMX, but the connectors used to connect the cables differ.

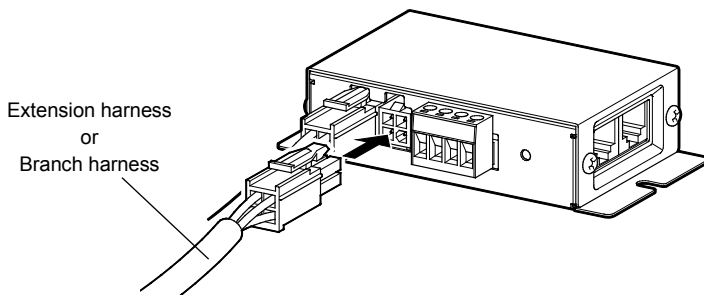
1 Connect the power harness connected to the power unit to the power input connector

Be sure to insert the connector facing the right way, until it is secured by the tab.



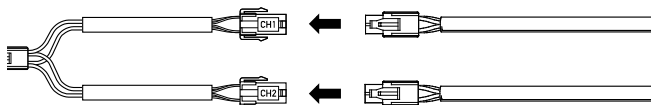
2 Connect the extension harness or branch harness to the OLED output connector

Be sure to insert the connector facing the right way, until it is secured by the tab.



3 When using a branch harness, connect the extension harness to the branch harness

Connect an extension harness to the end of each branch of the branch harness.

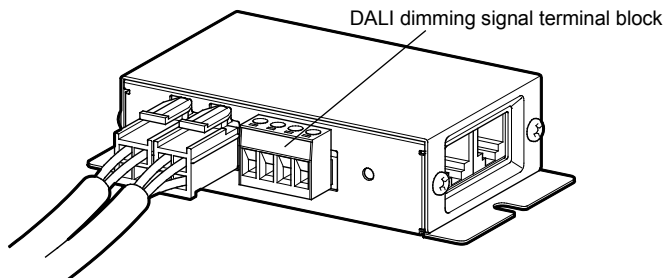


4 Connect the DALI network/DMX controller signal cable

●When using DALI dimming

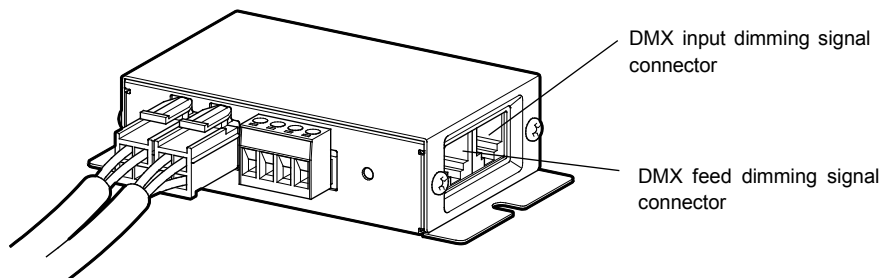
Use a flathead screwdriver to loosen the DALI dimming signal terminal block screw, check that the dimming signal input and output are correct, and insert the signal cable from the DALI network. Tighten the DALI dimming signal terminal block screw to secure the signal cable.

Use devices that conform to IEC62386-207 for the DALI network. Refer to the instruction manual for the DALI device you are using for more details about connecting to a DALI network.



●When using DMX dimming

Connect the cable to the DMX controller to the DMX input dimming signal connector and DMX feed dimming signal connector on the dimming interface. Use a commercially available DMX controller that conforms to DMX512/1990. Refer to the instruction manual for the DMX controller you are using for more details about connecting to a DMX controller.



5 Set the dimming interface according to the specifications of the dimming method being used

Refer to "DALI/DMX Dimming Interface Settings and Dimming Characteristics" in "5 Appendix/Technical Specifications" for the dimming interface settings.

●When using DALI dimming

Set the mode setting switches (same for DALI/DMX) according to the specifications of the connected DALI network.

●When using DMX dimming

Set the mode setting switches (same for DALI/DMX) and DMX address selection switches according to the specifications of the connected DMX controller.

Connecting Lighting Module SL

Connect the conversion harness connected to Lighting Module SL and the extension harness connected to the dimming interface.

Alternatively, if you are linking multiple Lighting Module SL, use the specialized linking harness to connect them. The maximum number of Lighting Module SL that can be linked and used differs depending on whether the branch harness and dimming I/F is used.

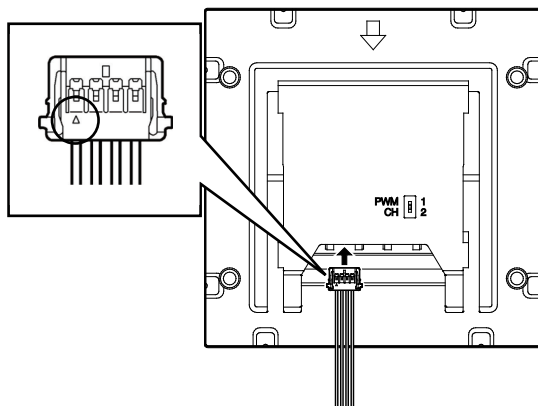
CAUTION

If you are linking Lightning Module SL, use the same types. Do not mix the normal type and the high luminance type.

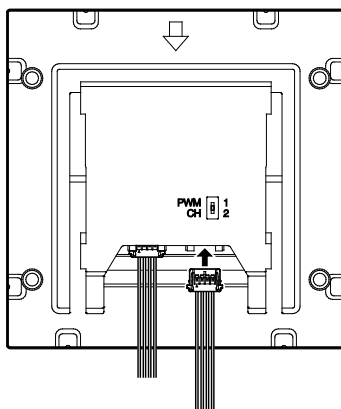
1 Connect the Lighting Module SL side connector of the conversion harness to the DC connector on Lighting Module SL

Connect to either DC connector 1 or 2. Choose depending on the installation position and wiring.

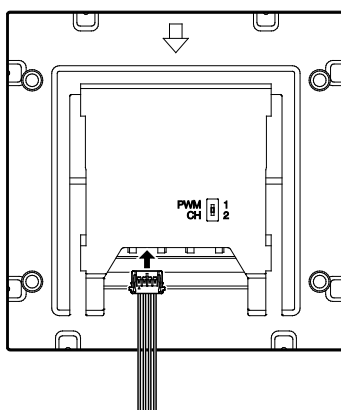
The connector is polarized, so ensure that pin 1 (marked with $\triangle$) is oriented as shown in the diagram before connecting.



- 2** To link multiple Lighting Module SL, connect one of the linking harness connectors into the empty DC connector

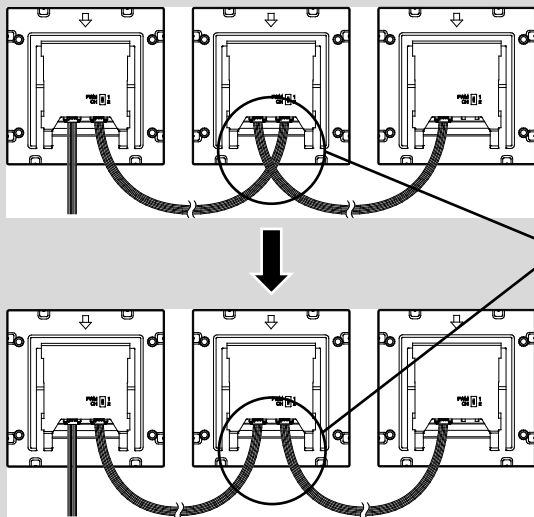


- 3** Connect the other linking harness connector to the DC connector of the next Lighting Module SL



CAUTION

Make sure that the linking harnesses connected to Lighting Module SL do not cross over each other when the modules are installed on a wall, etc. If they cross over each other, change how the linking harnesses are connected.



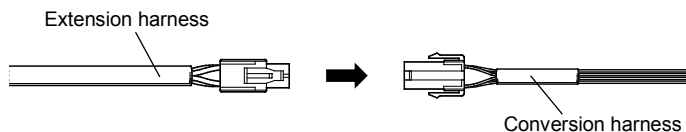
The harnesses cross over each other. Switch the linking harnesses over so that they do not cross over each other.

4 Repeat steps 2 and 3 until all Lighting Module SL are linked

When using a branch harness, link the Lighting Module SL to be connected to the other branch in the same way.

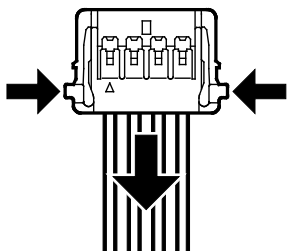
5 Connect the extension harness to the extension harness side connector of the conversion harness.

When using a branch harness, connect the extension harness and conversion harness to the other branch in the same way.



Disconnecting the Conversion and Linking Harnesses

To disconnect the connectors of the conversion or linking harnesses connected to Lighting Module SL, press the release buttons on the sides of the connector and pull the connector out as shown below.



CAUTION

- Do not try to pull out the connector without pressing the release buttons, or by pulling on the cables. Otherwise this may cause damage or malfunction of the harnesses and Lighting Module SL.
- Hold the connector part of the linking harness when attaching or removing it. Holding any part other than the connector may cause the connector to be damaged (e.g. the connector may come off).

3

Connections and Wiring (when dimming is not required)

Wiring Overview

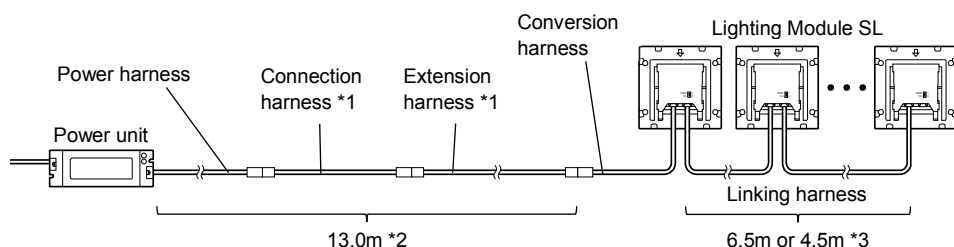
The power unit and Lighting Module SL etc. should be connected as shown in the diagram below.

- The length of the wiring may cause the voltage to drop. Make sure that the wiring is the same or shorter than the lengths indicated in the connection diagrams.
- The number of Lighting Module SL that can be connected to one power unit differs depending on the connection method used. Refer to "Maximum number of Lighting Module SL that can be connected (without dimming)".
- Be sure to use the specialized harnesses to connect the modules.

CAUTION

When wiring leave enough leeway so that excessive force is not placed on the harness cables and connectors. Placing excessive force on the cables or connectors may cause damage or malfunction.

●With no branching

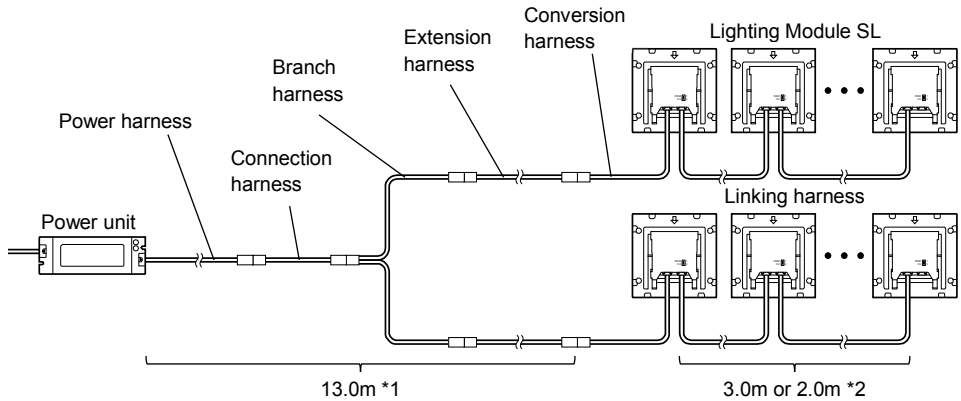


*1: If no extension harness is used the connection harness and extension harness can be omitted. Connect the power harness to the conversion harness.

*2: The wiring lengths indicated in the diagram above do not include the length of the connection harness.

*3: The maximum length for the normal type is 6.5m, and 4.5m for the high luminance type.

●With branching



- *1: The wiring lengths indicated in the diagram above do not include the length of the connection harness or branch harness.
- *2: The maximum length for the normal type is 3.0m, and 2.0m for the high luminance type.

Maximum number of Lighting Module SL that can be connected (without dimming)

When not using dimming the maximum number of Lighting Module SL that can be connected is as follows.

Model number	Branch harness	Max. no. per branch	Max. no.
LE-01L, LE-02L, LE-03L	Not used	-	14
	Used	7	14 (7 + 7)
LE-01H, LE-02H, LE-03H	Not used	-	10
	Used	5	10 (5 + 5)

Connecting the Power Unit

Connect the power cable and power harness to the power unit. Refer to “Connecting the Power Unit” in “2 Connections and Wiring (when dimming is required)” when wiring.

Connecting Lighting Module SL

Connect Lighting Module SL to the power unit.

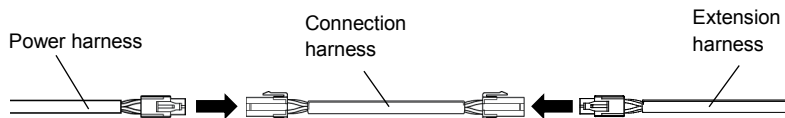
Alternatively, if you are linking multiple Lighting Module SL, use the specialized linking harness to connect them. The maximum number of Lighting Module SL that can be linked and used differs depending on whether the branch harness is used.

1 Follow steps 1 to 4 in “Connecting Lighting Module SL” in “2 Connections and Wiring (when dimming is required)” to connect the required number of Lighting Module SL

2 When using a branch harness or extension harness, connect the harness as follows

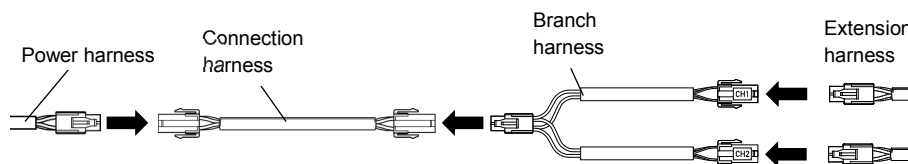
●When using an extension harness

As shown in the diagram, connect the connection harness and extension harness to the power harness.



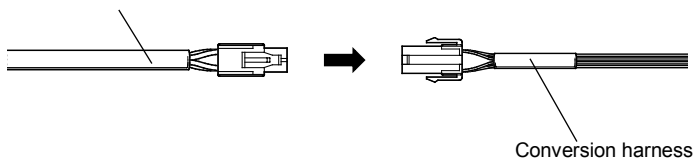
●When using a branch harness

As shown in the diagram, connect the connection harness, branch harness, and extension harness to the power harness.



- 3** Connect the power harness or extension harness to the extension harness side connector of the conversion harness.

Power harness or Extension harness



Conversion harness

4

Installing Lighting Module SL

Use the specialized installation bases to attach Lighting Module SL to a wall or ceiling.



Caution



Do not directly secure Lighting Module SL to walls etc. without an installation base using screws, adhesive or tape.

Otherwise product performance may deteriorate, and the modules may become damaged, or fall and cause injury.



When installing the modules protect hands by wearing gloves or similar.

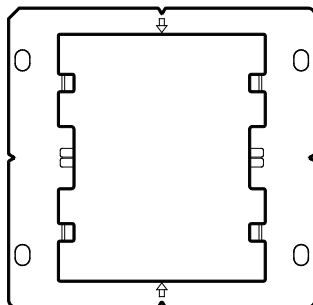
Otherwise this may lead to cuts or other hand injuries.

Securing Installation bases

Installation Base Types

The following two types of installation base are available.

● Installation Base S



This base is 13/64"(5mm) thick when installed (including Lighting Module SL). It can be installed on a surface behind the light-emitting side.

When Lighting Module SL is set in installation base S, the base cannot be seen from the light-emitting surface of the module.

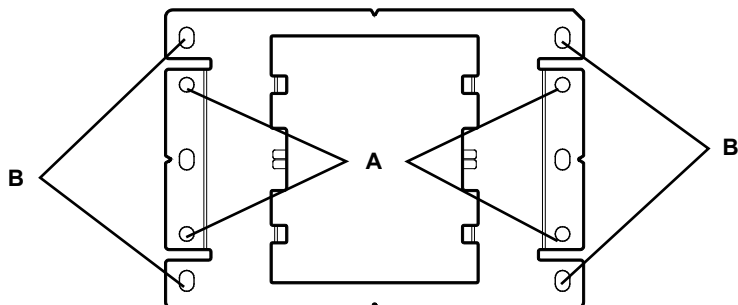
The types of screws that can be used for installation are limited. Use the screw shown below.

- **Wood screw:** : M3.1 x 25 mm

CAUTION

If a screw not listed above is used, the head of the screw will obstruct the product, preventing it from being attached, tilting it, or causing scratches or other damage.

● Installation Base A



This base is 13/64"(5mm) thick when installed (including Lighting Module SL). Depending on how installation base A is secured, the module can be installed on a surface either in front of (using the A screw holes) or behind (using the B screw holes) the light-emitting side.

As the screws are attached outside of where Lighting Module SL sits, any 3.0 to 4.0 mm diameter screws can be used.

CAUTION

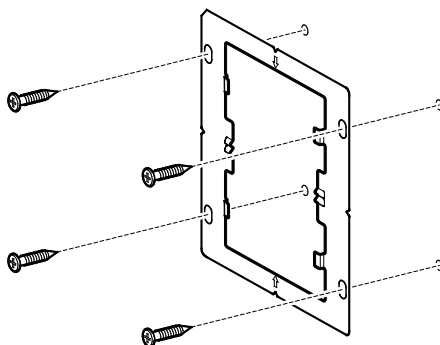
- Use an appropriate screw length according to the construction material and thickness of the surface where the module will be installed.
- When using the base so that the module is installed on a surface in front of the light-emitting side, it may be difficult to attach the SL Light Module after the base has been attached. When installing in this kind of location, attach the SL Light Module to installation base A first before installing the base.

1 Secure the installation base using screws

CAUTION

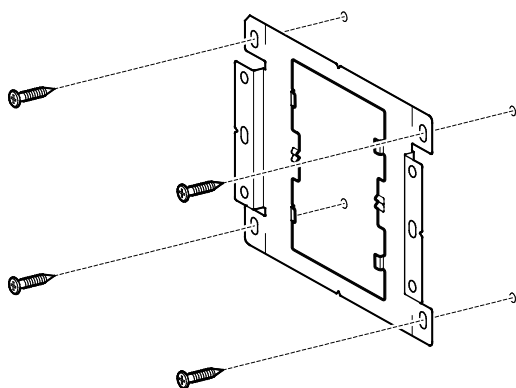
Contact us beforehand if you wish to secure the module on a wall or other surface where it cannot be directly secured using screws, such as a gypsum wall.

● Installation Base S

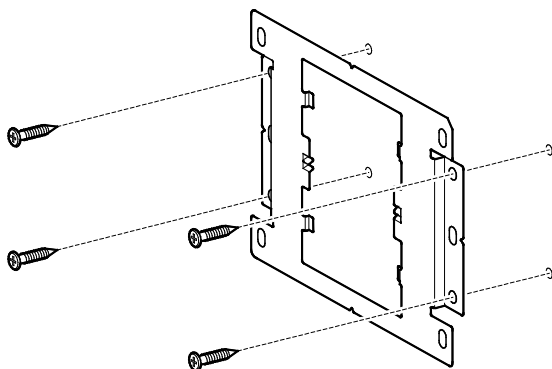


●Installation Base A

- To install on a surface behind the light-emitting side



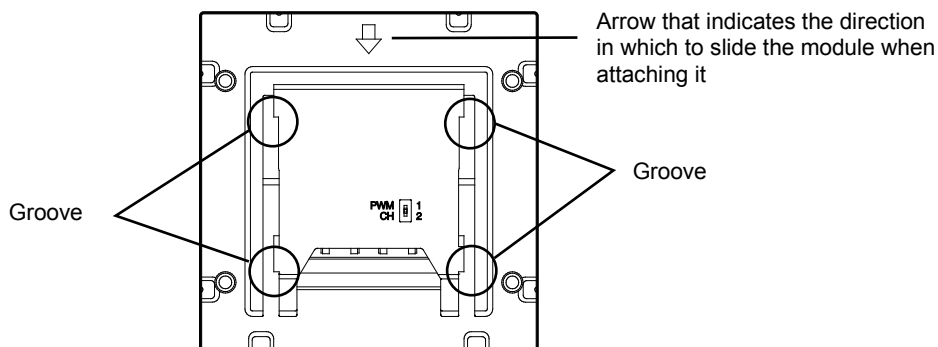
- To install on a surface in front of the light-emitting side



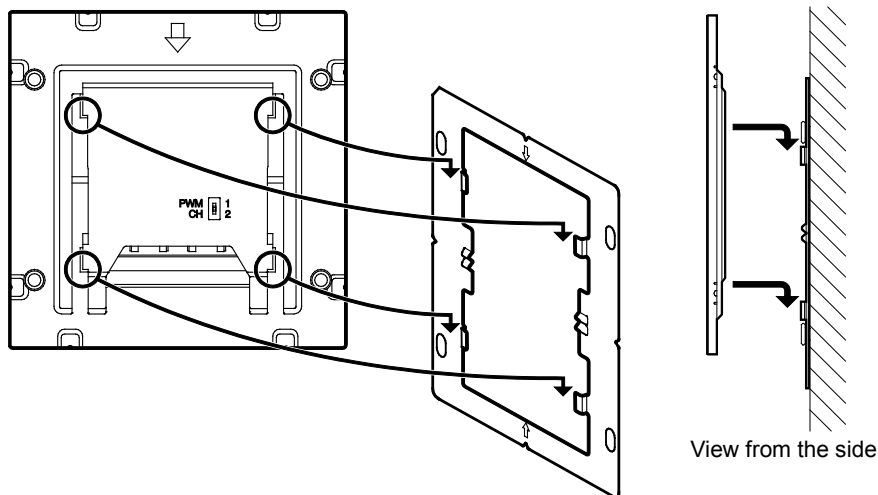
Attaching Lighting Module SL

Attach Lighting Module SL to the secured installation base.

- 1 Check the position of the grooves and the direction of the arrow on the back of Lighting Module SL



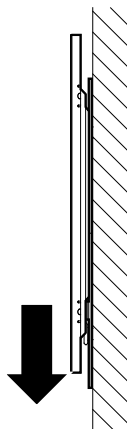
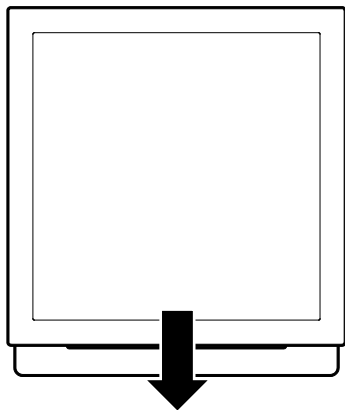
- 2 Align the hooks on the installation base and the grooves on Lighting Module SL, and attach the module to the installation base



The illustration shows installation base S.

3 Slide Lighting Module SL to secure it in the direction indicated by the arrow on the back of the module

Slide it until you hear a click and it is secure.



View from the side

The illustration shows installation base S.

CAUTION

Lightly pull Lighting Module SL forward to check that all four of the grooves on the back of the module and hooks on the installation base are secure.

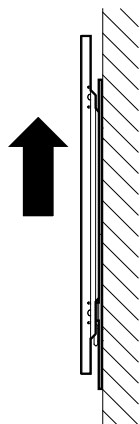
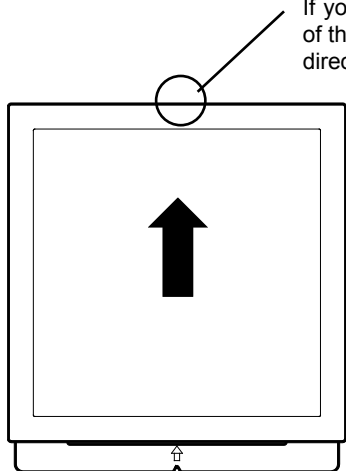
Removing Lighting Module SL

Follow the procedure below when removing Lighting Module SL for repair or to replace them.

- 1 Slide Lighting Module SL in the opposite direction to the arrow on the back of the module (the direction with a small protrusion), and release the hooks on the installation base from the grooves on Lighting Module SL**

There is a small protrusion on the side where the arrow is on the back.

If you cannot check the direction of the arrow on the back of the module, use the protrusion on the side to confirm the direction.



View from the side

The illustration shows installation base S.

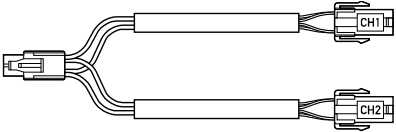
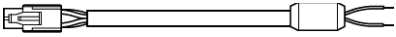
- 2 Pull Lighting Module SL forward to remove it**

CAUTION

If it cannot be removed, the hooks on the installation base may not be fully released from the grooves on the back of the module. Do not pull the module with excessive force. Check that the module has been slid far enough that the hooks and grooves have released.

Harness List

The harnesses used to wire this product are as follows.
Be sure to use specialized harnesses.

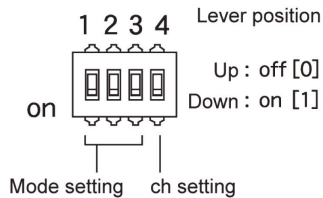
Type	Appearance	Length
Linking harness		1-31/32"(0.05m)
		4-23/32"(0.12m)
		11-13/16"(0.3m)
		19-11/16"(0.5m)
Conversion harness		11-13/16"(0.3m)
Extension harness		7-7/8"(0.2m)
		3'3"(1.0m)
		9'10"(3.0m)
		16'5"(5.0m)
		32'10"(10.0m)
Branch harness		7-7/8"(0.2m)
Connection harness		7-7/8"(0.2m)
Power harness		9'10"(3.0m)

PWM Dimming Interface Settings and Dimming Characteristics

Dimming Characteristic Switch Settings

●ch setting

ch	Switch setting
	4
1	0
2	1

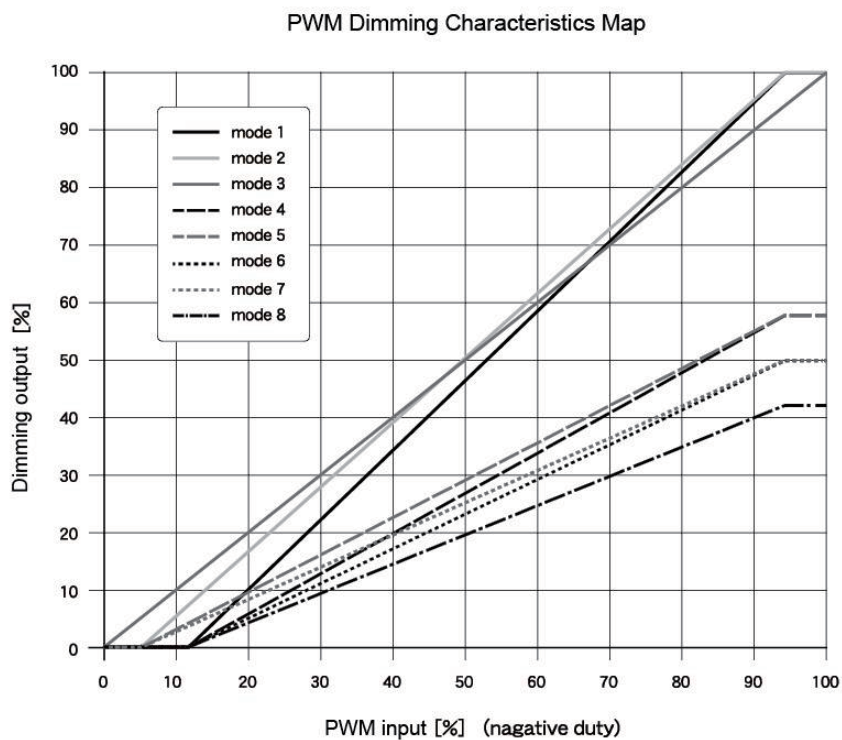


●Mode setting

Mode ^{*1}	Switch setting	Input PWM	Output PWM
	1 2 3		
1	0 0 0	11 - 94% (A)	0 - 100%
2	1 0 0	5 - 94% (B)	
3	0 1 0	0 - 100% (C)	
4	1 1 0	11 - 94% (A)	0 - 58%
5	0 0 1	5 - 94% (B)	
6	1 0 1	11 - 94% (A)	0 - 50%
7	0 1 1	5 - 94% (B)	
8	1 1 1	11 - 94% (A)	0 - 42%

*1 For the dimming characteristics for each mode, refer to "Dimming Characteristics for Each Mode (PWM Dimming)" on the following page.

Dimming Characteristics for Each Mode (PWM Dimming)

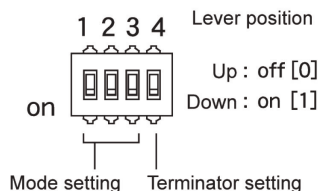


DALI/DMX Dimming Interface Settings and Dimming Characteristics

Mode Switch Settings (same for DALI/DMX)

●Terminator setting

Terminator setting	Switch setting
	4
Disabled	0
Enabled	1



●Mode setting

Mode ^{*1}	Switch setting	Input signal	No. of ch ^{*2}	Options ^{*3}
	1 2 3			
1	0 0 0	DALI	1ch (ch1 and ch2 are controlled together)	None
2	1 0 0			Smoothing
3	0 1 0		2ch (ch1 and ch2 are controlled separately)	None
4	1 1 0			Smoothing
5	0 0 1	DMX	2ch (ch1 and ch2 are controlled separately)	None
6	1 0 1			Smoothing
7	0 1 1			None
8	1 1 1			Smoothing

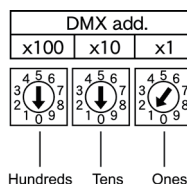
*1 For the dimming characteristics for each mode, refer to "Dimming Characteristics for Each Mode (DALI Dimming)" or "Dimming Characteristics for Each Mode (DMX Dimming)" on the following pages.

*2 Select ch1 or ch2 on the channel switch on Lighting Module SL.

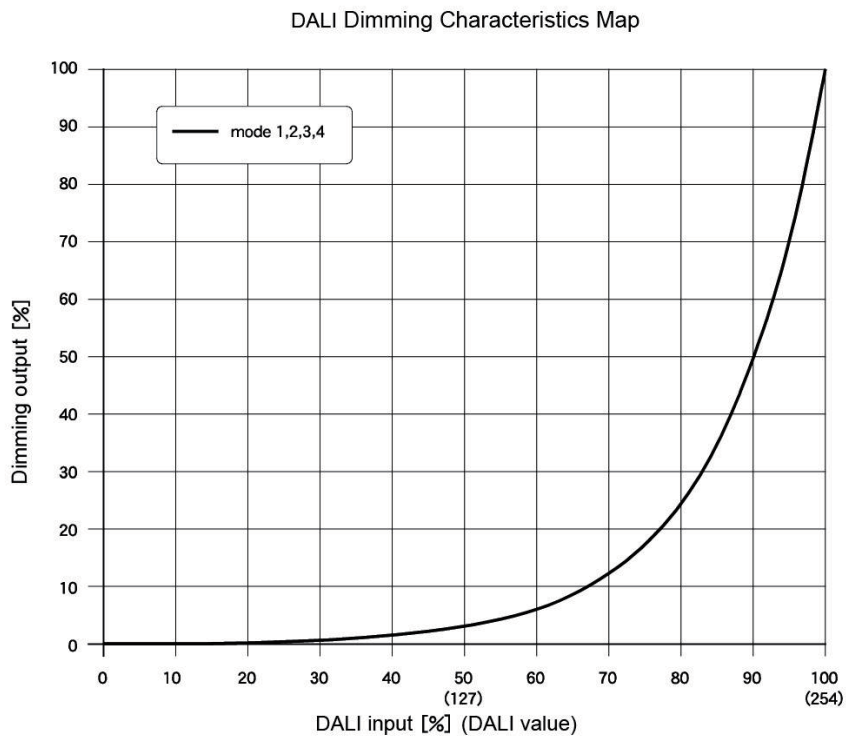
*3 You can select smoothing to enable smoother dimming.

DMX Address Selection Switch Settings (DMX only)

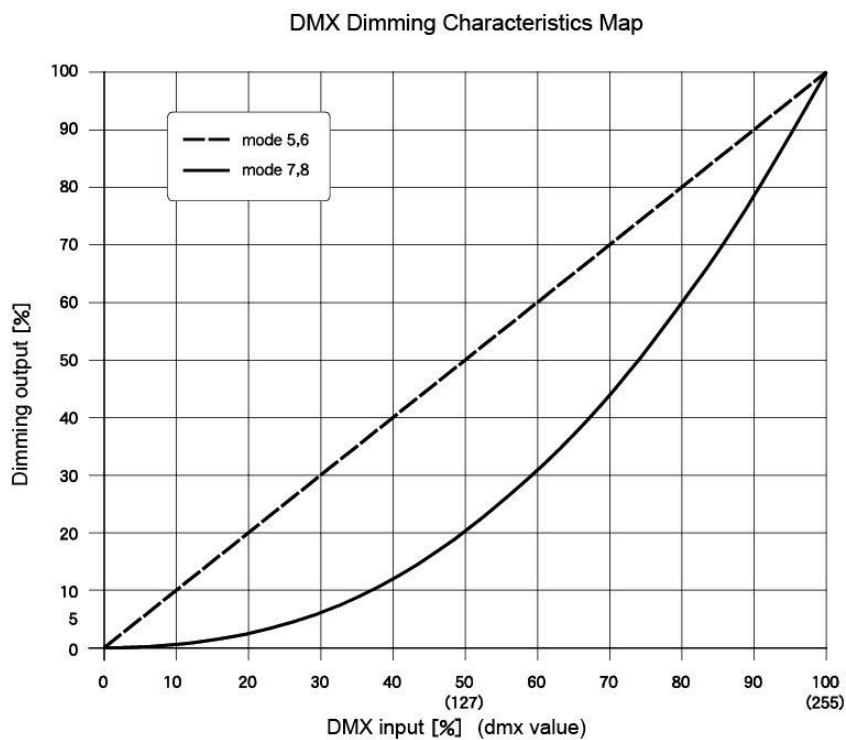
ch1	Address set using the switches
ch2	Address set using the switches +1



Dimming Characteristics for Each Mode (DALI Dimming)



Dimming Characteristics for Each Mode (DMX Dimming)



NOTES

NOTES

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