PATLITE®

Tiered Signal Tower

REVOLITE™

SPECIFICATION

[TYPE: LA6]

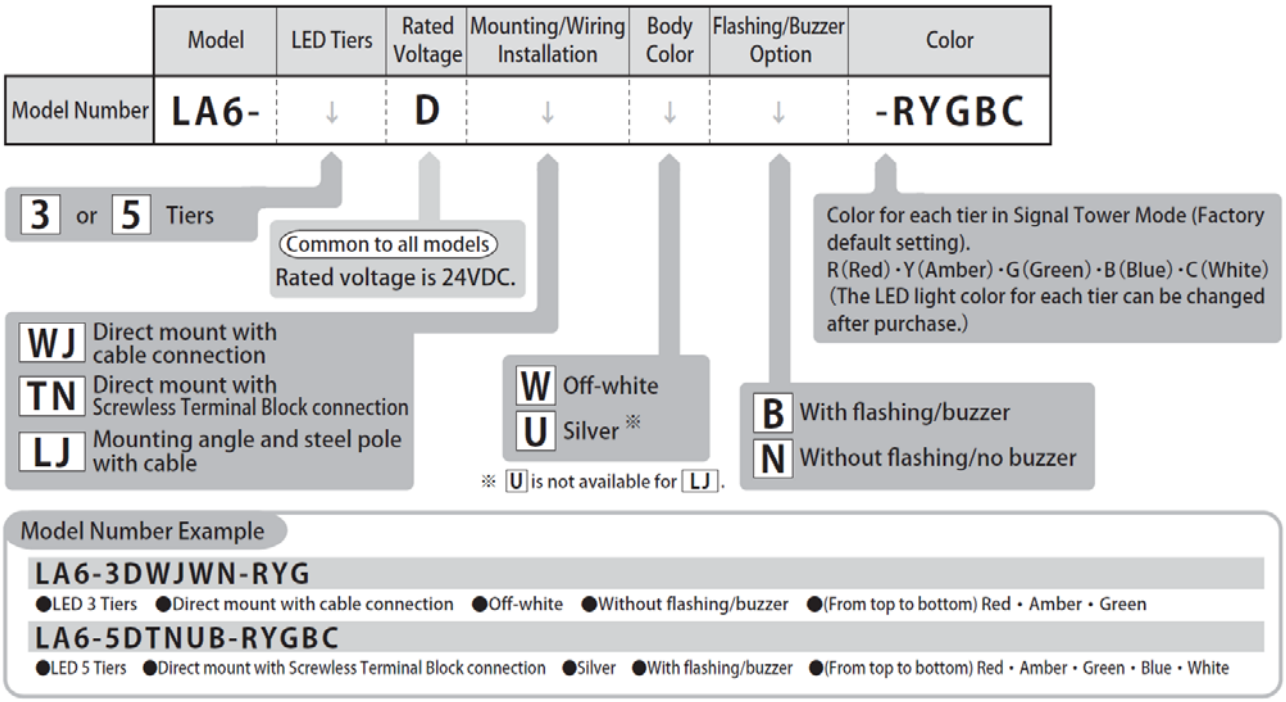
PATLITE Corporation

1. **SPECIFICATION**

<table>
<tr><td colspan="2">Model</td><td colspan="5">LA6-□D□□□-□(Refer to "2. Model Number Configuration")</td></tr>
<tr><td colspan="2">Rated Voltage</td><td colspan="5">24 V DC</td></tr>
<tr><td colspan="2">Operating Voltage Range</td><td colspan="5">±10% of Rated Voltage</td></tr>
<tr><td rowspan="4">Rated Power Consumption</td><td rowspan="2">Standard</td><td>LA6-5 D□□N-RYGBC</td><td>5W</td><td>LA6-5 D□□B-RYGBC</td><td>6.5W</td></tr>
<tr><td>LA6-3D□□N-RYG</td><td>3.5W</td><td>LA6-3D□□B-RYG</td><td>4.5W</td></tr>
<tr><td rowspan="2">Maximum</td><td>LA6-5 D□□N-YYYYY</td><td>7W</td><td>LA6-5 D□□B-YYYYY</td><td>8W</td></tr>
<tr><td>LA6-3D□□N-YYY</td><td>4.5W</td><td>LA6-3D□□B-YY</td><td>5.5W</td></tr>
<tr><td>Environmental Condition</td><td colspan="5">Buzzer: Tone No.1 at Maximum Volume</td></tr>
<tr><td colspan="2">Signal Wire Current</td><td colspan="5">Maximum 70mA</td></tr>
<tr><td colspan="2">Standby Current</td><td colspan="5">Maximum 15mA</td></tr>
<tr><td colspan="2">Operating Ambient Temperature</td><td colspan="5">-25℃ - +60℃</td></tr>
<tr><td colspan="2">Operating Humidity Range</td><td colspan="5">Less than 90% RH (No Dew or Condensation)</td></tr>
<tr><td colspan="2">Storage Temperature Range</td><td colspan="5">-25℃ - +60℃</td></tr>
<tr><td colspan="2">Storage Humidity Range</td><td colspan="5">Less than 90% RH (No Dew or Condensation)</td></tr>
<tr><td colspan="2">Mounting Location</td><td colspan="5">Indoor Only</td></tr>
<tr><td colspan="2" rowspan="2">Mounting Direction</td><td>Upright</td><td colspan="2">Horizontal</td><td>Inverted</td></tr>
<tr><td>  </td><td colspan="2">  </td><td>  </td></tr>
<tr><td colspan="2">Protection Rating</td><td colspan="5">IP65 (buzzer specification: IP54) IEC 60529</td></tr>
<tr><td>Environmental Condition</td><td colspan="5">Upright Installation</td></tr>
<tr><td colspan="2" rowspan="4">Vibration Resistance</td><td>LA6-□□LJ□□</td><td colspan="4">Sweep Durability: Totalamplitude: 0.3 mm_{p-p} (10 - 57.5 Hz),
Acceleration: 20.0 m/s^2 (57.5 - 150 Hz)
Fixed pitch durability: Acceleration 20.0 m/s^2</td></tr>
<tr><td>LA6-□□WJ□□
LA6-□□TN□□</td><td colspan="4">Sweep Durability: Totalamplitude 0.3 mm_{p-p} (10 - 57.5 Hz),
Acceleration: 20.0 m/s^2 (57.5 - 150 Hz)
Fixed Vibration Frequency Durability: Acceleration 10.0 m/s^2</td></tr>
<tr><td colspan="5">IEC 60068-2-6:2010</td></tr>
<tr><td>Environmental Condition</td><td colspan="5">Upright Installation</td></tr>
<tr><td colspan="2">Insulation Resistance</td><td colspan="5">More than 1Mohm at DC500V between the power input lead and chassis.</td></tr>
<tr><td colspan="2">Withstand Voltage</td><td colspan="5">500VAC for 1min between terminals and chassis without breaking insulation</td></tr>
</table>

<table>
<tr><td>Possible display colors</td><td colspan="6">Signal Tower mode 9 colors / Smart mode 21 colors</td></tr>
<tr><td rowspan="3">Display Color
(Typical Luminous Intensity)</td><td colspan="6">red (1000 mcd) amber (1700 mcd) green (2600 mcd) blue (1000 mcd) white (1250 mcd)</td></tr>
<tr><td colspan="6">purple (800 mcd) pink (850 mcd) sky-blue (2150 mcd) lemon (2150 mcd)</td></tr>
<tr><td colspan="6">* Due to the characteristics of the LED elements, a variation in difference of the color tone and brightness of every product may occur.</td></tr>
<tr><td>Flash Rate</td><td colspan="6">60 ±2 fpm</td></tr>
<tr><td rowspan="6">Buzzer Sound
(Typical Frequency)</td><td>No. 1</td><td colspan="2">2400Hz Continuous beep sound</td><td>No.2</td><td colspan="2">2400Hz Rapid intermittent beep
(0.05 sec. sound / 0.05 sec. silent)</td></tr>
<tr><td>No.3</td><td colspan="2">2400Hz Long intermittentbeep
(1.5 sec. sound / 1.5 sec. silent)</td><td>No.4</td><td colspan="2">2400Hz Fast intermittent beep
(0.5 sec. sound / 0.5 sec. silent)</td></tr>
<tr><td>No.5</td><td colspan="2">3600Hz Continuous beep Sound</td><td>No.6</td><td colspan="2">3600Hz Rapid intermittent beep
(0.05 sec. sound / 0.05 sec. silent)</td></tr>
<tr><td>No.7</td><td colspan="2">3600Hz Long intermittentbeep
(1.5 sec. sound / 1.5 sec. silent)</td><td>No.8</td><td colspan="2">3600Hz Fast intermittent beep
(0.5 sec. sound / 0.5 sec. silent)</td></tr>
<tr><td>No.9</td><td colspan="2">2400Hz & 3375Hz Multiplexed Beep
(0.25 sec. / 0.25 sec.)</td><td>No.10</td><td colspan="2">2400Hz & 3600Hz Multiplexed Beep
(0.25 sec. / 0.25 sec.)</td></tr>
<tr><td>No.11</td><td colspan="2">4000Hz & 4800Hz Multiplexed Beep
(0.25 sec. / 0.25 sec.)</td><td colspan="3">-</td></tr>
<tr><td colspan="2">Sound Level</td><td colspan="6">Maximum:85dB</td></tr>
<tr><td>Environmental Condition</td><td colspan="6">Buzzer Sound No.1 measured from the front direction of the buzzer opening at 1m</td></tr>
<tr><td rowspan="2">Volume Control</td><td colspan="6">The set up button is the fourth step (Factory Default: Maximum).</td></tr>
<tr><td colspan="6">[Maximum] -> [-5dB drop from maximum (standard)] -> [-10dB drop from maximum (standard)] -> [OFF] (-> Returns to [Maximum])</td></tr>
<tr><td rowspan="2">Data Transfer Interface</td><td>Main Unit</td><td colspan="5">USB micro-B Terminal Female
USB2.0/1.1 Interface, Transmission Rate: USB2.0/1.1/1.0</td></tr>
<tr><td>Transfer Cable</td><td colspan="5">Charge /Data Transfer compatible Micro USB (not included)
Connector Type: USB (A type) Male- USB (MicroB type) Male</td></tr>
<tr><td>Data Programming Application Software</td><td colspan="6">Exclusive Application Software
(Downloadable from our Homepage)</td></tr>
<tr><td rowspan="4">Mass (Tolerance 10%)</td><td>LA6-3DTN□B</td><td>480g</td><td>LA6-3DLJ□B</td><td>980g</td><td>LA6-3DWJ□B</td><td>450g</td></tr>
<tr><td>LA6-3DTN□N</td><td>420g</td><td>LA6-3DLJ□N</td><td>930g</td><td>LA6-3DWJ□N</td><td>400g</td></tr>
<tr><td>LA6-5DTN□B</td><td>590g</td><td>LA6-5DLJ□B</td><td>1090g</td><td>LA6-5DWJ□B</td><td>560g</td></tr>
<tr><td>LA6-5DTN□N</td><td>530g</td><td>LA6-5DLJ□N</td><td>1040g</td><td>LA6-5DWJ□N</td><td>510g</td></tr>
<tr><td rowspan="3">Compliance Standards</td><td colspan="3">EMC Directive (EN 61000-6-4, EN 61000-6-2)</td><td colspan="3">RoHS Directive (EN 50581)</td></tr>
<tr><td colspan="3">UL508, CSA-C22.2 No.14</td><td colspan="3">KC (KN 61000-6-4, KN 61000-6-2)</td></tr>
<tr><td colspan="3">FCC Part 15 SubpartB Class A</td><td colspan="3">-</td></tr>
<tr><td>Remarks</td><td colspan="6">CE Marking Compliant
UL Recognized Component (File No.E215660)</td></tr>
</table>

2. **Model Number Configuration**

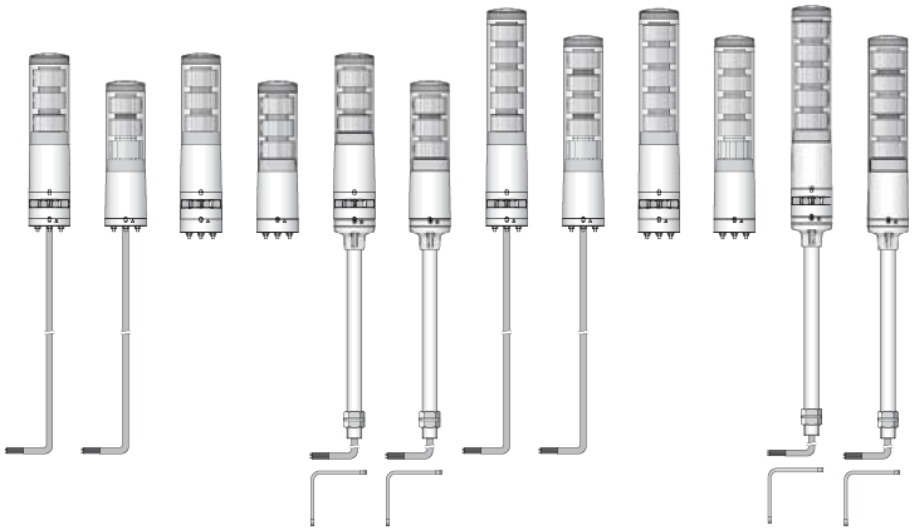


3. Part Names and Dimensions

3.1. Outer Appearance List

The full product appearance is indicated according to its model number. Refer to the model numbers as a reference to its appearance.

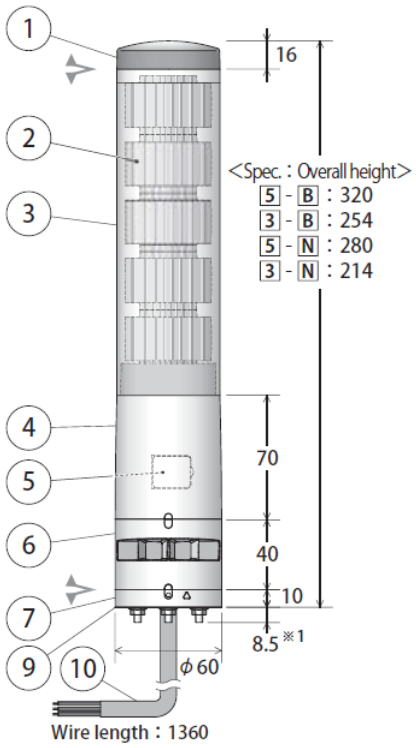
Number of Lens Tiers	3 lens tiers						5 lens tiers					
Mounting/Wiring Installation	WJ		TN		LJ		WJ		TN		LJ	
Body Color	W Off-white / U Silver (Not available for the LJ Specification.)											
Flashing/Alarm Option	B	N	B	N	B	N	B	N	B	N	B	N



3.2. **Part Names and Outer Appearance**

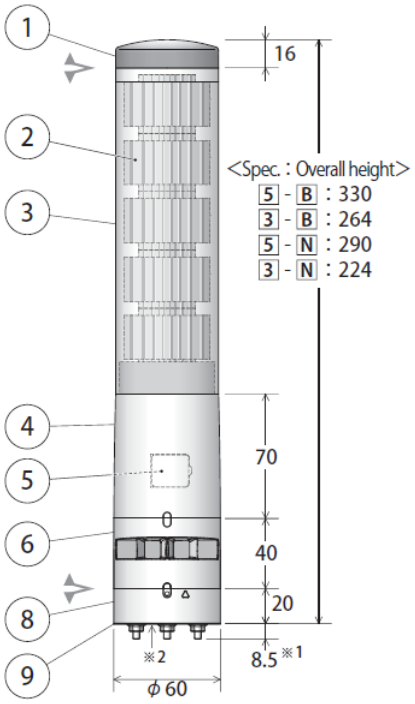
Each figure contains 5 lens tiers, with flashing and Alarm functions.For 3 lens tiers, the outer lens height will be shorter. Also, for specifications not including the flashing/Alarm functions, the product will not include aAlarm unit.

■ WJ Direct mount with cable connection



■ TN Direct mount with Screwless Terminal Block connection

(Unit : mm)



※1 Board thickness range is 4 mm or less.

※2 TN Spec. Underside View

Threaded bore for cable gland attachment (M16×1.5 Effective screw length 12mm)

Cable gland

<Note> The cable gland is not included with this product.

14 Accessory Assembly WJ TN

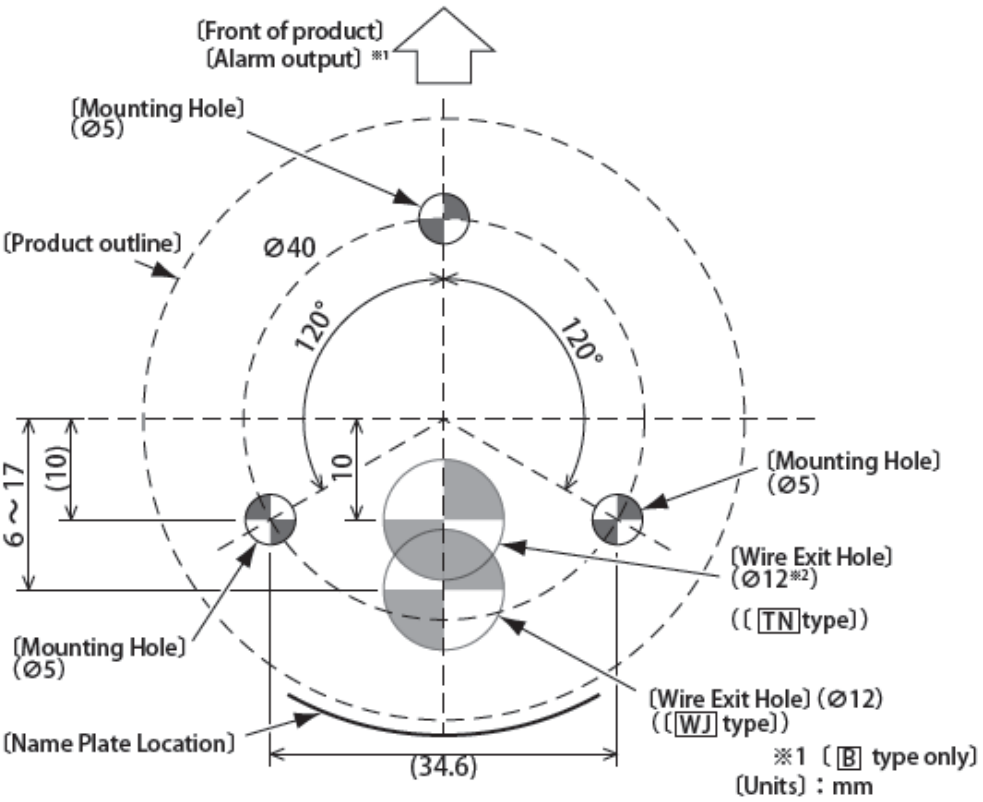
Screw (M4x20)

3pcs.

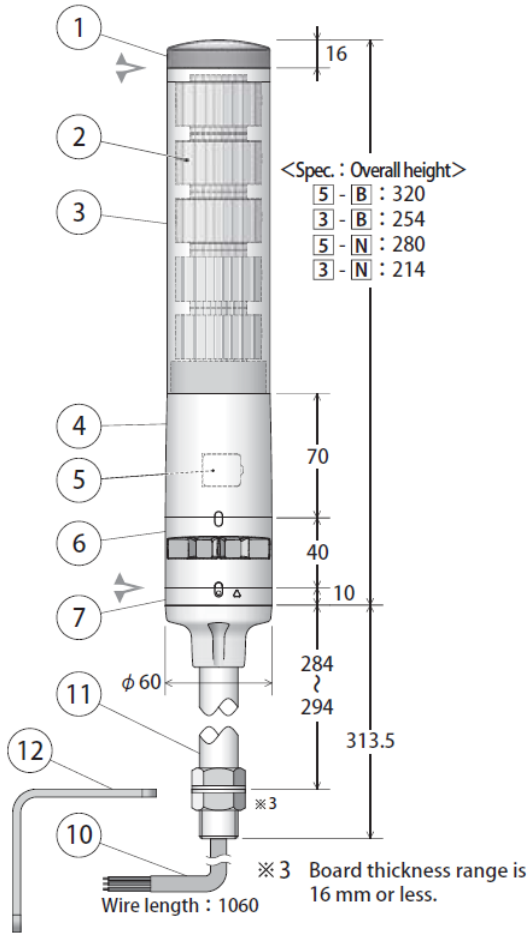
Flanged nut (M4)

3pcs.

■WJ TN Mounting Dimension



■ LJ Steel pole with mounting angle and cable

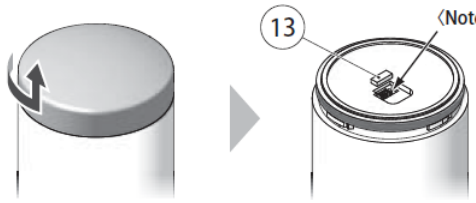


Number	Name	Material	Number	Name	Material
1	Head Cover	ABS	8	Terminal Block Bracket	ABS
2	Lens	PMMA	9	Waterproof Packing	Urethane Foam
3	Outer lens	PC	10	Cable	PVC
4	Body	ABS	11	Pole	Steel Pipe
5	USB cover	ABS	12	Mounting Angle	Steel Plate
6	Buzzer case	ABS	13	Setup Button	ABS
7	Direct-mount Bracket	ABS	14	Accessory Assembly	Steel

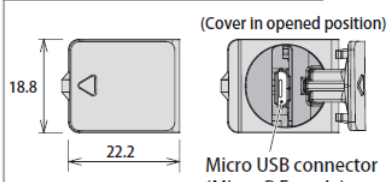
〈Note〉 The arrow mark (stackable mark) shows the part of the Main Unit (upper portion of bracket) which can be removed.
Do not disassemble any parts other than the parts indicated above.

13 Setup Button (Head Cover removal)

Remove the head cover by turning it to the left to release it from the locked position. (Perform in the reverse for removal to re-assemble.)

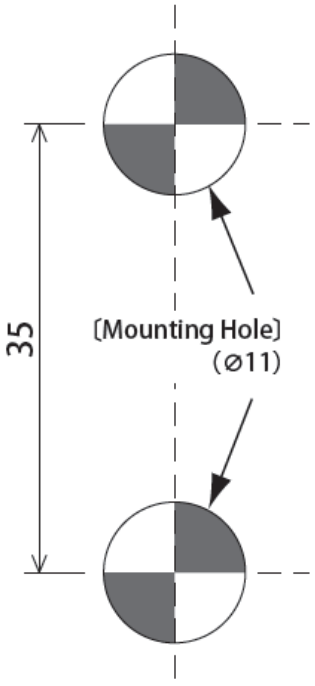


5 USB cover parts in detail

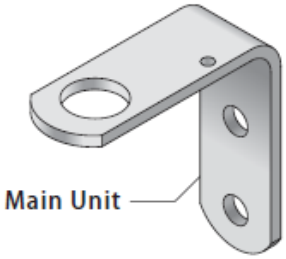


〈Note〉
- To open the USB cover, insert a minus driver (blade-edge width of 3 mm, thickness of 0.5 mm or less) in the indented part and lightly pry it open.
(If there is concern with scratching or damaging the Main Unit, it is recommended to use an object made of ceramics.)
- Ensure the USB cover is closed at all times.'If not securely closed, its waterproof performance will decrease.

■ LJ Mounting Dimension

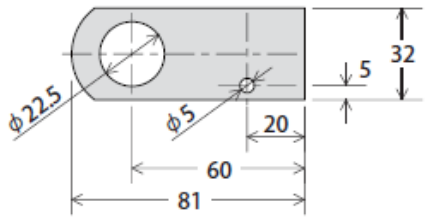


3.3. **Attachment Angle Part Names and Dimensions**

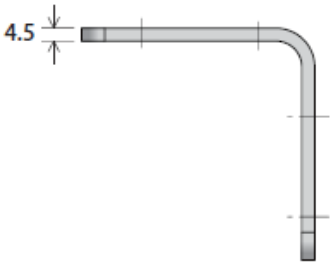


(Unit : mm)

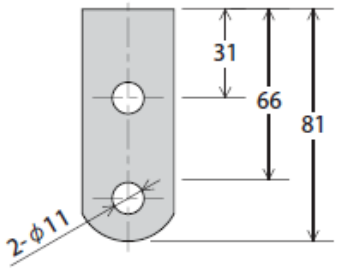
Top View



Side view



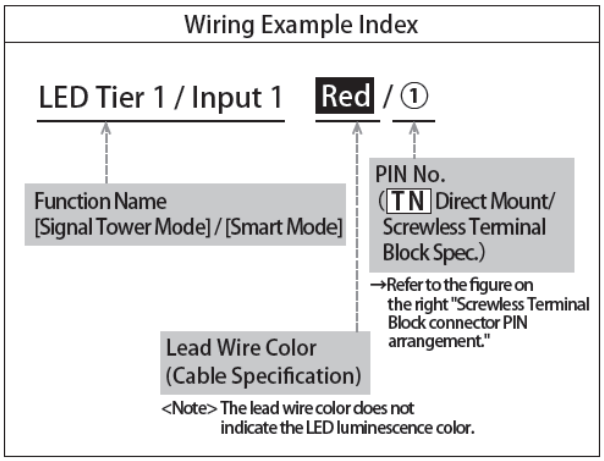
Rear view



4. **Wiring**

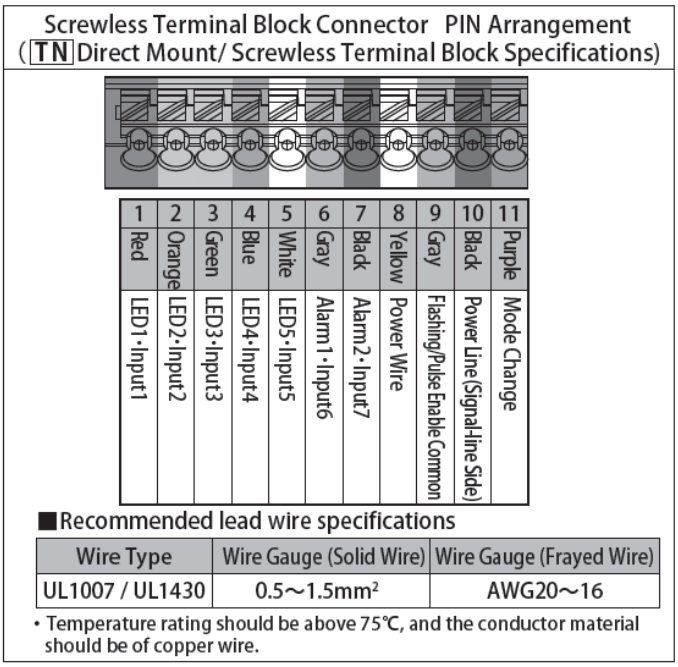
The wiring example indicates how to connect to external contacts for every classification.

If there are any special applications that require asking questions concerning this product, feel free to contact your PATLITE Sales Representative.



■Alarm Sound Pattern (Factory Default)

Alarm1	Alarm Sound No.1
Alarm2	Alarm Sound No.2
Alarm 1 and Alarm 2 Entered Simultaneously	Alarm Sound No.9

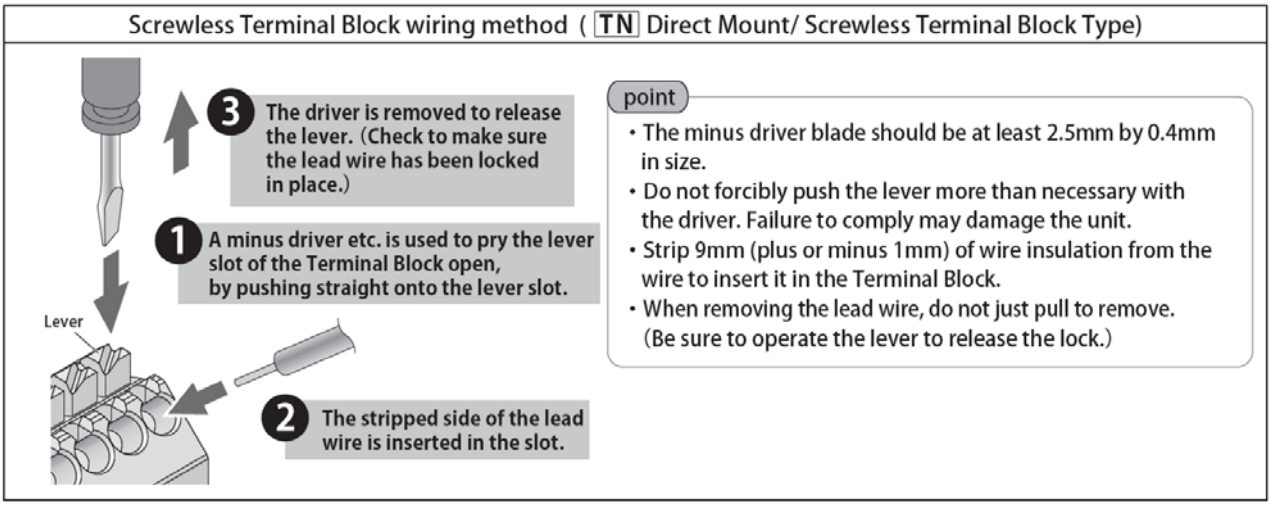


■Recommended lead wire specifications

Wire Type	Wire Gauge (Solid Wire)	Wire Gauge (Frayed Wire)
UL1007 / UL1430	0.5～1.5mm²	AWG20～16

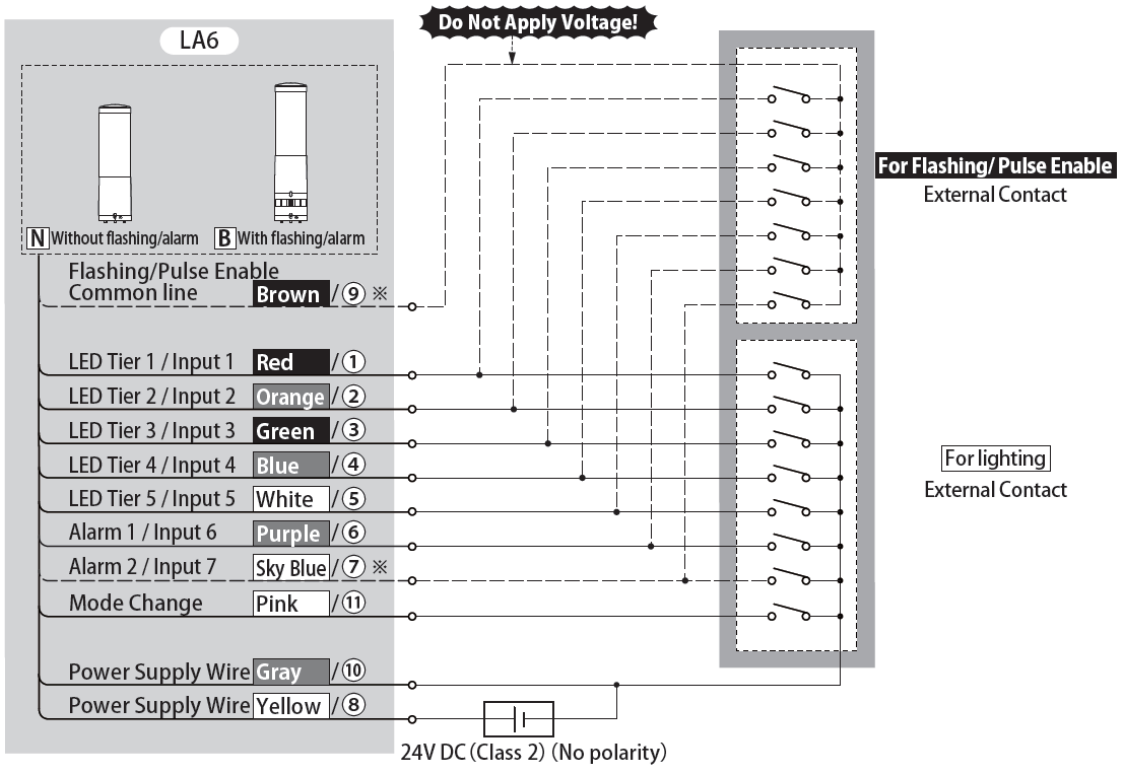
• Temperature rating should be above 75℃, and the conductor material should be of copper wire.

* For the Mode switch-over, refer to "6. How to Use" for further details.



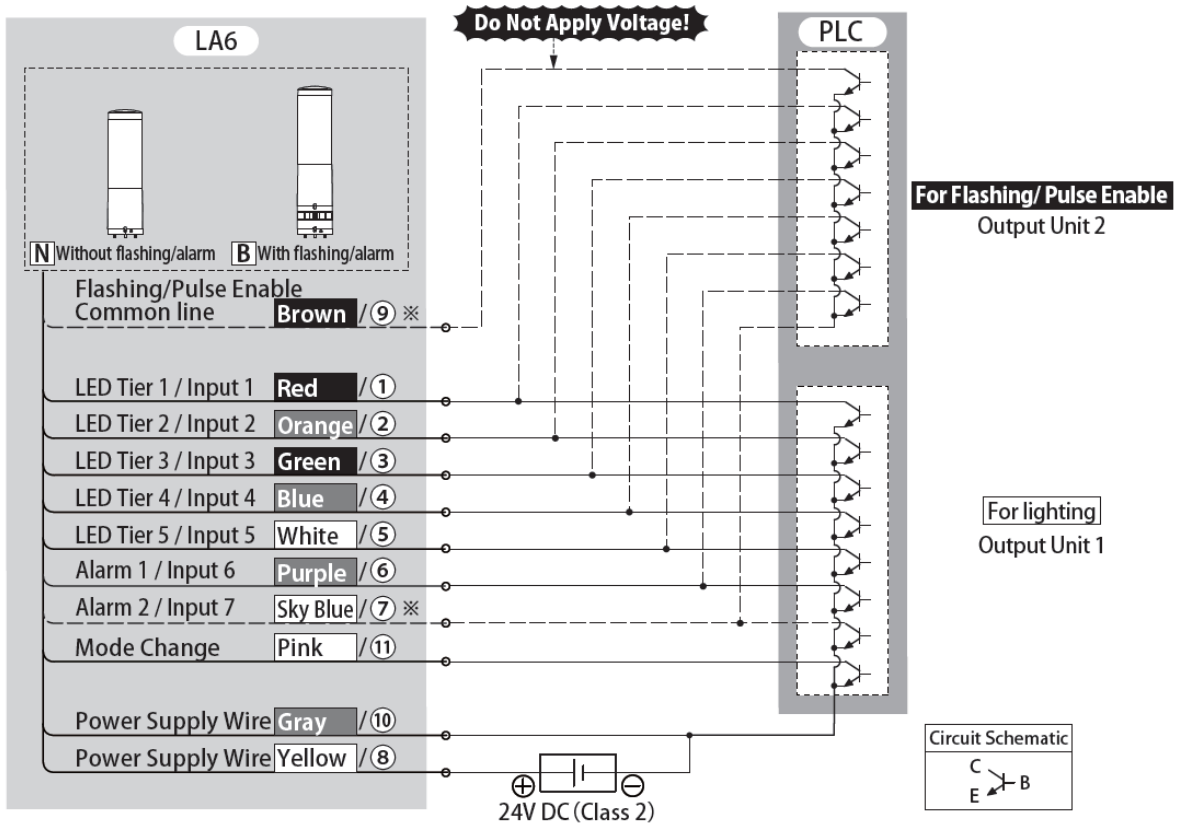
* When lighting and flashing are used together in the Signal Tower mode with a PLC, it is necessary to separate the flashing and non-flashing circuit outputs on the PLC side.

When connected to powered relay contacts



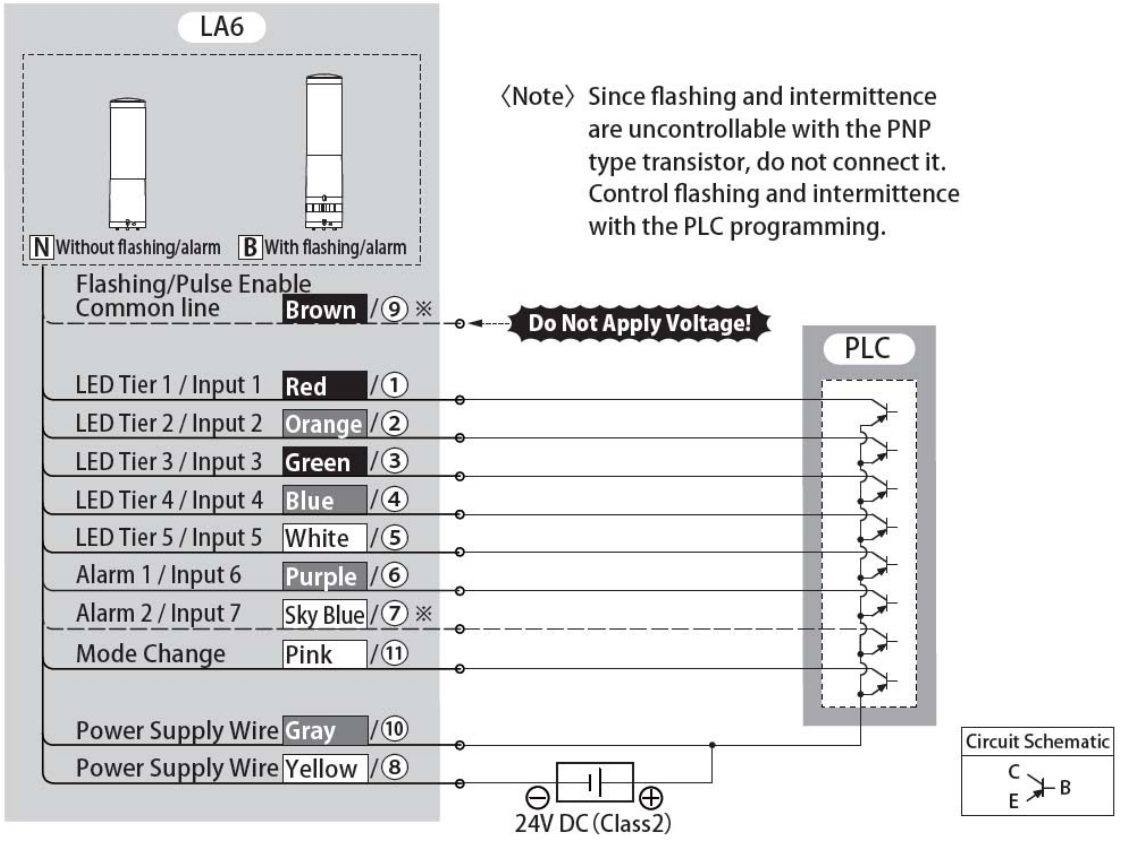
* B Only for flashing / Alarm specifications

When connected to a PLC (NPN type transistor)



* B Only for flashing / Alarm specifications

When connected to a PLC (PNP type transistor)

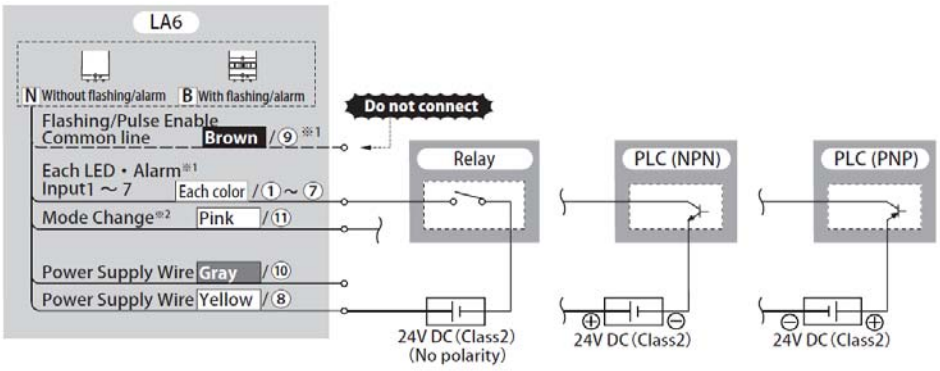


* B Only for flashing / Alarm specifications

- When not connected to the Power Supply Wire (Gray /(10)), a supply current and inrush current is still present. Refer to Tables 2 and 3 when selecting an external contact within the allowable contact capacity.

External Contact Classification

Voltage Contact Relay or PLC



※1 B Flashing/alarm Specifications only.
※2 There is no inrush current on Pink wire for mode change.

Table 1 Signal Contact Capacity

Current Capacity	100mA or more
Withstand Voltage	DC35 V or more
Leakage Current	0.1mA or less
ON Voltage (Vsat)	1V or less

Table 2 Supply Inrush Current

Inrush Current Value
16A / 5us

Table 3 Supply Current

Model	Current
LA6-3D□□□N	170mA
LA6-3D□□□B	210mA
LA6-5D□□□N	260mA
LA6-5D□□□B	300mA

5. **Operating Directions**

The operation of this product contains two modes; "Signal-Tower Mode" and "Smart Mode".The explanation for each mode shows fairly significant differences to them.

Changing between the Signal-Tower mode and the "Smart Mode" is a simple ON/OFF in the "Mode Change".

Mode Switch ON: Smart Mode

Mode Switch OFF: Signal Tower Mode

Although a fundamental level hold controls the inputs, only a trigger input in the pulse trigger type for the smart mode turns into a one shot input.The "Mode Switch" can also be used for the recombination of colors, changing the amount of Alarm sounds, and product initialization sequences.

5.1. **Signal-Tower Mode**

The Signal Tower Mode controls operation with ON/OFF inputs from the wires currently assigned to each LED and Alarm, like our conventional Signal Towers.When short-circuiting each input to the "Flashing/Pulse Enable Common", The LED will flash, and an intermittent Alarm sound will occur.

The Signal Tower Mode set up can be done in our REVOLITE EDITOR (Free download from our company's Homepage).

●**The set up**

This type can be set up as shown in the following table.

Setting Index	Description
LED Lighting/flashing	Flashing rates are selectable from 30 times per minute, 60 times per minute, or 120 times per minute.
Alarm Tone	Alarm Silence or one tone can be selected from 11 kinds.
LED Color	LED lights On or Off can be selected.

●LED Input Conversion Table

For inputs 1-7, LED and Alarm ON/OFF can be entered into the diagram.

Table 3. Signal Tower Mode Input Conversion Table

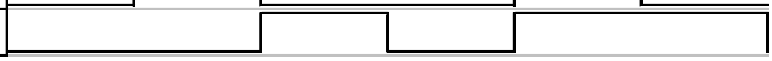
Input	Output	
1	LED Tier 1 (Red)	
2	LED Tier 2 (Amber)	
3	LED Tier 3 (Green)	
4	LED Tier 4 (Blue)	
5	LED Tier 5 (White)	
6	Alarm 1 Tone No.1	Alarm 3 Tone No.9 * When inputs are simultaneously entered
7	Alarm 2 Tone No.2	

* Factory settings

●Operation Example

For inputs 1-7, an example of an output of the operation is shown.

Operating Condition	LED Tier 1	Off	Red	Off	Off	Red	Off
	LED Tier 2	Off	Off	Amber	Off	Off	Off
	LED Tier 3	Off	Off	Green	Green	Green	Off
	LED Tier 4	Off	Off	Blue	Blue	Off	Off
	LED Tier 5	Off	Off	Off	White	Off	Off
	Buzzer	Mute	Tone 1	Tone 2	Mute	Tone 3	Tone 2

Signal Input	Input 1	
	Input 2	
	Input 3	
	Input 4	
	Input 5	
	Input 6	
	Input 7	

* Factory settings

5.2. **Smart Mode**

There are three kind of modes, "Time-trigger Type", "Pulse Trigger Type", and "Single-display Type".
The factory default input is the time trigger type, but there is a pulse trigger type and single display type,of which each type can be changed by the setup, which means it is necessary to create the setup data and transmit it to the product with a personal computer which has the REVOLITE EDITOR (Free download from our company Homepage) installed in it. (Refer to "7. Changing Data" for details on how to change the data)
For details, please refer to the software help section.
The main mode has common functions for each type and has the following at this mode.

●Input 6 (mute input)

The Alarm sound stops when an "ON" input occurs, and muffles the sound.

●Input 7 (clear input)

If an input for each type is set to ON, the pattern contents which are controlling the operation will be initialized and it will return to the first pattern.Also, LED's from all the tiers will go out at an "ON" input, and the Alarm is also muffled.
Refer to each type to for the explanation of how they should look.

Time-trigger Type

The Time Trigger function has 63 set patterns to which the memory contains two or more patterns used as a series of wave-like flows, etc. that can be used in groups.The time trigger operates in accordance with time, and the pattern transition timing operates during this group operation.In addition, the maximum memory of 15 groups can be set up in ON/OFF combinations, and a call is made to inputs 1-4.

Moreover, the time trigger type for input 5 turns into a STOP input, and during the input, operates by either one of the following contents, and stops the time progress of the pattern changes.

- STOP input of a pattern currently on display to change to a lighted state.
- STOP input of a pattern currently on display to change to a flashing state.
- STOP input of a special pattern currently on display to change to a lighted state.
- STOP input of a special pattern currently on display to change to a flashing state.

The setup to select these can be performed in the REVOLITE EDITOR (it is free download in our company HP).

●The set up

This type can be set up as shown in the following table.

Set up range	Setting Index	Description
Every Group	Display Repeats	When even the last set-up pattern changes and display time is exceeded, it is either selected to return to the head pattern of the group, or is considered as the last pattern.
	Display Time Unit	Every 1 second and every 0.1 seconds are selected for the display time in units, to be set up for each pattern.
	STOP Input Operation	A STOP input can be selected for four operations when turned "ON".
Every Pattern	Display Time	Select the time until a pattern changes to the next pattern.
	LED Lighting/flashing	Select all LEDs to turn on or flash. Flashing rates are selectable from 30 times per minute, 60 times per minute, or 120 times per minute.
	Alarm Tone	Alarm Silence or one tone can be selected from 11 kinds.
Every Tier	LED Color	LED lights On or Off can be selected.

●Group Input Conversion Table

For inputs 1-4, group No. in the combination of ON/OFF can be put into the diagram.

Table1.Time Trigger Type Input Conversion Table

Group No.	Input 1	Input 2	Input 3	Input 4
1	ON			
2		ON		
3	ON	ON		
4			ON	
5	ON		ON	
6		ON	ON	
7	ON	ON	ON	
8				ON
9	ON			ON
10		ON		ON
11	ON	ON		ON
12			ON	ON
13	ON		ON	ON
14		ON	ON	ON
15	ON	ON	ON	ON
An empty cell indicates the "OFF" condition.				

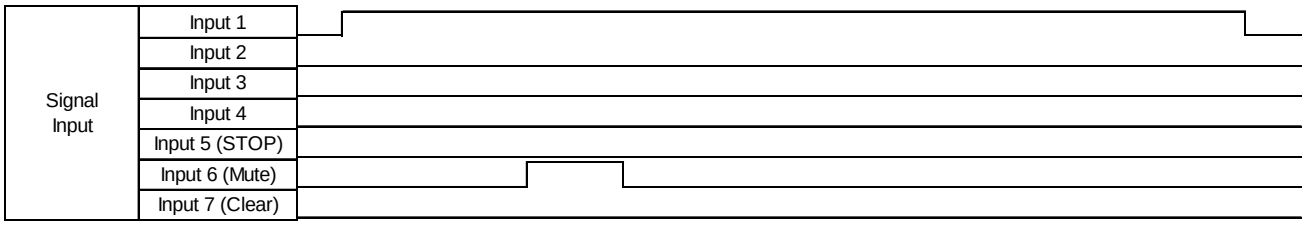
* With a time trigger type, an "ON" status on input 7 can cause the clearance (reset) of the operation, an "ON" status on input 6 can cause aAlarm mute, and an "ON" status on input 5 can cause a STOP in time progress of the pattern changes.

●Operation Example

The folloing are examples of the time trigger type operation.In addition to time progress and pattern changes, the figure also shows the mute input operation.

[Group/Pattern No.]

Operating Condition	LED / Buzzer	Off / Mute	1/1	1/2	1/3	1/4 / Mute	1/5	...	1/60	1/61	1/62	1/63	Off / Mute

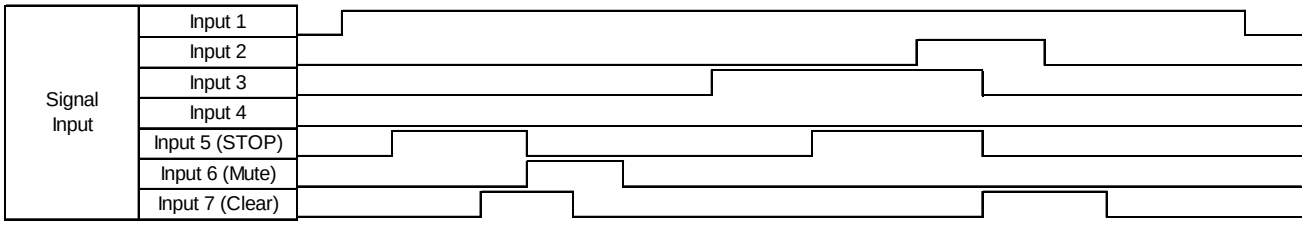


* The time trigger type operating state is an example for setting data.

In addition to time progress and pattern changes, the figure also shows the STOP input operation, the mute input, and the clear input.A STOP input setup shows an indication of the pattern at a STOP input by flashing.

[Group/Pattern No.]

Operating Condition	LED / Buzzer	Off / Mute	1/1	1/2 (STOP)	Clear	1/1 / Mute	1/2	5/1	5/2	5/3 (STOP)	Clear	1/1	1/2	Off / Mute



* The time trigger type operating state is an example for setting data.

Pulse-trigger Type

The pulse-trigger type is operated like a time trigger type for a group. However, with the pattern transition timing, it is only used as a one shot pulse for input 5.

The memory of the a maximum of 15 groups can be done, and the combination of ON/OFF to the inputs 1-4 performs a call.This setup can be made in the REVOLITE EDITOR (Free download at our company's Homepage).

●The set up

This type can be set up as shown in the following table.

Set up range		Setting Index	Description
Every Pattern		LED Lighting/flashing	Select all LEDs to turn on or flash. A flashing is selected from the speed for /- 120 times by /- 60 times by /30 times.
		Alarm Tone	Alarm Silence or one tone can be selected from 11 kinds.
	Every Tier	LED Color	LED lights On or Off can be selected.

●Group Input Conversion Table

For inputs 1-4, group No. in the combination of ON/OFF can be put into the diagram.

Table 2.Pulse Trigger Type Input Conversion Table

Group No.	Input 1	Input 2	Input 3	Input 4
1	ON			
2		ON		
3	ON	ON		
4			ON	
5	ON		ON	
6		ON	ON	
7	ON	ON	ON	
8				ON
9	ON			ON
10		ON		ON
11	ON	ON		ON
12			ON	ON
13	ON		ON	ON
14		ON	ON	ON
15	ON	ON	ON	ON
An empty cell indicates the "OFF" condition.				

* With a pulse trigger type, an "ON" state on input 5 (one shot pulse), can make a pattern change, an "ON" state on input 6 can cause the Alarm to mute, and an "ON" state on input 7 can cause a clear (reset) of the operation.

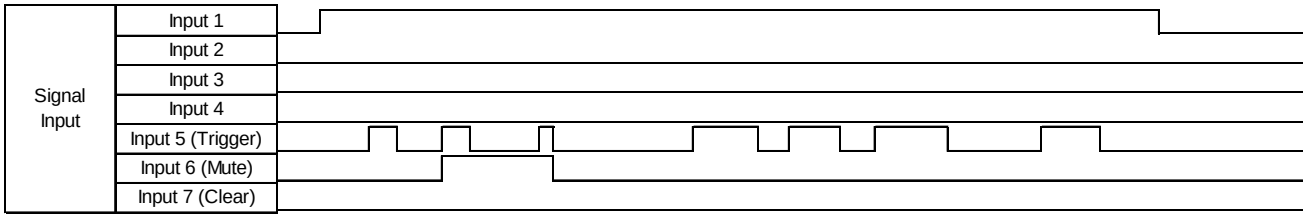
●Operation Example

The following are examples of the pulse-trigger type operation.

In addition to trigger input and pattern changes, the figure shows the operation of the mute input.

[Group/Pattern No.]

Operating Condition	LED / Buzzer	Off / Mute	1/-	1/1	1/2 / Mute	1/3	...	1/60	1/61	1/62	1/63	Off / Mute

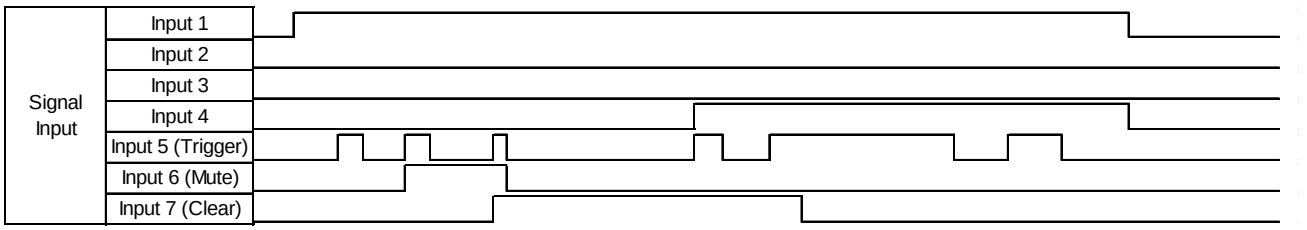


* The pulse trigger type operating state is an example for setting data.

In addition to trigger input and pattern changes, the figure shows the operation of the mute input and the clear input.

[Group/Pattern No.]

Operating Condition	LED / Buzzer	Off / Mute	1/-	1/1	1/2 / Mute	Clear	9/-	9/1	Off / Mute



Single-display Type

There are 31 pattern varieties with the product's internal memory that can be used in combination of ON/OFF inputs from signal wire inputs 1-5 to operate the LED display colors.Although the flashing/Alarm functions can be used, the LED wave-like color flow, etc., cannot be used.

The setup for each pattern can be made in the REVOLITE EDITOR (Free download at our company's Homepage).

●The set up

This type can be set up as shown in the following table.

Set up range		Setting Index	Description
Every Pattern		LED Lighting/flashing	Select all LEDs to turn on or flash. Flashing rates are selectable from 30 times per minute, 60 times per minute, or 120 times per minute.
		Alarm Tone	Alarm Silence or one tone can be selected from 11 kinds.
	Every Tier	LED Color	LED lights On or Off can be selected.

●Input Pattern Conversion Table

For inputs 1-5, Pattern numbers in combination of ON/OFF can be put into the diagram.

Table 3.Single Display Type Input Conversion Table

Pattern No.	Input 1	Input 2	Input 3	Input 4	Input 5
1	ON				
2		ON			
3	ON	ON			
4			ON		
5	ON		ON		
6		ON	ON		
7	ON	ON	ON		
8				ON	
9	ON			ON	
10		ON		ON	
11	ON	ON		ON	
12			ON	ON	
13	ON		ON	ON	
14		ON	ON	ON	
15	ON	ON	ON	ON	
16					ON

Pattern No.	Input 1	Input 2	Input 3	Input 4	Input 5
17	ON				ON
18		ON			ON
19	ON	ON			ON
20			ON		ON
21	ON		ON		ON
22		ON	ON		ON
23	ON	ON	ON		ON
24				ON	ON
25	ON			ON	ON
26		ON		ON	ON
27	ON	ON		ON	ON
28			ON	ON	ON
29	ON		ON	ON	ON
30		ON	ON	ON	ON
31	ON	ON	ON	ON	ON

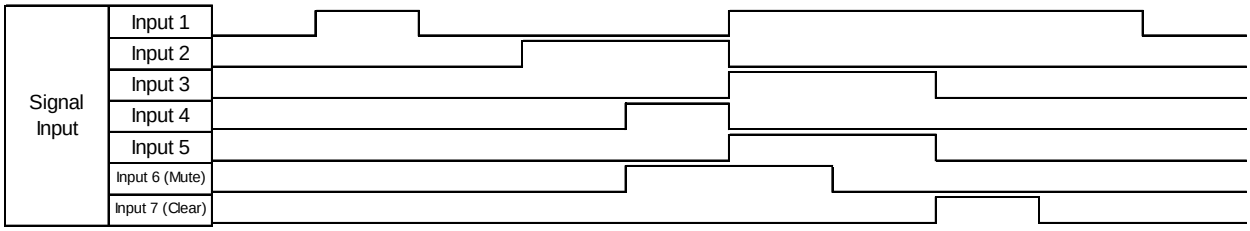
An empty cell indicates the "OFF" condition.

* For a single display type, with an "ON" status on input 6, a clear (reset) operation can be done, and an "ON" status on input 7 can cause the Alarm to be muted.

●Operation Example

The following are examples of the single display type operation.

Operating Condition	LED / Buzzer	Off / Mute	Pattern 1	Off / Mute	Pattern 2	Pattern 10 / Mute	Pattern 21	Clear	Pattern 1	Off / Mute

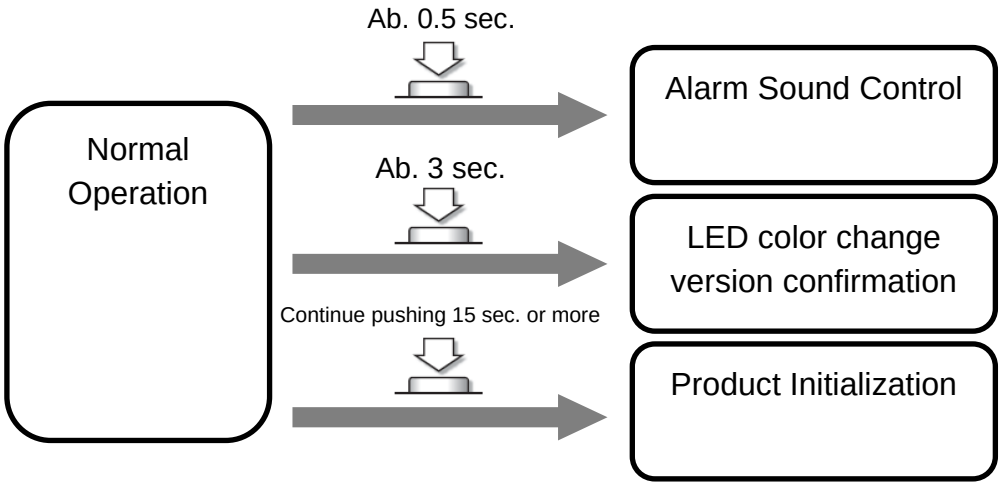


5.3. **Mode Switch Operation**

The following operations can be controlled by the Mode Switch.

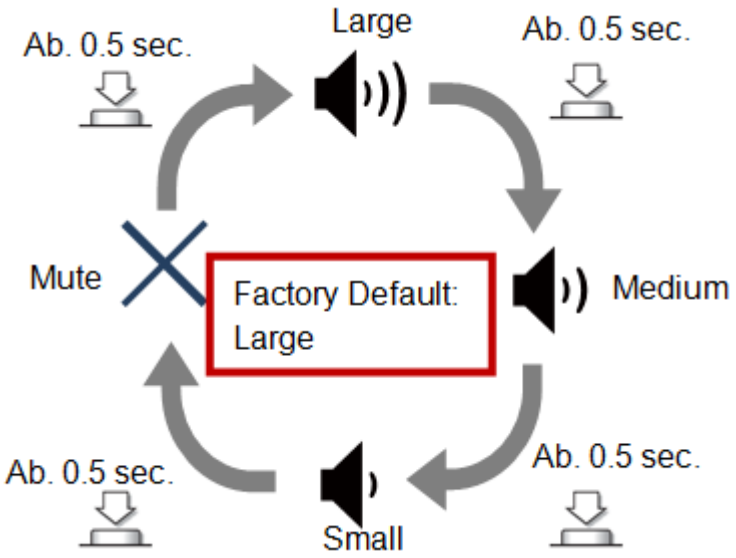
- Alarm Sound Control
- LED Color Change
- Version Confirmation
- Product Initialization

The following figure shows the timing of when pushing the Mode Switch can perform these operations.
As a caution, no signal inputs are received during each setup.



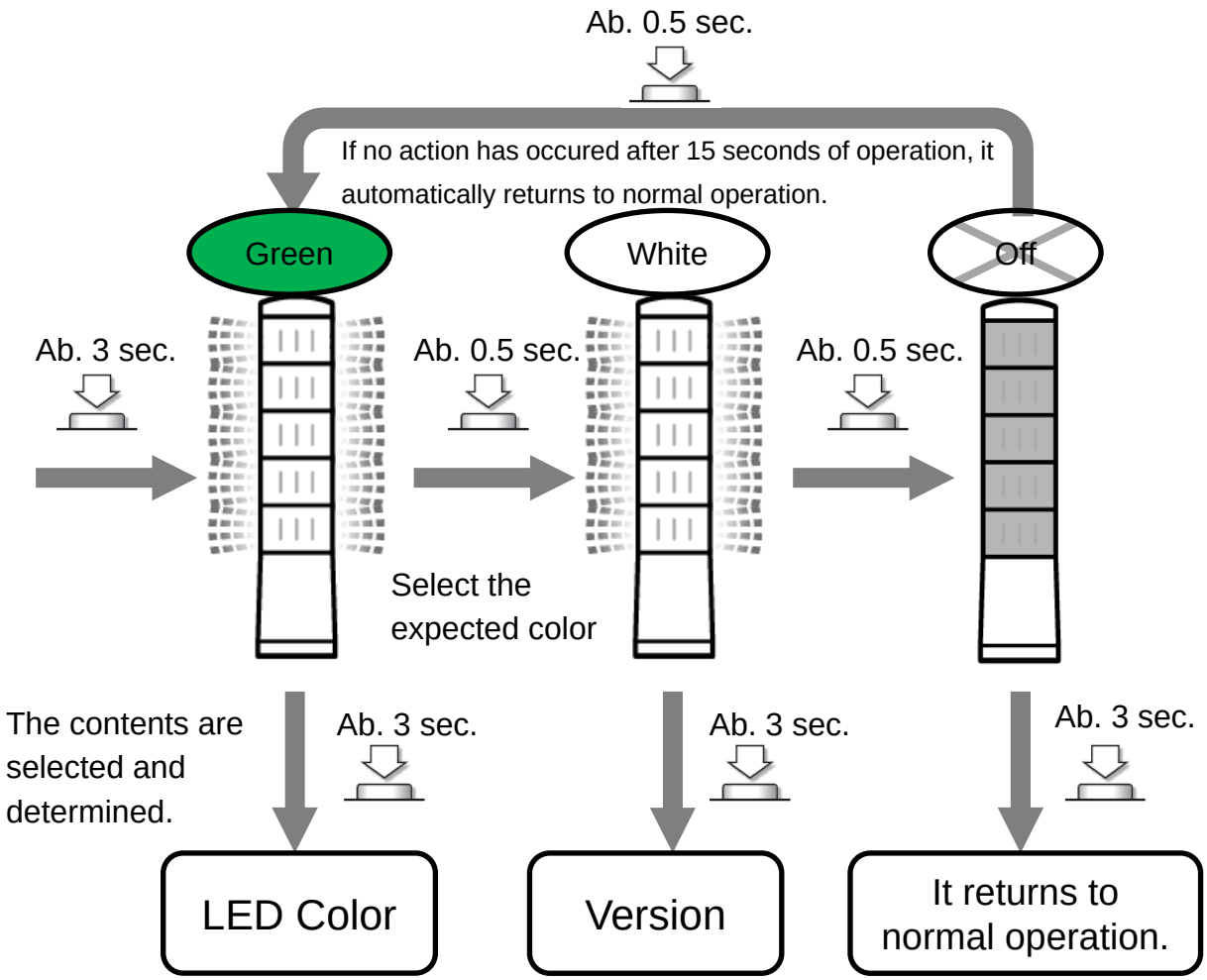
●Alarm Sound Control

The Alarm sound adjustment is done by pushing the Mode Switch for about 0.5 seconds.Whenever the Mode Switch is pushed, the volume changes in the order according to the following figure, and a beep sound is heard with the changing of the volume.Volume adjustment is completed when the beep sound is done.



●LED color change and version confirmation selection

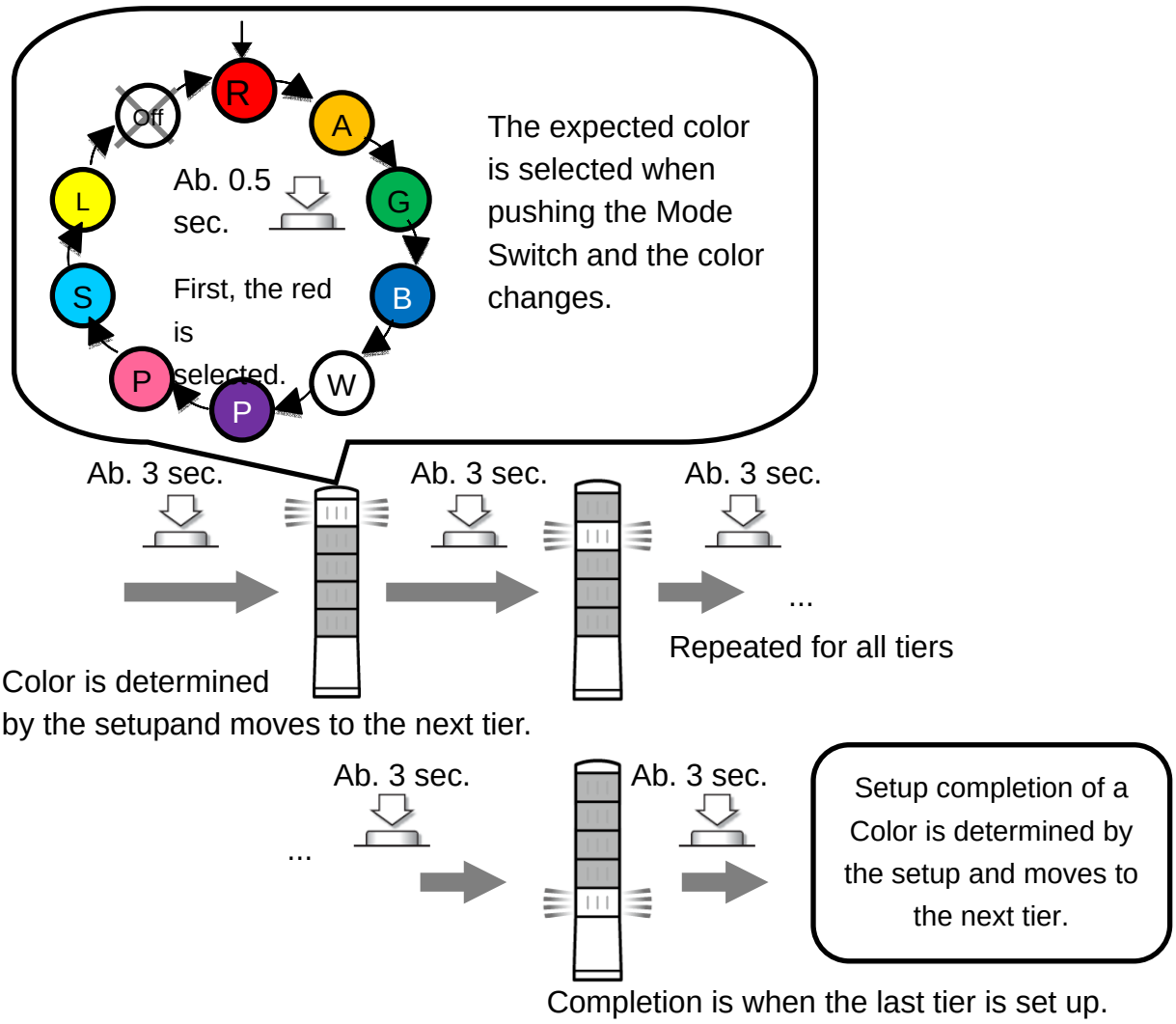
When all LED tiers flash a green color, the LED color change or version confirmation can be selected because it is in that status.As shown in the following figure, when the Mode Switch is pushed for about 0.5 seconds, 3 different selections for the LED color change, version confirmation, and return to the normal mode can be selected.Once the selection is made, if the Mode Switch is pushed somewhat longer (about 3 seconds), then the mode goes into the contents selected.



●LED color change

The LED color which operates in the Signal Tower mode can be changed.First, the LED color change starts from the1st tier where the red LED turns on.As shown in the following figure, whenever it pushes a Mode Switch short (about 0.5 second), the 1st step of LED lighting color changes in order.

To change the LED color to a different preference, by pushing the Mode Switch somewhat longer (about 3 seconds), the expected color status that is on, such as the 1st LED tier color, can change to the next LED tier color, such as the 2nd LED tier color, by selecting the desired lighted state.Once the last LED tier color is changed and the Mode Switch is pushed somewhat longer (about 3 seconds), like with the 1st LED tier, all LED color changes are complete.

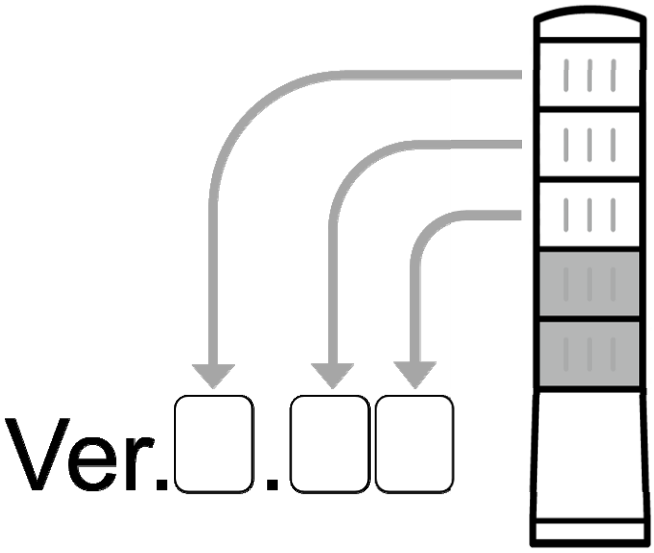


●Version Confirmation

To verify the firmware version, three LED tiers will flash in accordance to the current firmware version, indicated from top to bottom. The following table indicates the meaning for each flashing LED color and the corresponding number.

LED Color	Corresponding Number
Off	0
Red	1
Amber	2
Green	3
Blue	4
White	5
Purple	6
Pink	7
Sky-blue	8
Lemon	9

The version is expressed in the order from the LED top to bottom, as shown in the figure below.



For a detailed verification of the current version, the "REVOLITE EDITOR" application can be used to check from the PC.
If the is no personal computer, etc., available in its environment, contact your nearest Patlite Sales Representative and tell them the status of LED tiers displayed to determine the current firmware version.
From the version confirmation status, pressing the Mode Switch somewhat longer (3 seconds), or leaving it for 15 seconds untouched, will automatically cause it to return to normal operation.

6. **ChangingData**

With the "REVOLITE EDITOR" application software, setup data can be changed and transmitted into this product.

●Necessary Items

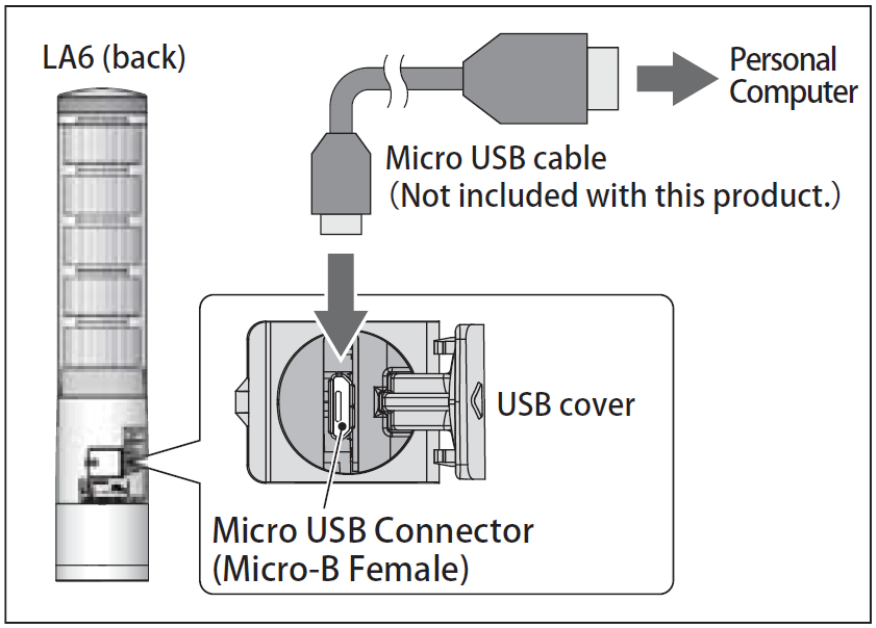
- This product
- Personal Computer (with all hardware operating normally)
- MicroUSB cable for Charging/Data Transfer (USB A male to USB Micro-B male * not included with this products)
- "REVOLITE EDITOR" Application Software

  Supporting OS: Windows®7 32 bit/64 bit, and Windows®8 32 bit/64 bit, and Windows®8.1 32 bit/64 bits

●Transfer Procedure

① Product changes to standby status (all signal inputs OFF).
(Power supply input can be ON or OFF, whichever is easier)

② Open the USB cover to the product, use the MicroUSB cable to connect the product to the personal computer.



③ Click the "Transmission" button in the "REVOLITE EDITOR" application.

④ From the start of data transfer, it takes about 15 seconds before the "Transfer was completed" prompt is displayed.

⑤ Remove the micro USB cable and close the USB cover completely.

7. **Time Chart**

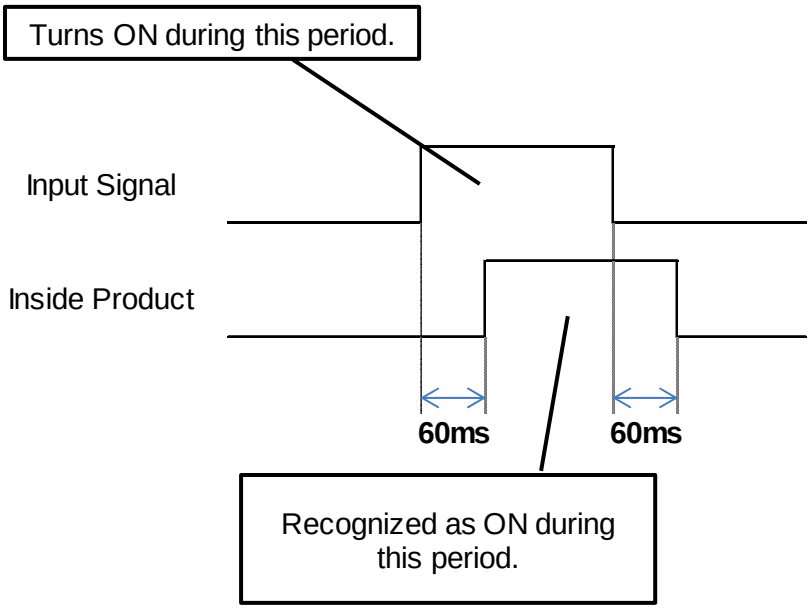
A signal input and its input signal recognition are determined based on the time chart shown below.This product is roughly classified into two input signals, as indicated from the following contents.

- Standard Input Signal... All input signals, except a trigger input, are level hold inputs.
- Trigger Input Signal ... It is a one shot input. (Only for the pulse trigger type)

Refer to the items in each chart.
In addition, the signal input holding time (data lead time) of this product is common to all signal inputs (except for the Mode Switch).
Data lead time is 60 milliseconds.

7.1. **Basic Signal Input Time Chart**

If an input signal status is maintained by the data lead time indicated for this product, the input status is decided inside the product.



7.2. **Trigger Input Signal Time Chart**

Unlike other inputs, the trigger input in the "Smart Mode" turns into a one shot input.As the time in detection rises, and is maintained, the next detection is not recognized.