

PATLITE[®]

Signal Tower

Specifications
[Type: LA6]

PATLITE Corporation

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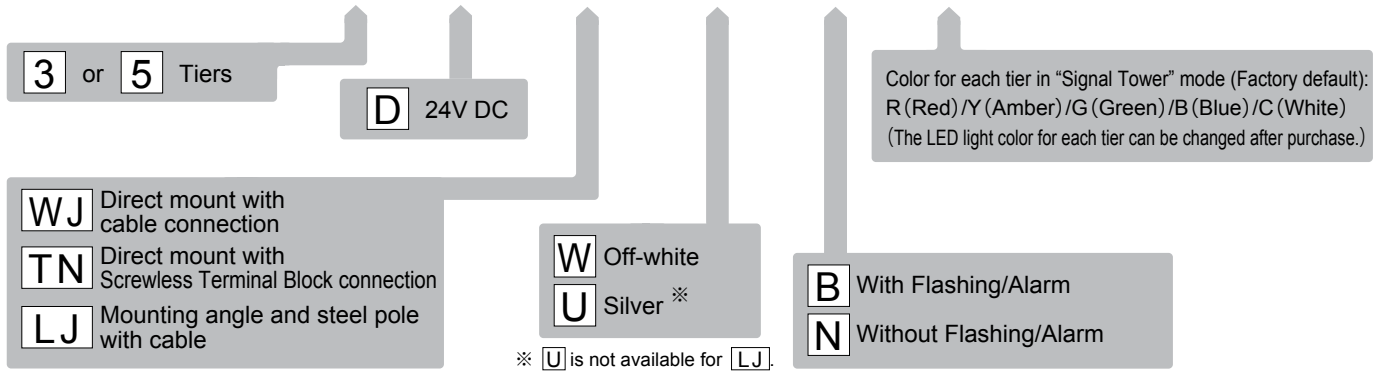
1. Specifications

Model		LA6-□D□□□-□ (Refer to "2. Model Number Configuration")			
Rated Voltage		DC24 V			
Operating Voltage Range		±10% of Rated Voltage			
Rated Power Consumption	Standard	LA6-5 D□□N-RYGBC	5.0W	LA6-5 D□□B-RYGBC	6.5W
		LA6-3D□□N-RYG	3.5W	LA6-3D□□B-RYG	4.5W
	Maximum	LA6-5 D□□N-YYYY	7.0W	LA6-5 D□□B-YYYY	8.0W
		LA6-3D□□N-YYY	4.5W	LA6-3D□□B-YY	5.5W
Environmental Condition		Alarm: Tone No.1 at Maximum Volume			
Signal Wire Current		Maximum 70mA			
Standby Current		Maximum 15mA			
Operating Ambient Temperature		-25°C - +60°C			
Operating Humidity Range		Less than 90% RH (No Dew or Condensation)			
Storage Temperature Range		-25°C - +60°C			
Storage Humidity Range		Less than 90% RH (No Dew or Condensation)			
Mounting Location		Indoor Only			
Mounting Direction		Upright/Inverted Direction			
Protection Rating		IP65 (Alarm specification: IP54) IEC 60529			
Environmental Condition		Upright Installation			
Vibration Resistance	LA6-□□L□□	Sweep Durability: Total amplitude: 0.3 mmp-p (10 - 57.5 Hz),			
		Acceleration: 20.0 m/s ² (57.5 - 150 Hz)			
		Fixed pitch durability: Acceleration 20.0 m/s ²			
	LA6-□□WJ□□ LA6-□□TN□□	Sweep Durability: Total amplitude 0.3 mmp-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			
Environmental Condition		JIS C 60068-2-6:2010			
Insulation Resistance		More than 1Mohm at DC500V between the power input lead and chassis.			
Withstand Voltage		500VAC for 1min between terminals and chassis without breaking insulation			
Display Color Variations		Signal Tower Mode: 9 Colors Smart Mode: 21 Colors			
Display Color (Typical Luminous Intensity)		red (1000 mcd) amber (1700 mcd) green (2600 mcd) blue (1000 mcd) white (1250 mcd) purple (800 mcd) pink (850 mcd) sky blue (2150 mcd) lemon (2150 mcd)			
* Due to the characteristics of the LED elements, a variation in difference of the color tone and brightness of every product may occur.					
Flash Rate		60 ± 2 Flashes Per Minute			

Alarm Sound (Typical Frequency)	No.1	2400Hz Continuous beep sound		No.2	2400Hz Rapid intermittent beep (0.05 sec. sound / 0.05 sec. silent)	
	No.3	2400Hz Long intermittent beep (1.5 sec. sound / 1.5 sec. silent)		No.4	2400Hz Fast intermittent beep (0.5 sec. sound / 0.5 sec. silent)	
	No.5	3600Hz Continuous beep Sound		No.6	3600Hz Rapid intermittent beep (0.05 sec. sound / 0.05 sec. silent)	
	No.7	3600Hz Long intermittent beep (1.5 sec. sound / 1.5 sec. silent)		No.8	3600Hz Fast intermittent beep (0.5 sec. sound / 0.5 sec. silent)	
	No.9	2400Hz & 3375Hz Multiplexed Beep (0.25 sec. / 0.25 sec.)		No.10	2400Hz & 3600Hz Multiplexed Beep (0.25 sec. / 0.25 sec.)	
	No.11	4000Hz & 4800Hz Multiplexed Beep (0.25 sec. / 0.25 sec.)		-		
Sound Level		Maximum: 85dB				
Environmental Condition		Alarm Sound No.1 measured from the front direction of the Alarm opening at 1m				
Volume Control		The set up button is the fourth step (Factory Default: Maximum). [Maximum] -> [-5dB drop from maximum (standard)] -> [-10dB drop from maximum (standard)] -> [OFF] (-> Returns to [Maximum])				
Data Transfer Interface	Main Unit	USB micro-B Terminal Female USB2.0/1.1 Interface, Transmission Rate: USB2.0/1.1/1.0				
	Transfer Cable	Charge /Data Transfer compatible Micro-USB (not included) Connector Type: USB type Male to USB MicroB type Male				
Data Programming Application Software		Exclusive "EDITOR for LA series" Application Software (Downloadable from our Homepage)				
Mass (Tolerance 10%)	LA6-3DTN □ B	480g	LA6-3DLJ □ B	980g	LA6-3DWJ □ B	450g
	LA6-3DTN □ N	420g	LA6-3DLJ □ N	930g	LA6-3DWJ □ N	400g
	LA6-5DTN □ B	590g	LA6-5DLJ □ B	1090g	LA6-5DWJ □ B	560g
	LA6-5DTN □ N	530g	LA6-5DLJ □ N	1040g	LA6-5DWJ □ N	510g
Compliance Standards	EMC Directive (EN 61000-6-4, EN 61000-6-2)			RoHS Directive (EN 50581)		
	UL508, CSA-C22.2 No.14			KC (KN 61000-6-4, KN 61000-6-2)		
	FCC Part 15 Subpart B Class A			-		
Remarks	CE Marking Compliant					
	UL Recognized Component (File No.E215660)					

2. Model Number Configuration

	Model	LED Tiers	Rated Voltage	Mounting/Wiring Installation	Body Color	Flashing/Alarm Option	Color
Model Number	LA6-	↓	D	↓	↓	↓	-RYGBC



Model Number Example

LA6-3DWJWN-RYG

•LED 3 Tiers •Direct mount with cable connection •Off-white •Without Flashing/Alarm •(From top to bottom) Red • Amber • Green

LA6-5DTNUB-RYGBC

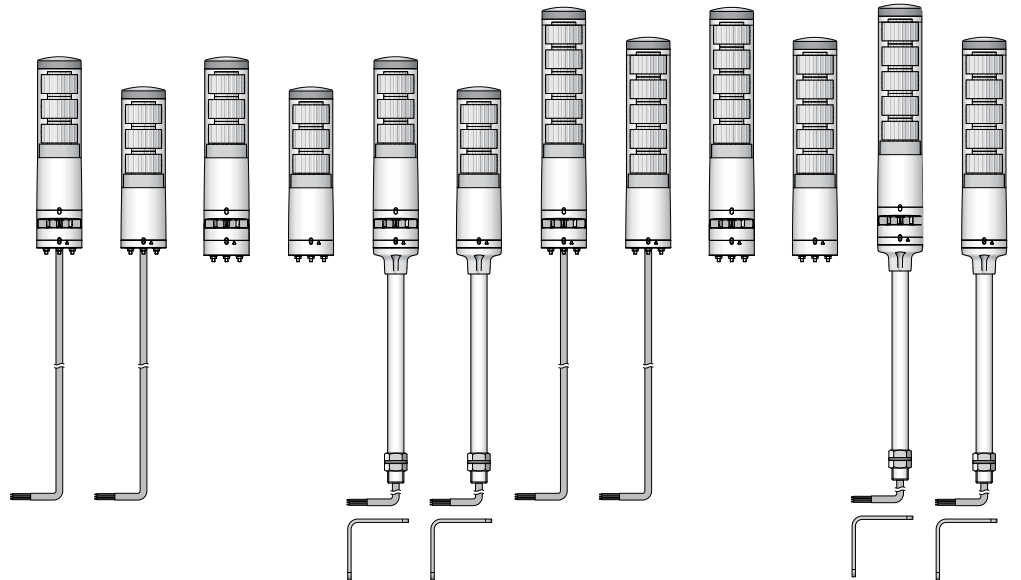
•LED 5 Tiers •Direct mount with Screwless Terminal Block connection •Silver •With Flashing/Alarm •(From top to bottom) Red • Amber • Green • Blue • White

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.

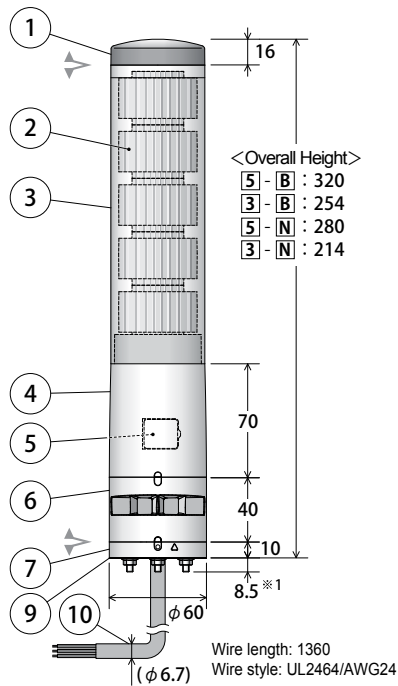
Number of Lens Tiers	3 Lens Tiers						5 Lens Tiers					
Mounting/Wiring Installation	WJ		TN		LJ		WJ		TN		LJ	
Body Color	W Off-white / U Silver (Not available for the LJ type.)											
Flashing/Alarm (Option)	B	N	B	N	B	N	B	N	B	N	B	N



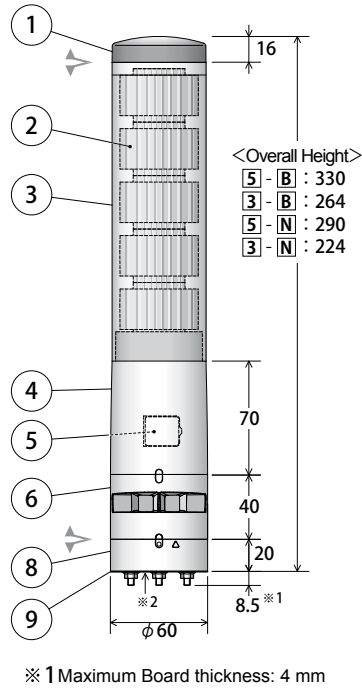
3.2. Part Names and Outer Appearance

Each figure contains 5 lens tiers, with Flashing/Alarm functions. For 3 lens tiers, the outer lens height will be shorter. Also, for models not including the Flashing/Alarm functions, the product will not include an alarm unit.

■ [WJ] Direct mount with cable connection



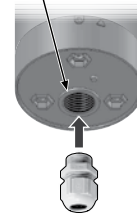
■ [TN] Direct mount with Screwless Terminal Block connection



(Unit:mm)

※ 2 [TN] Spec. Underside View

Threaded hole 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 (M4×20)



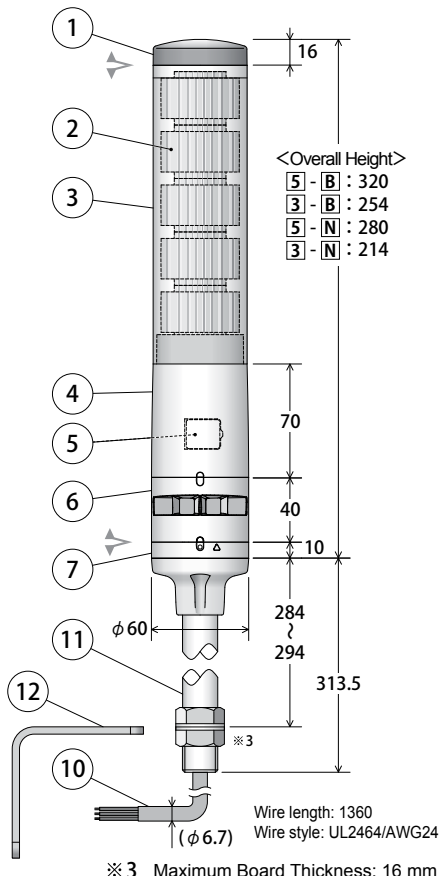
3pcs.

Flanged nut (M4)



3pcs.

■ [LJ] Steel pole with mounting angle and cable

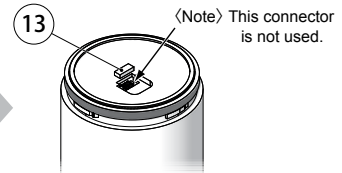


Number	Name	Material	Number	Name	Material
1	Head Cover	ABS	8	Terminal Block Bracket	ABS
2	Lens	PMMA	9	Waterproof Packing	Urethane Foam
3	Outer Lens	PC	10	Cable	PVC
4	Body	ABS	11	Pole	Steel Pipe
5	USB Cover	ABS	12	Mounting Angle	Steel Plate
6	Buzzer Case	ABS	13	Multi-function Button	ABS
7	Direct-mount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

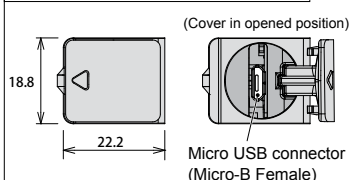
<Note> ➤ The arrow mark (stackable mark) shows the part of the Main Unit (upper portion of bracket) which can be removed. Do not disassemble any parts other than the parts indicated above.

13 Multi-function Button (Remove Head Cover)

Remove the head cover by turning it to the left to release it from the locked position. (To re-assemble, perform the steps in the reverse order.)



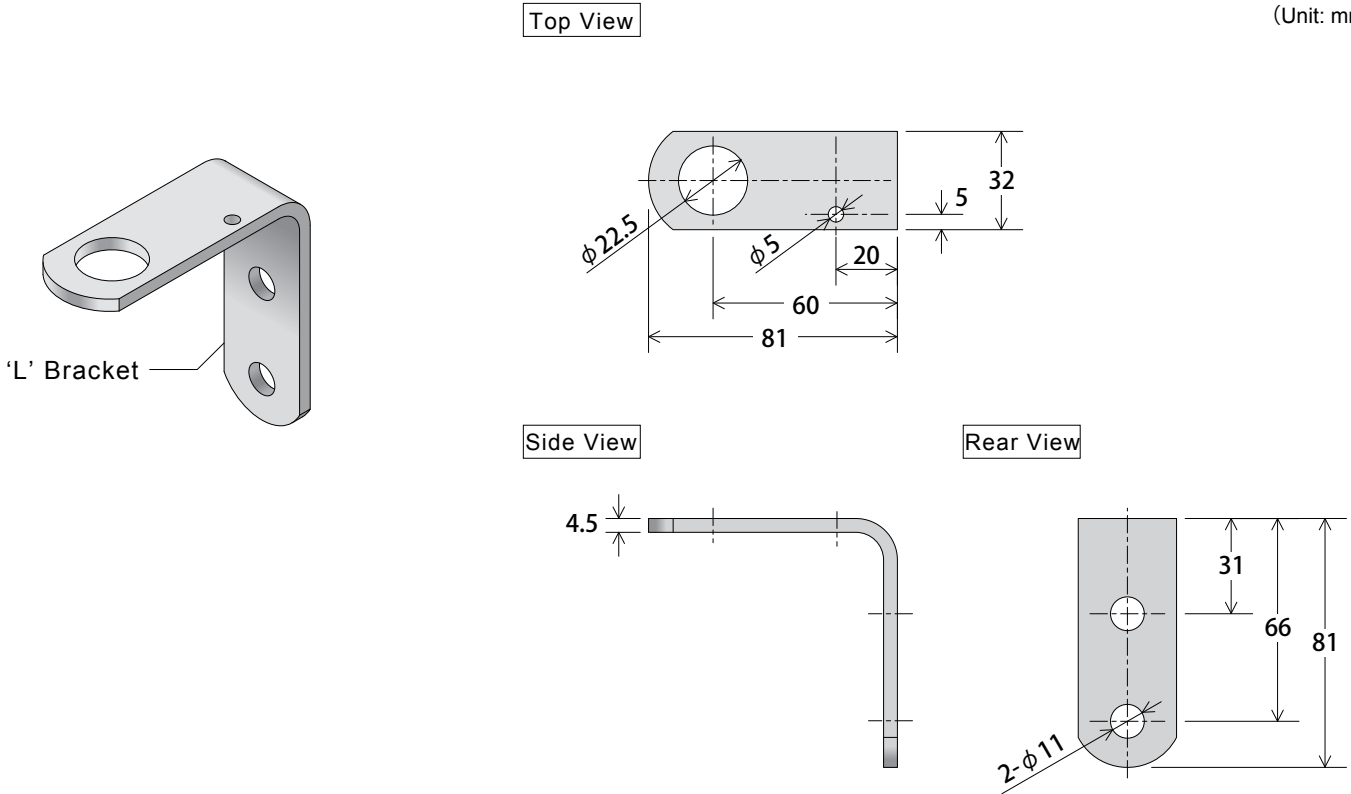
5 USB Cover (Detailed Parts)



<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. (Use an object made of ceramic to avoid scratching or damaging the Body.) - Ensure the USB cover is closed at all times. If not securely closed, the waterproof performance will decrease.

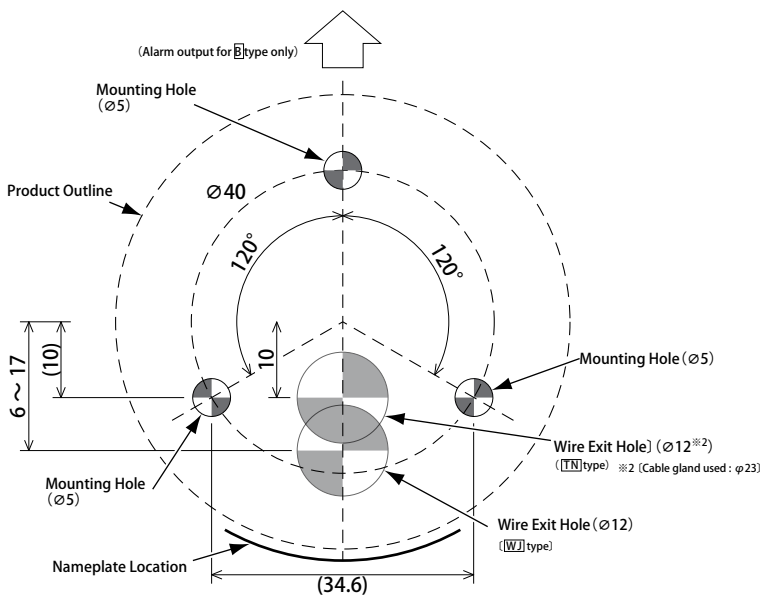
3.3. Attachment Angle Part Names and Dimensions

(Unit: mm)



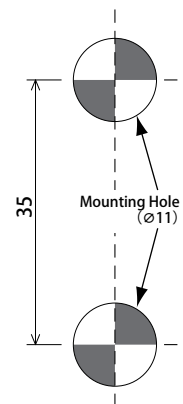
WJ TN Mounting Dimensions Installation Template

(This figure is NOT to full scale) (Units : mm)



LJ Mounting Dimensions (Installation Template)

(This figure is NOT to full scale) (Units : mm)

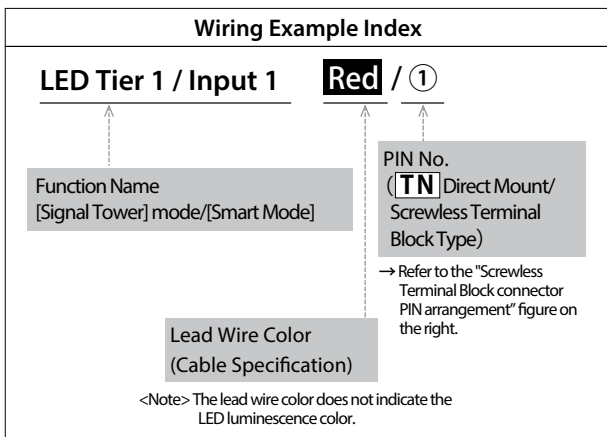


4. Wiring

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.

4.1. Wiring Examples



Alarm Sound Pattern (Factory Default)

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

Screwless Terminal Block Connector PIN Arrangement
(TN Direct Mount/ Screwless Terminal Block Specifications)

1	2	3	4	5	6	7	8	9	10	11
Red	Orange	Green	Blue	White	Gray	Black	Yellow	Gray	Black	Purple
LED1/Input1	LED2/Input2	LED3/Input3	LED4/Input4	LED5/Input5	Alarm 1/Input6	Alarm 2/Input7	Power Wire /Pulse Enable Common	Flashing (Signal-line-side)	Power Line (Signal-line-side)	Mode Change

Recommended lead wire specifications

Wire Type	Wire Gauge (Solid Wire)	Wire Gauge (Frayed Wire)
UL1007 / UL1430	0.5~1.5mm ²	AWG20~16

* Temperature rating should be above 75°C and the conductor material should be of copper wire.

About the "Mode Change" switch-over

When entering the "Mode Change", the operating mode can be changed to the "Smart Mode." In the "Smart Mode", various lighting and alarm patterns can be arranged. Visit our company's homepage (<http://www.patlite.com>) for further details.

* For the "Mode Change" switch-over, refer to "5. Operating Directions" 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.

* Even when starting two or more units simultaneously, a lag will occur during flashing or the Alarm sound.

Screwless Terminal Block wiring method (Model TN Direct Mount/ Screwless Terminal Block)

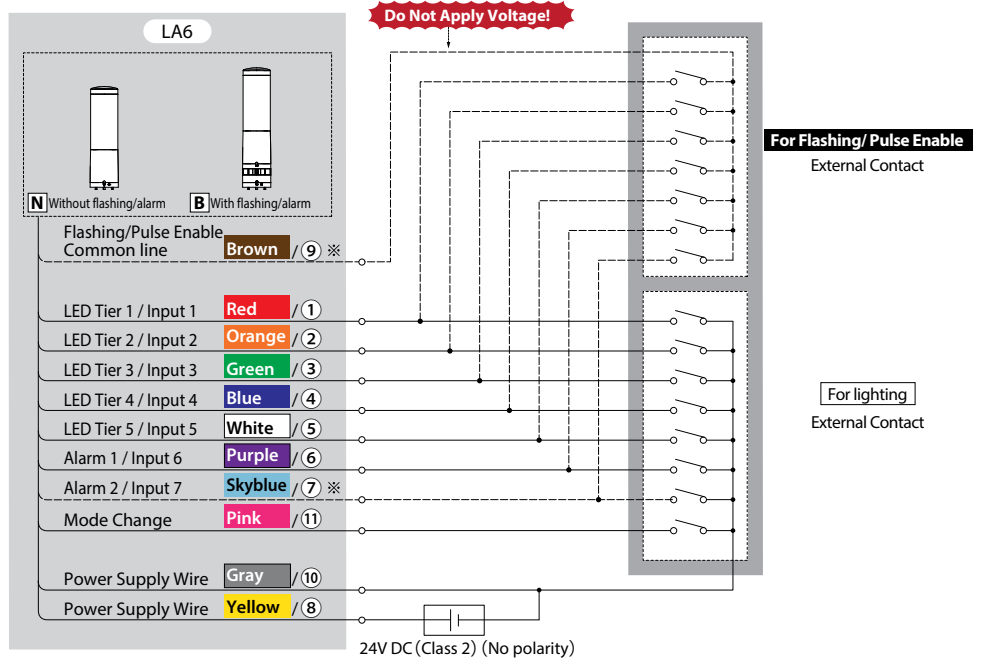
- 1** A minus driver etc. is used to pry the lever slot of the Terminal Block open, by pushing straight onto the lever slot.
- 2** The stripped side of the lead wire is inserted in the slot.
- 3** The driver is removed to release the lever. (Check to make sure the lead wire has been locked in place.)

Point

- The minus driver blade should be at least 2.5mm by 0.4mm in size.
- Do not forcibly push the lever more than necessary with the driver. Failure to comply may damage the unit.
- Strip 9mm (plus or minus 1mm) of wire insulation from the wire to insert it in the Terminal Block.
- When removing the lead wire, do not just pull to remove. (Be sure to operate the lever to release the lock.)

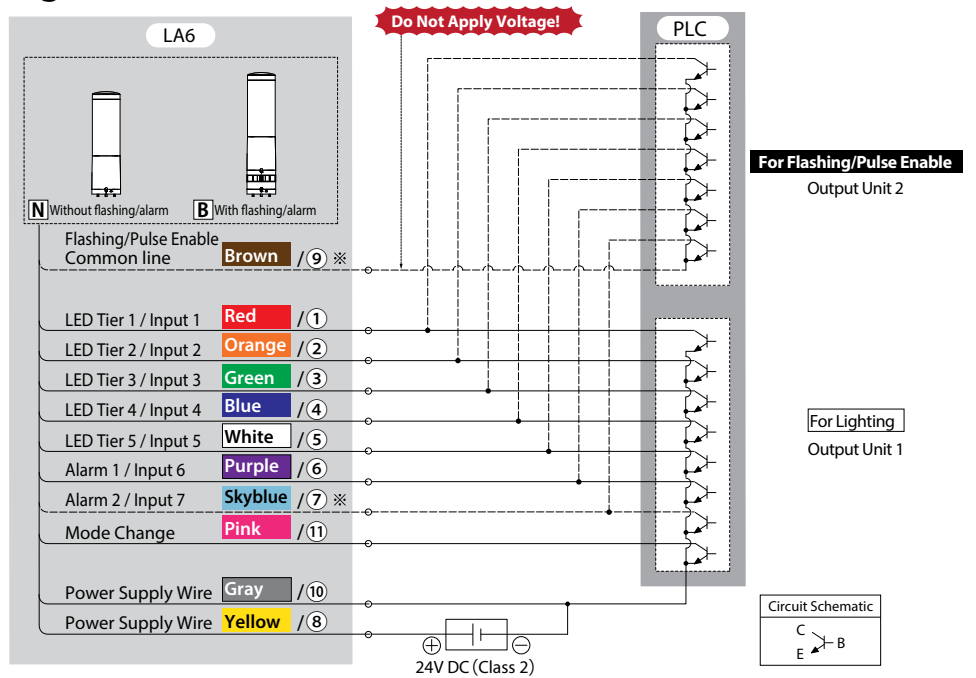
4.1.1. When connecting to relay contacts

External Contact Classification
Voltage Contact Relay



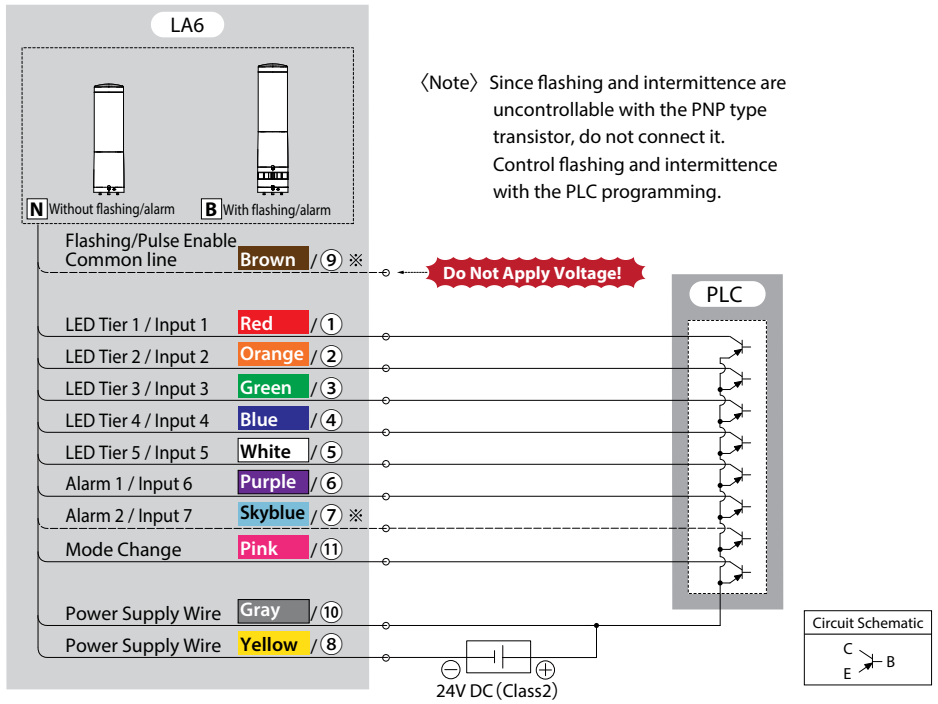
4.1.2. When connecting to a PLC (NPN Transistor)

External Contact Classification
PLC(NPN Transistor)



4.1.3. When connecting to a PLC (PNP Transistor)

External Contact Classification
 PLC(PNP Transistor)



4.2. Current Capacity

External Contact Classification

Voltage Contact Relay or PLC

※1 **B** Flashing/Alarm type only.

※2 There is no inrush current on the **Pink** wire for "Mode Change."

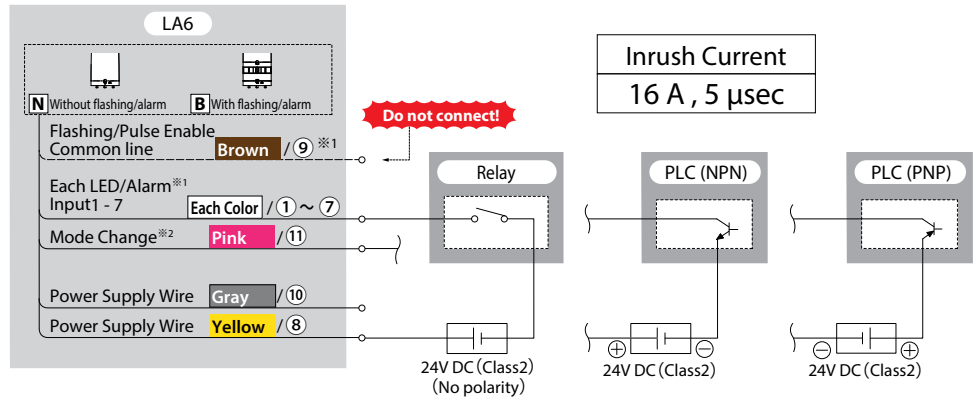


Table 1 Signal Contact Capacity

Current Capacity	100mA or more
Withstand Voltage	DC 35V or more
Leakage Current	0.1mA or less
ON Voltage (Vsat)	1V or less

Table 2 Power Supply Inrush Current

Inrush Current Value	16A/5us
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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

This product contains a multi-function button (Refer to "3.2. Part Names and Outer Appearance") under the Head Cover in the upper section, which can be operated as follows:

- Alarm Sound Control: Adjustable up to four steps.
- LED Color Change: The luminescence color of each tier can be changed.
- Version Confirmation: The current version of the product can be checked.
- Product Initialization: The memory contents of the product can be cleared and returned to factory default values.
(Returns to the "Signal Tower" mode. The alarm sound pattern and the "Smart Mode" setup conditions have not changed.)

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 input from the "Mode Change" signal input wire.

Signal input "Mode Change" ON: Smart Mode

Signal input "Mode Change" OFF: "Signal Tower" mode

Although a continuous hold input controls the inputs, only a trigger input in the pulse trigger mode for the "Smart Mode" turns into a one shot input. With the "Mode Change" in the OFF condition, the Multi-function button can be used for the recombination of colors, changing the amount of alarm sounds, and other product functionalities.

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 "EDITOR for LA series" software application (Visit our homepage at <http://www.patlite.com/> to download the software.).

• Setup Parameters

This mode has parameters that can be set up as shown in the following table.

Setup Index	Description
LED lighting/flash for flash per minute(fpm) rate	Flashing rates are selectable from 30fpm, 60fpm, or 120fpm.
Alarm Tone	Alarm sound muting or one tone can be selected from 11 varieties.
LED Color	LED lights can be selected for ON or OFF.

• LED Input Conversion Table

For inputs 1-7, LED and Alarm ON/OFF can be entered as indicated in the "Signal Tower" mode operation example.

Table 4. "Signal Tower" mode Input Conversion Table

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	

* Pre-set with Factory default

• “Signal Tower” mode operation example

Operating Condition	LED Tier 1	OFF	Blue	OFF	OFF	OFF	OFF	...	Red	Red	Red	Red Flashing	OFF	
	LED Tier 2	OFF	Blue	Blue	OFF	OFF	OFF		Red	Red	Red	Red Flashing	OFF	
	LED Tier 3	OFF	Blue	Blue	Blue	OFF	OFF		Red	Red	Red	Red Flashing	OFF	
	LED Tier 4	OFF	Blue	Blue	Blue	Blue	OFF		OFF	Red	Red	Red	Red Flashing	OFF
	LED Tier 5	OFF	Blue	Blue	Blue	Blue	Blue		OFF	Red	Red	Red	Red Flashing	OFF
	Buzzer	Mute	Tone 1	Tone 2	Tone 7	Mute	Mute		Mute	Mute	Mute	Tone 11	Tone 13	Mute

Group/Pattern No.	1/1	1/2	1/3	1/4	1/5	...	1/60	1/61	1/62	1/63
-------------------	-----	-----	-----	-----	-----	-----	------	------	------	------

Signal Input	Input 1	_____										
	Input 2	_____										
	Input 3	_____										
	Input 4	_____										
	Input 5 (STOP)	_____										
	Input 6 (Mute)	_____										
	Input 7 (Clear)	_____										

5.2. “Smart Mode”

There are three kind of modes, “Time-trigger” mode”, “Pulse-trigger” mode”, and “Single-display” mode”.

The factory default input is the “Time-trigger” mode, but there is a “Pulse-trigger” mode and “Single-display” mode, 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 “EDITOR for LA series” software application (Visit our homepage at <http://www.patlite.com/> to download the software.) installed in it. (Refer to “6. 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 mode for the explanation of how their “Clear” input should look.

5.2.1. “Time-trigger” mode

The “Time-trigger” mode 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” mode 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” mode for input 5 turns into a “STOP” input, and during the input, operates by either one of the following conditions indicated below, 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 “EDITOR for LA series” software application (Visit our homepage at <http://www.patlite.com/> to download the software.).

• Setup Parameters

This mode has parameters that can be set up as shown in the following table.

Setup 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 varieties.
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 entered as indicated in the "Time-trigger" mode operation example.

Table 5. "Time-trigger" mode 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

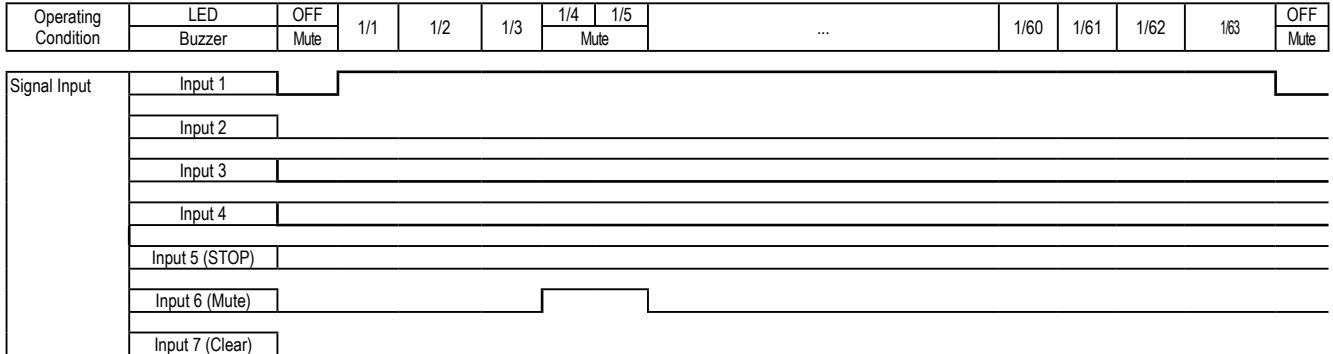
An empty cell indicates the "OFF" condition.

Note

* In the "Time-trigger" mode, 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).

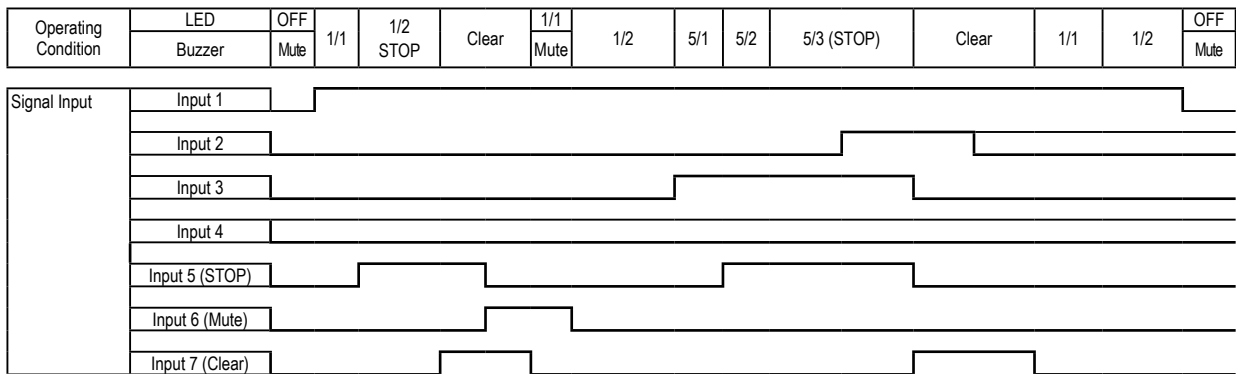
- **“Time-trigger” mode Operation Example**

The following are examples of the “Time-trigger” mode operation. In addition to time progress and pattern changes, the figure also shows the “Mute” input operation.



* The “Time-trigger” mode 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.



* The “Time-trigger” mode operating state is an example for setting data.

5.2.2. “Pulse-trigger” mode

The “Pulse-trigger” mode is operated like the “Time-trigger” mode for a group. However, with the pattern transition timing, it is only used as a one shot pulse for input 5.

The memory for a maximum of 15 groups can be used, and the combination of ON/OFF to inputs 1-4 performs a call. This setup can be made in the “EDITOR for LA series” software application (Visit our homepage at <http://www.patlite.com/> to download the software application and other features for the LA6.).

- **Setup Parameters**

This mode has parameters that can be set up as shown in the following table.

Setup 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 varieties.
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 entered as indicated in the "Pulse-trigger" mode operation example.

Table 6. "Pulse-trigger" mode 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.

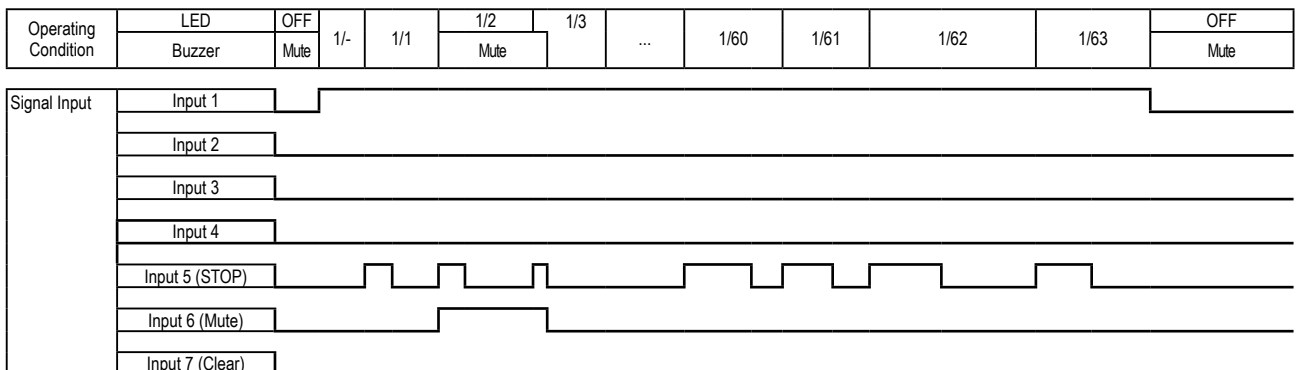
Note

* With a "Pulse-trigger" mode, 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).

• "Pulse-trigger" mode Operation Example

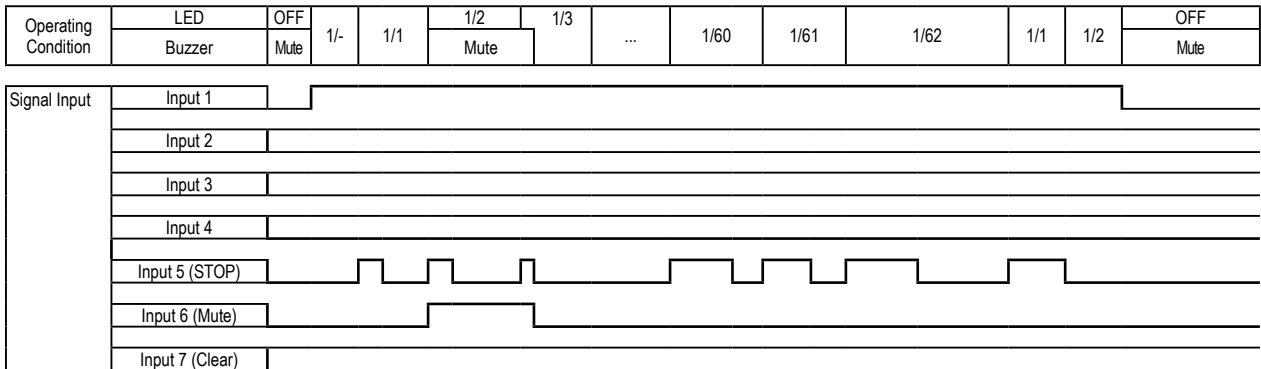
The following are examples of the "Pulse-trigger" mode operation.

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



* The "Pulse-trigger" mode 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.



Note

The one shot trigger input pulse acquires only the rise-time of the input. Refer to “7.1. Basic Signal Input Time Chart” for more details.

5.2.3. “Single-display” mode

There are 31 group 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 group can be made in the “EDITOR for LA series” software application (Visit our homepage at <http://www.patlite.com/> to download the software application and other features for the LA6.)

- **Setup Parameters**

This mode has parameters that can be set up as shown in the following table.

Setup Range	Setting Index	Description
Every Group	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 varieties.
Every Tier	LED Color	LED lights On or Off can be selected.

• **Group Input Conversion Table**

For inputs 1-5, Group numbers in combination of ON/OFF can be entered as indicated in the “Single-display” mode operation example.

Table 7. “Single-display” mode Input Conversion Table

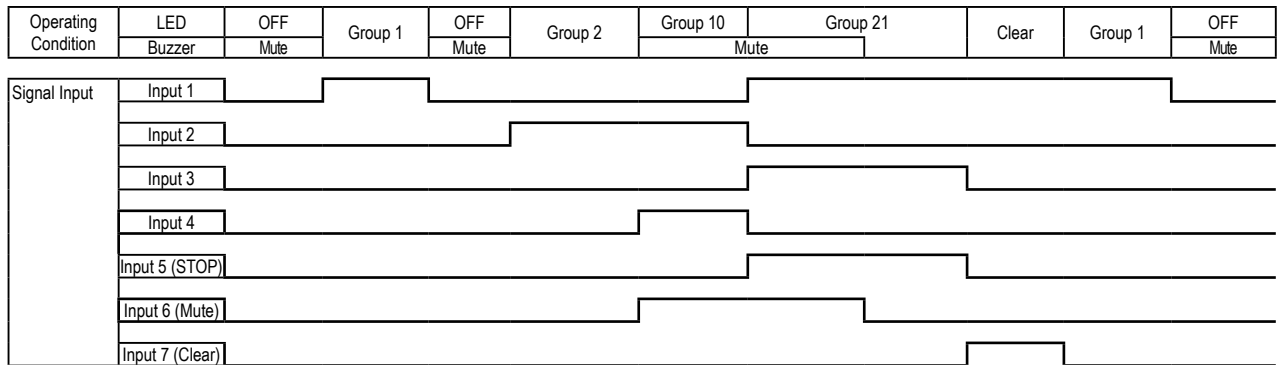
Group No.	Input 1	Input 2	Input 3	Input 4	Input 5	Group No.	Input 1	Input 2	Input 3	Input 4	Input 5
1	ON					17	ON				ON
2		ON				18		ON			ON
3	ON	ON				19	ON	ON			ON
4			ON			20			ON		ON
5	ON		ON			21	ON		ON		ON
6		ON	ON			22		ON	ON		ON
7	ON	ON	ON			23	ON	ON	ON		ON
8				ON		24				ON	ON
9	ON			ON		25	ON			ON	ON
10		ON		ON		26		ON		ON	ON
11	ON	ON		ON		27	ON	ON		ON	ON
12			ON	ON		28			ON	ON	ON
13	ON		ON	ON		29	ON		ON	ON	ON
14		ON	ON	ON		30		ON	ON	ON	ON
15	ON	ON	ON	ON		31	ON	ON	ON	ON	ON
16					ON	An empty cell indicates the “OFF” condition.					

Note

* For the “Single-display” mode, with an “ON” status on input 6, a “Clear” (reset of the operation) can be executed, and an “ON” status on input 7 can cause the alarm to be muted.

• **“Single-display” mode Operation Example**

The following are examples of the “Single-display” mode operation.



5.3. Multi-function Button Operation

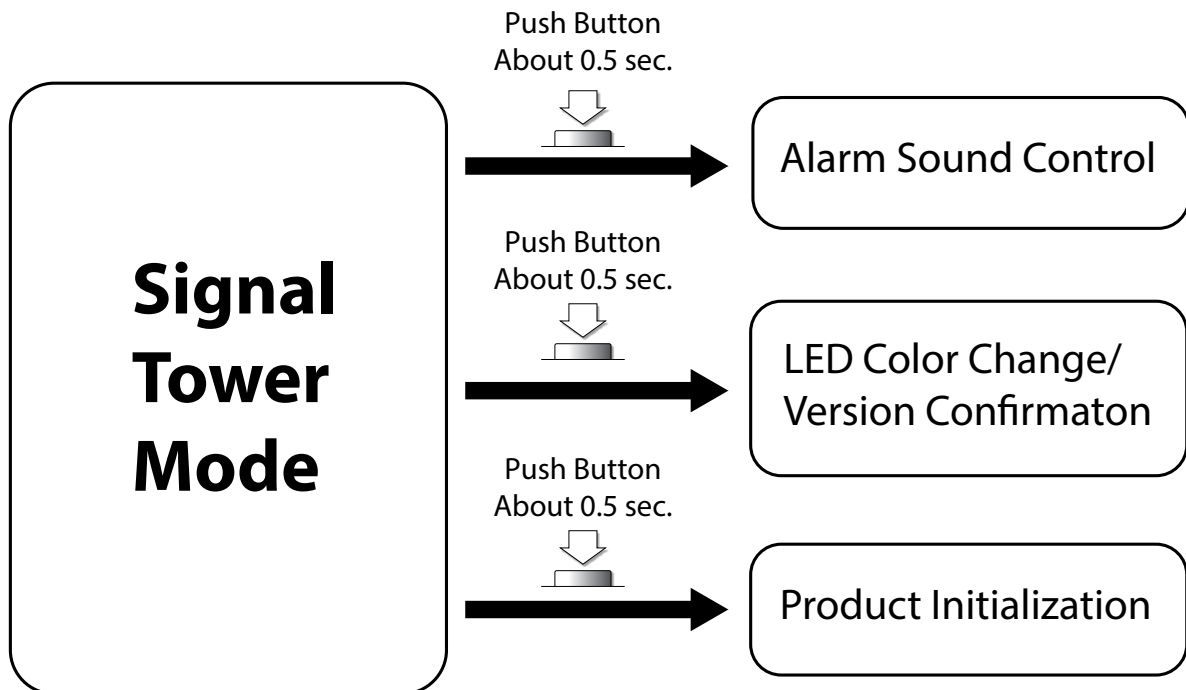
This product contains a multi-function button (“3. Part Names and Dimensions”) under the Head Cover in the upper section, which can be operated as follows:

- Alarm Sound Control : Four adjustable steps.
- LED Color Change : The luminescence color of each tier can be changed.
- Version Confirmation : The current version of the product can be checked.
- Product Initialization : The memory contents of the product can be cleared and returned to factory default values.

(Returns to the “Signal Tower” mode. The alarm sound pattern and the “Smart Mode” setup data have not changed.)

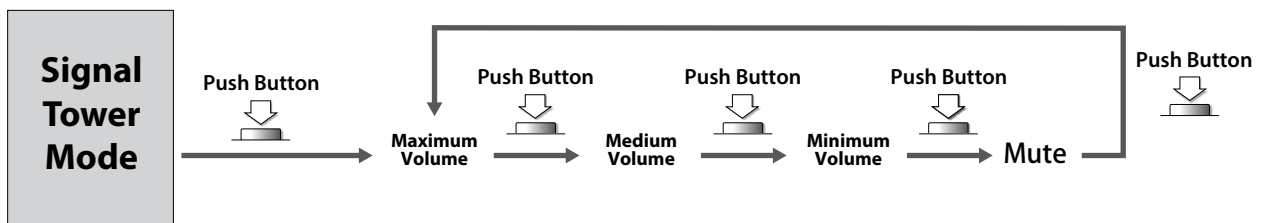
The following figure shows the timing when pushing the Multi-function Button to perform these operations.

As a caution, no signal inputs are received during each setup.



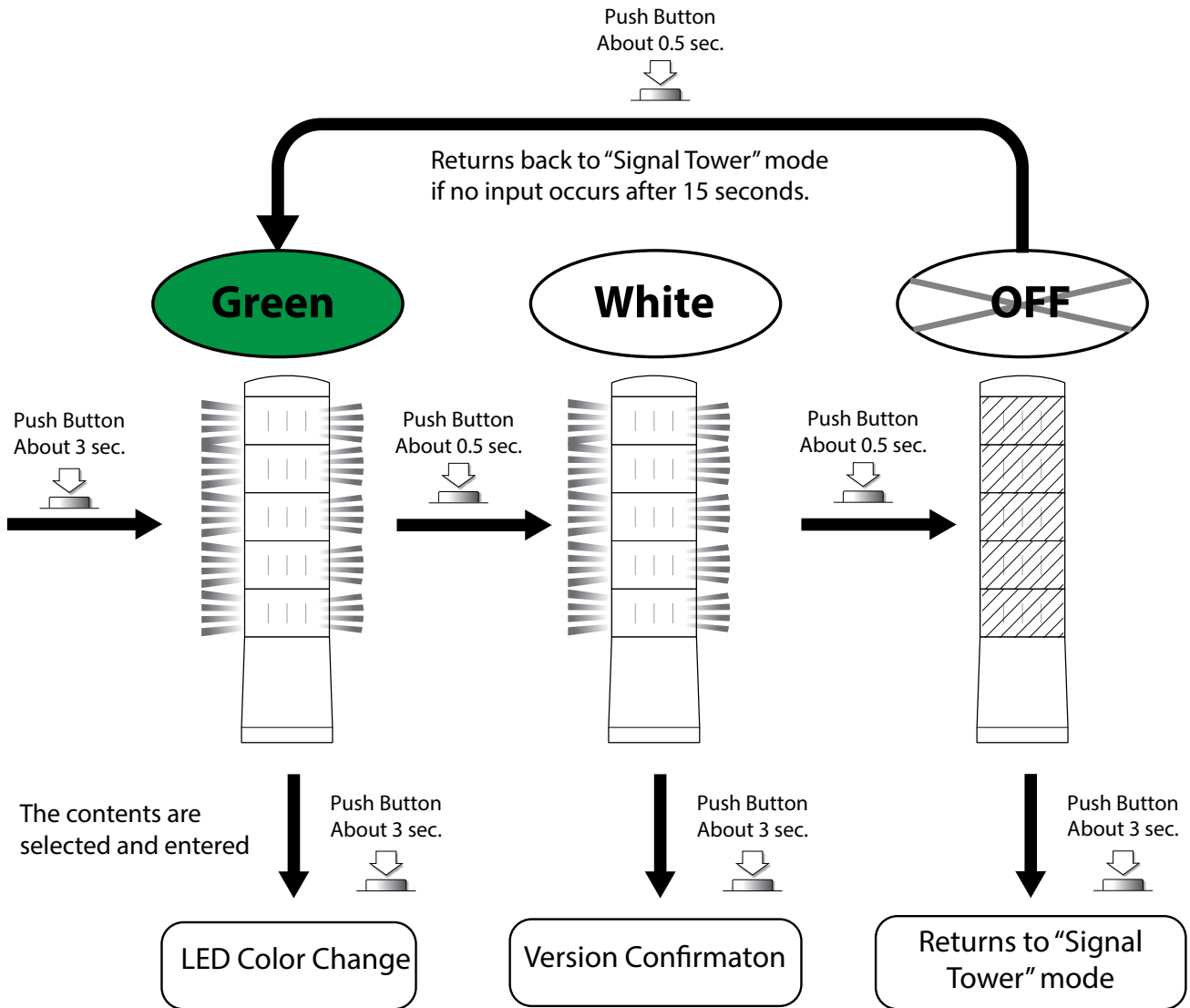
5.3.1. Alarm Sound Control

The “Alarm Sound Control” is adjustable by pushing the Multi-function Button for about 0.5 seconds. Whenever the Multi-function Button is pushed, the volume changes in the order according to the following figure below, and a beep sound is heard with the changing of the volume. Volume adjustment is completed when the beep sound is heard.



5.3.2. LED Color Change/Version Confirmation

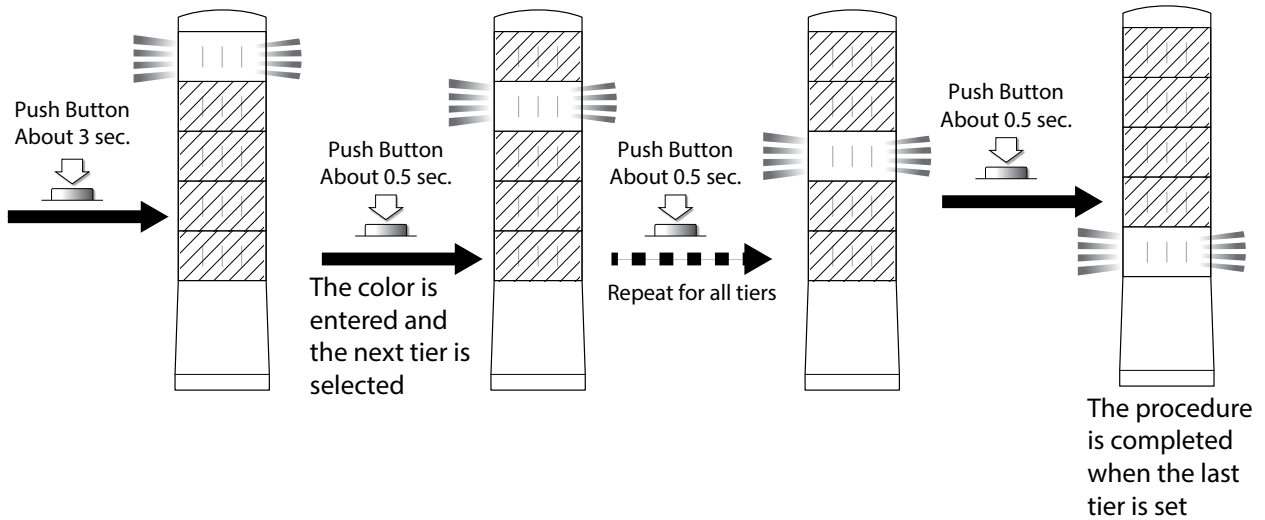
When all LED tiers flash a green color, the “LED Color Change/Version Confirmation” can be selected while it is in that status. As shown in the following figure, when the Multiple-function Button is pushed for about 0.5 seconds, 3 different selections: the “LED Color Change”; “Version Confirmation”; and returning to “Signal Tower” mode, can be selected. Once the selection is made, if the Multiple-function button is pushed about 3 seconds longer, then the mode goes into the status selected.



5.3.2.1. LED Color Change

The LED color which operates in the “Signal Tower” mode can be changed. First, the LED color change starts from the 1st tier where the red LED turns on. As shown in the following figure, whenever the Multiple-function button is pressed for a short time (about 0.5 second), the 1st LED Tier color changes in order.

To change the LED color to a different preference, by pushing the Multiple-function for 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 Multiple-function Button is pushed about another 3 seconds, all LED color changes are complete.

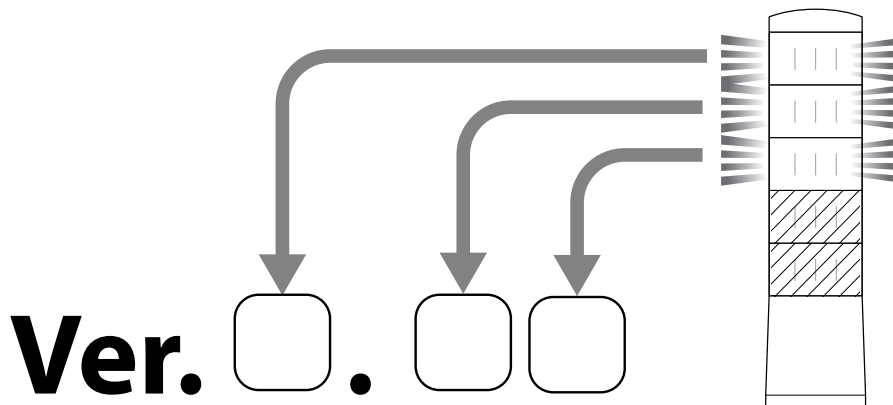


5.3.2.2. Version Confirmation

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.



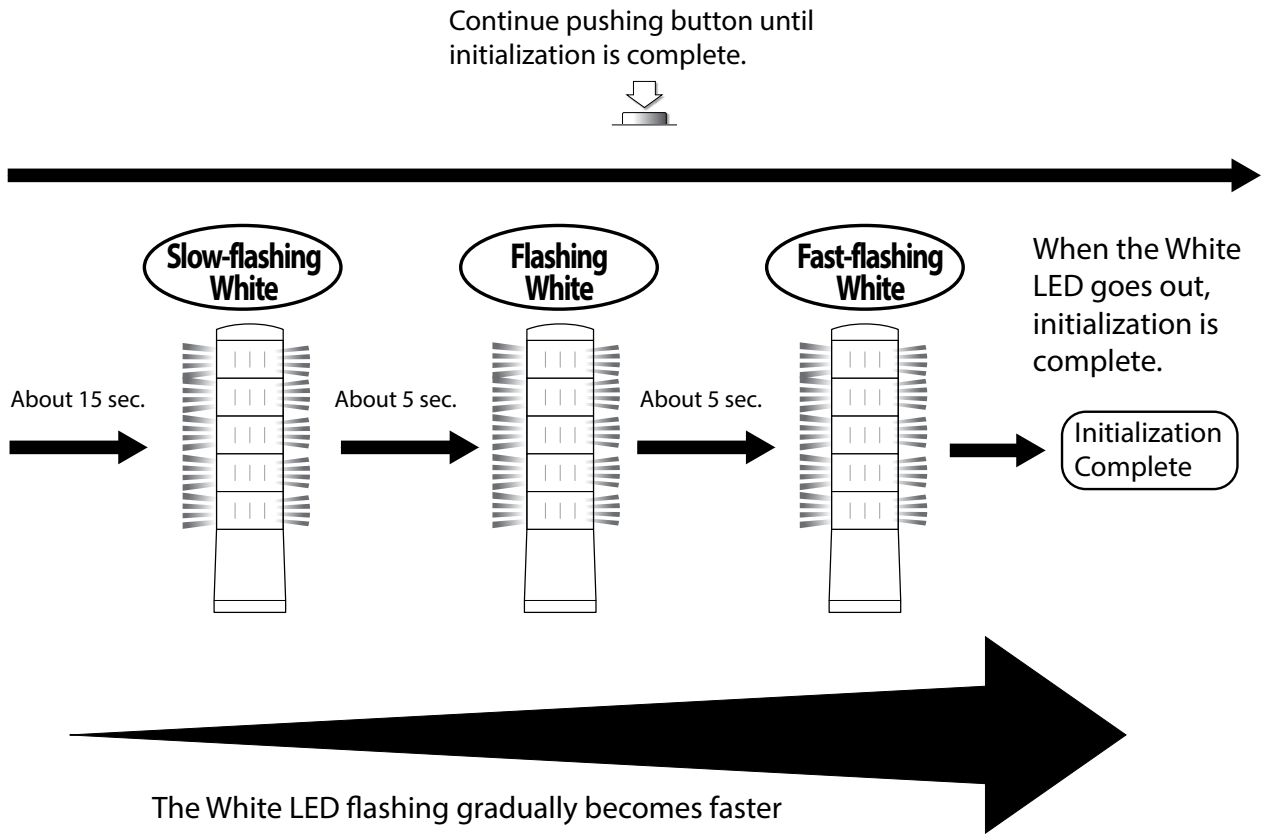
For a detailed verification of the current version, the "EDITOR for LA series" software application can be used to check from the PC.

If there 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.

To exit from the "Version Confirmation" status, pressing the Multiple-function Button for about 3 seconds, or leaving it for 15 seconds untouched, will automatically cause it to return to its normal operation.

5.3.2.3. Product Initialization

The flashing speed of the white LED gradually becomes faster while holding the Multiple-function Button down until the White LED is in its full flashing state. The first flashing lasts about 15 seconds before the flash rate increases, and by continuing to push the Multiple-function Button, the White LED goes out after 10 seconds and Initialization (product returns to "Signal Tower" mode and values are back to factory default) is completed.



Note

- If the "Multiple-function" Button is released before initialization is completed, it returns to the "Signal Tower" mode.
- After pushing the "Multiple-function" Button, the standard time to completely return to factory default is 30 seconds.
- Initialization is only possible in the "Signal Tower" mode.

5.4. Factory Default Data

5.4.1. “Signal Tower” mode

The following chart indicates the default set up values.

Setup Index	Setup Contents
LED Tier 1 Color	Red
LED Tier 2 Color	Amber
LED Tier 3 Color	Green
LED Tier 4 Color	Blue (No setup if it is a 3 tier model)
LED Tier 5 Color	White (No setup if it is a 3 tier model)
Alarm 3 Tone	Tone No. 3
Flashing Cycle	60 fpm

5.4.2. “Smart Mode”

The following chart indicates the default set up when entering the “Smart Mode.”

Setup Index	Setup Contents
Input Type	Time Trigger Type

The following tables indicate various groups in which the contents their groups contain various operations.

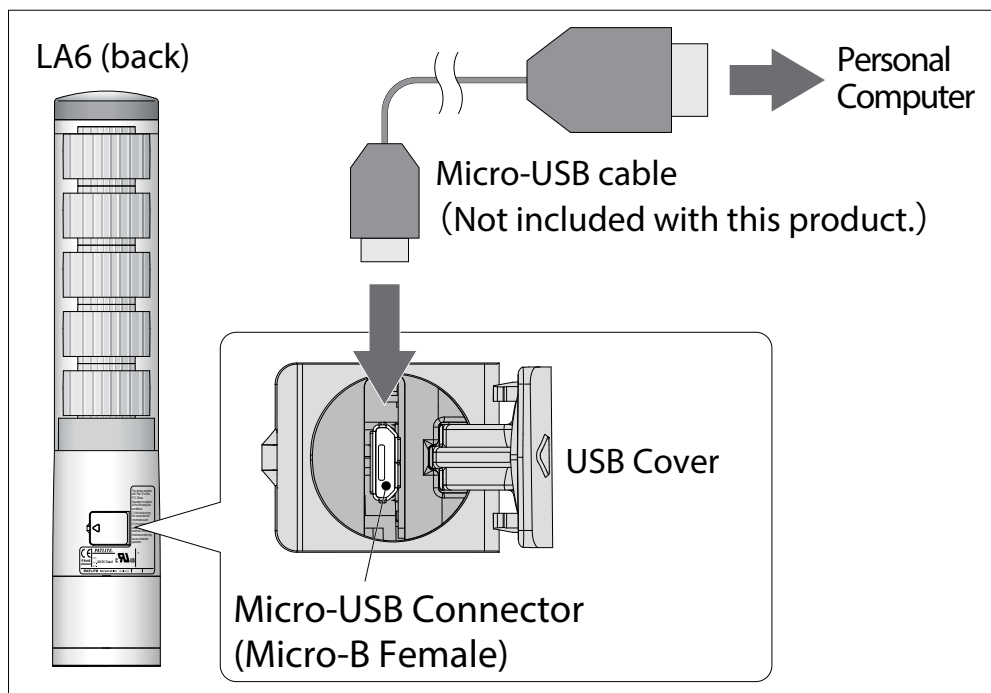
- Table for Various Operations

The details of the 5 tier group setup can be found in the “Complete Operation Manual” for the LA6. The manual can be downloaded on our webpage at <http://www.patlite.com>.

6. Changing Data

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

- **Necessary Items**
 - This product
 - Personal Computer (with all hardware operating normally)
 - Micro-USB Cable for Charging/Data Transfer (* USB-A male to USB Micro-B male is not included with this products)
 - "EDITOR for LA series" Application Software (Visit our homepage at <http://www.patlite.com/> to download it.)
Supporting OS: Windows 7 (32/64 bit), Windows 8 (32/64 bit), Windows 8.1 (32/64 bit), Windows 10 (32/64 bit)
- **Transfer Procedure**
 - A. Product changes to standby status in which all signal inputs are "OFF"
(Power supply input can be ON or OFF, whichever is easier)
 - B. Open the USB Cover to the product, use the Micro-USB Cable to connect the product to the personal computer.
 - C. Click the "Transmission" button in the "EDITOR for LA series" application software.
 - D. From the start of data transfer, it takes about 15 seconds before the "Transfer was completed" prompt is displayed.
 - E. Remove the Micro-USB cable and close the USB Cover completely.



Note

- If the power supply input to the product is set to ON, the group operation test can be checked by clicking the "preview" button in the "EDITOR for LA series" application software.

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" mode)

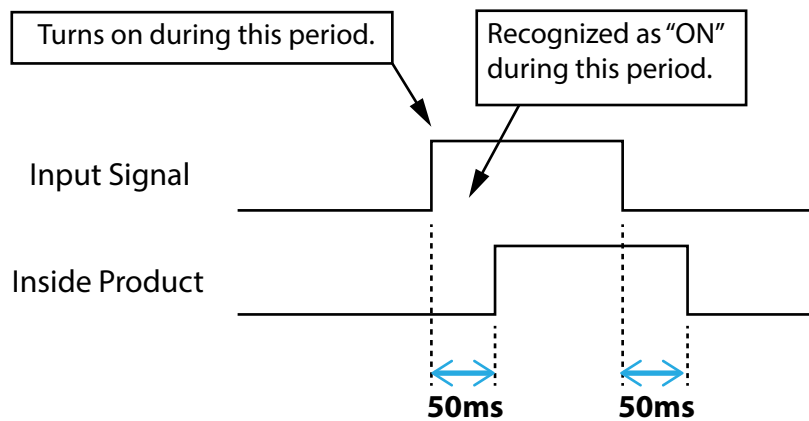
Refer to "5. Operating Directions" for details.

In addition, the signal input holding time (data lead time) of this product is common to all signal inputs (except for the Multi-function Button).

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.

