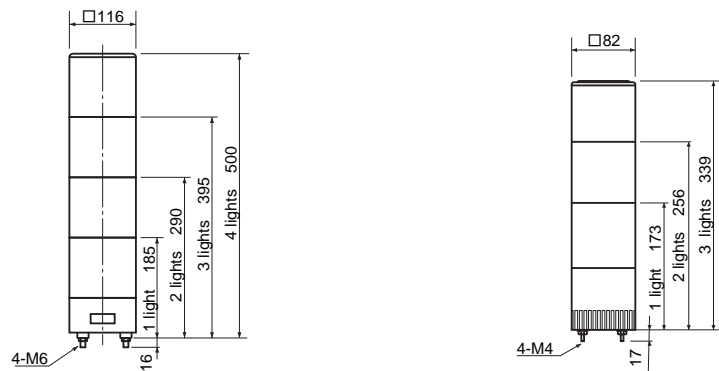


8. SPECIFICATIONS

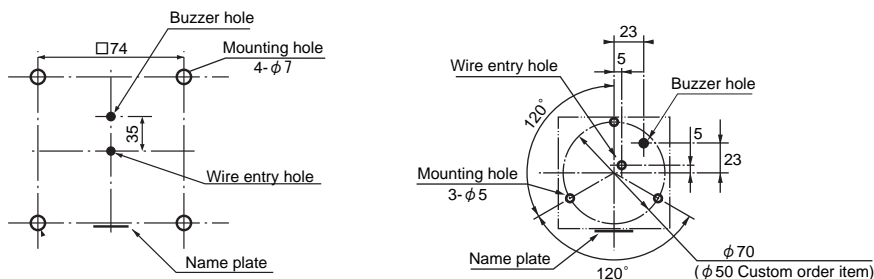
1. Dimensions (Unit : mm)

Type KJ,KJB Type KJS,KJSB,KES,KESB



2. Mounting Dimensions (Unit : mm)

Type KJ,KJB Type KJS,KJSB,KES,KESB



3. Specifications

Type KJ,KJB

Style	Model	Rated voltage	Rated current	Flash per minute	Bulb	Mass
1 light	KJ(B)-102	24V DC	0.5A	130 flashes par minute	24V 10W	1.0Kg
	KJ(B)-110	100V AC	0.1A		12V 5W	1.2Kg
	KJ(B)-112	110~120V AC				
	KJ(B)-120	220V AC	0.05A			
KJ(B)-124	240V AC					
2 lights	KJ(B)-202	24V DC	1.0A	130 flashes par minute	24V 10W	1.5Kg
	KJ(B)-210	100V AC	0.13A		12V 5W	2.0Kg
	KJ(B)-212	110~120V AC				
	KJ(B)-220	220V AC	0.07A			
KJ(B)-224	240V AC					
3 lights	KJ(B)-302	24V DC	1.5A	130 flashes par minute	24V 10W	2.0Kg
	KJ(B)-310	100V AC	0.18A		12V 5W	2.5Kg
	KJ(B)-312	110~120V AC				
	KJ(B)-320	220V AC	0.09A			
KJ(B)-324	240V AC					
4 lights	KJ(B)-402	24V DC	2.0A	130 flashes par minute	24V 10W	2.5Kg
	KJ(B)-410	100V AC	0.26A		12V 5W	3.0Kg
	KJ(B)-412	110~120V AC				
	KJ(B)-420	220V AC	0.13A			
KJ(B)-424	240V AC					

※ Bulb type Glass G18 Base BA15S (Spare bulb : 1)
 ※ Type KJB : Buzzer (Sound volume may be adjusted via the control on the bottom of the body.)

	Wire type / Dia	Lead wire
Power supply wire (100V~240V AC only)	VCT / 0.75mm ²	Approx. 280mm
Lead wire	VW-HT / 0.5mm ²	Approx. 300mm

Type KJS,KJSB

Style	Model	Rated voltage	Rated current	Flashing cycle	Bulb	Mass
1 light	KJS(B)-101	12V DC	0.5A	160 flashes par minute	12V 5W	0.5Kg
	KJS(B)-102	24V DC				
	KJS(B)-110	100V AC	0.06A		12V 5W	0.7Kg
	KJS(B)-112	110~120V AC				
	KJS(B)-120	220V AC				
KJS(B)-124	240V AC	0.03A				
2 lights	KJS(B)-201	12V DC	1.0A	160 flashes par minute	12V 5W	0.8Kg
	KJS(B)-202	24V DC				
	KJS(B)-210	100V AC	0.1A		12V 5W	1.2Kg
	KJS(B)-212	110~120V AC				
	KJS(B)-220	220V AC				
KJS(B)-224	240V AC	0.05A				
3 lights	KJS(B)-301	12V DC	1.5A	160 flashes par minute	12V 5W	1.2Kg
	KJS(B)-302	24V DC				
	KJS(B)-310	100V AC	0.2A		12V 5W	1.6Kg
	KJS(B)-312	110~120V AC				
	KJS(B)-320	220V AC				
KJS(B)-324	240V AC	0.1A				

※ Bulb type Glass G18 Base BA15S (Spare bulb : 1)
 ※ Type KJSB : Buzzer

	Wire type / Dia	Lead wire
Power supply wire	UL1007 AWG 20	Approx. 280mm
Lead wire	UL1007 AWG 22	

Type KES,KESB

Style	Model	Rated voltage	Power consumption	Flashing cycle	Mass
1 light	KES(B)-102	24V DC	6W MAX	110 flashes par minute	0.4Kg
	KES(B)-110	100V AC			
	KES(B)-112	110~120V AC			
	KES(B)-120	220V AC			
2 lights	KES(B)-124	240V AC	12W MAX	110 flashes par minute	1.0Kg
	KES(B)-202	24V DC			
	KES(B)-210	100V AC			
	KES(B)-212	110~120V AC			
3 lights	KES(B)-220	220V AC	18W MAX	110 flashes par minute	1.4Kg
	KES(B)-224	240V AC			
	KES(B)-302	24V DC			
	KES(B)-310	100V AC			
3 lights	KES(B)-312	110~120V AC	18W MAX	110 flashes par minute	1.4Kg
	KES(B)-320	220V AC			
	KES(B)-324	240V AC			

※ Power consumption will vary slightly according to color (red, amber and green).
 ※ Type KESB : Buzzer

	Wire type / Dia	Lead wire
Power supply wire	UL1007 AWG 20	Approx. 280mm
Lead wire	UL1007 AWG 22	

※ Specifications are subject to change without notice.

Caution

● We are not in a position to be responsible for damage and trouble caused by handling against caution and warning described in this instruction manual.

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PATLITE

Cube Tower

INSTRUCTION MANUAL

2056-K
 A95100060
 FA001

[TYPE : KJ(B),KJS(B),KES(B)]

Thank you for specifying the **PATLITE Cube Tower** for your application. Please read this manual before installing this system, and keep it carefully. In the case of maintenance, inspection and repair, please read this manual carefully. If you have question of this product, please feel free to contact us.

TO OPERATE THIS PRODUCT SAFELY, PLEASE OBSERVE THE FOLLOWINGS

[NOTES TO BE OBSERVED FOR SAFE OPERATION]

Note to be followed to prevent any damage to the user and other personnel or to assets are as follows:

■ The indications for warning are divided into the following classes according to the degree of danger or damage incurred when the warning is not taken into consideration and the product is not correctly used.

[Warning]

This symbol marks important instructions that, if ignored or incorrectly followed, could conceivably lead to death or serious injury.

[Caution]

This symbol marks important instructions that, if ignored or incorrectly followed, could conceivably lead to injury or property damage.

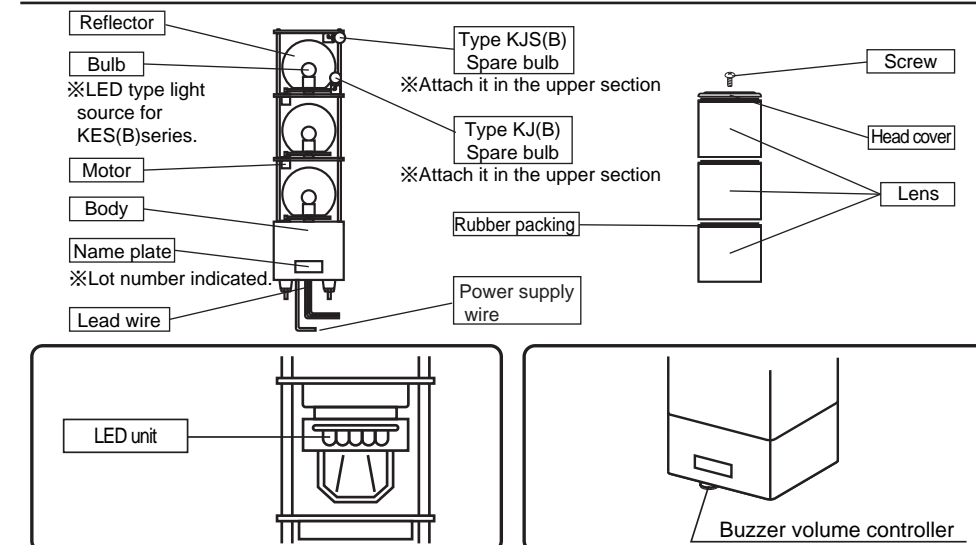
Warning

- Turn off the power supply before making wiring connections. Neglecting to do so may cause an electric shock.
- Wiring should be careful enough there to be for no mistake. If wiring is mistaken, an internal circuit will be damaged and it will become the cause of a fire.
- When the installation of this product requires the construction, please ask to specialist. Electric shock, fire and fall may occur.
- When you use this product for security purpose, routine inspection must be done. Just in case of emergency we recommend you to use this product together with other security product.
- Do not use this product without lens or with cracked lens. It may cause electric shock.
- Make sure power is turned off and the temperature of electric bulb falls down for repair to avoid electric shock and burn.
- Make sure power is turned off when checking or changing a fuse or bulb to prevent danger of electric shock.

Caution

- Use only specified operating voltage. Excess voltage hastens degradation.
- Make sure to set fuse in a power supply side, please connect a fuse.
- To clean lens, head cover, and case, wipe with water or glass cleaner soaked soft cloth.
- Do not use thinner or benzene as these cause color change or deform the surface. In an installation where there is violent vibration, the bulb life will be reduced. Observe the following precautions:
 - Avoid mounting directly on equipment that vibrates or is subject to shock.
 - Avoid mounting on a pillar or wall in such a way that the unit would be subject to vibration. Use a mounting angle (stay) that is strong enough to support the rotating light against wind and vibration.
- Do not use the hands to rotate the reflector.
- Do not oil the motor and rotor. (Neither will it rotate if oil enters the motor.)

1. PARTS NAME



• Type KES, KESB only

• Type KJB only

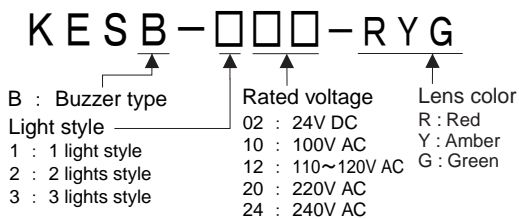
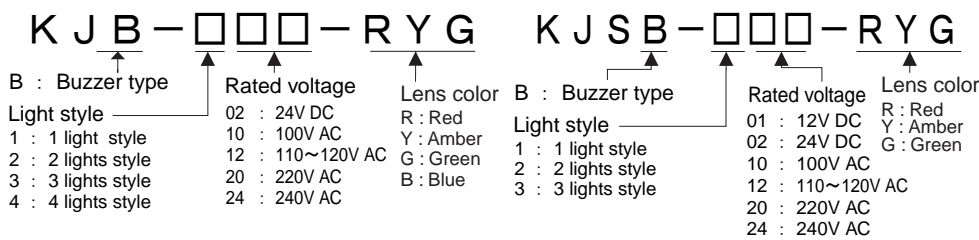
2. REPLACEMENT PARTS

The replacement parts are prepared. Please ask your local distributor for availability.

- Lens (per type, per color)
- Reflector (per type)
- Bulb (per type, per voltage)
Type KJ(B),KJS(B) only
- Head cover (per type)
- Rubber packing (per type)
- Motor (per type, per voltage)
- LED unit (per color, per voltage : Type KES(B) only)

※ If you have question please feel to contact us about other parts.

3. TYPE NO. CONFIGURATION



4. HOW TO MOUNTING

Caution

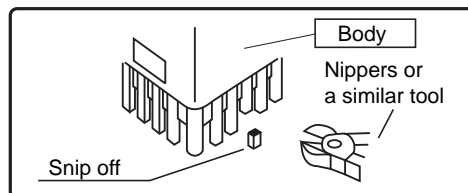
- Cube tower must be installed in a vertical position where it has enough strength and less vibration. Do not install it horizontally or reversely.
- If the unit is to be installed in a high location, be sure to select a spot that affords easy service by maintenance personnel.

• Drill the required mounting holes in the wall. (Refer to "8.SPECIFICATIONS" for the proper hole size.)

• Use the accessory nuts to secure the unit.

※ For KJS(B) and KES(B) types: If the power and signal wires must be taken out to the side, snip the bottom of the body, as shown in the figure at right, and pull the lead wires through the new access.

※ For KJS(B) and KES(B) types: Refer to the mounting template provided for correct location of the holes.



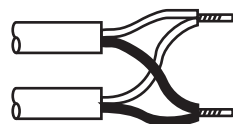
5. HOW TO MAKE WIRING CONNECTION

Caution

- Turn off the power supply before making wiring connections. Neglecting to so may cause an electric shock.
- When you have questions for the method of special operation or plural units operation, we recommend you to ask our customer service before wiring.
- Do not pull lead wire and push it in body when wiring.
- Wiring should be careful enough there to be for no mistake. If wiring is mistaken, an internal circuit will be damaged and it will become the cause of a fire.
- During connection, refer to the wiring example. Be sure to use crimp type terminal connectors.
- Make sure to set fuse in a power supply side, please connect a fuse.
- Make sure of the specified operating voltage and current before use.
- Use only specified operating voltage. Excess voltage hastens degradation.
- Make sure not to use any other bulbs except ones described in specifications.

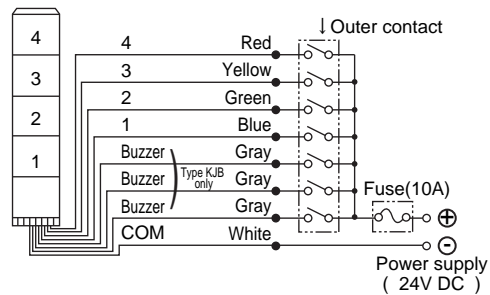
(Type KJ(B) 100V,120V,220V,240V AC)
 Type KES(B) All model
 Type KJS(B) All model

- Two or more units(100-240V) to be conducted parallel operation, make sure to connect white and black power supply wire as shown below.

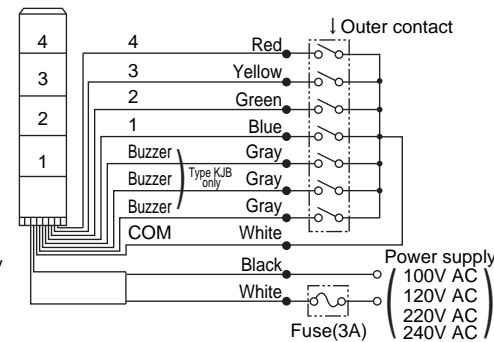


1. Type KJ(B)

• 24V DC Type



• 100V AC,120V AC,220V AC,240V AC Type



※ This wiring diagram is for the four-light unit. The number of signal wires will vary for other number of lights. (Refer to Table 1.)

The type with a buzzer (KJB, as shown) is wired to sound the buzzers in conjunction with their respective rotating lights. If the buzzer must sound independently (not in conjunction with the rotating lights), independently wire a switch to the buzzer's signal wire (any one of the gray wires).

Be sure that the ends of all unused wires are insulated.

※ The lamps are numbered 1,2,3,etc., starting with the bottom unit.

※ Be sure to install a fuse on the power supply end.

※ Refer to Table 2 for the selection of a contact capacity sufficient to handle the initial current, or use a relay as required.

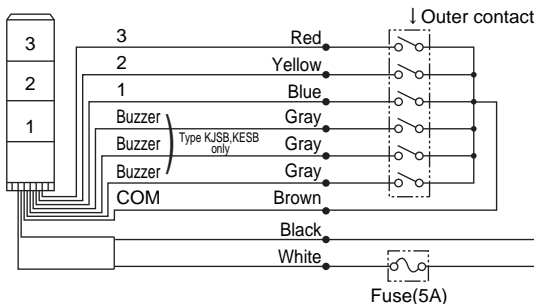
[Table 1]

	Lead wire color (Type KJ, KJB)			
4	---	---	---	Red
3	---	---	Red	Yellow
2	---	Red	Yellow	Green
1	Red	Yellow	Green	Blue
	1 Light(12V, 24V type only)	2 Lights	3 Lights	4 Lights

[Table 2]

	Normal current	Initial current	Contact capacity
For rotating light signal wire	450mA	4.5A	50V,5A
For Buzzer signal wire	30mA	0.3A	50V,1A

2. Type KJS(B),KES(B)



※ This wiring diagram is for the three-light unit. The number of signal wires will vary for other number of lights. (Refer to Table 1.)

The type with a buzzer (KJSB, KESB, as shown) is wired to sound the buzzers in conjunction with their respective rotating lights. If the buzzer must sound independently (not in conjunction with the rotating lights), independently wire a switch to the buzzer's signal wire (any one of the gray wires).

Be sure that the ends of all unused wires are insulated.

※ The lamps are numbered 1,2,3,etc., starting with the bottom unit.

※ The power wires for the AC 100,120,220,240-volt version are not polarized ⊕ or ⊖.

※ Be sure to install a fuse on the power supply end.

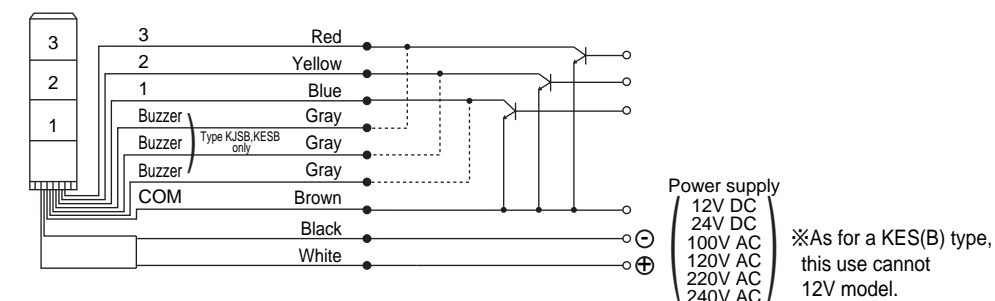
※ Use a switch contact capacity of at least 50 mA for the lamp and not less than 300 mA for the buzzers.

[Table 1]

	Lead wire color (Type KJS, KJSB,KES,KESB)		
3	---	---	Red
2	---	Yellow	Yellow
1	Blue	Blue	Blue
	1 Light	2 Lights	3 Lights

3. Type KJS(B),KES(B)

Wiring should be made as follows in case of using transistor as other contact.



TYPE	NPN Transistor (2SC or 2SD)	NON-Contact relay (for DC load only)
Withstand voltage	Vc > 45V or up	
Current capacity	Ic > 300mA or up (Buzzer) Ic > 50mA or up (Rotating light)	

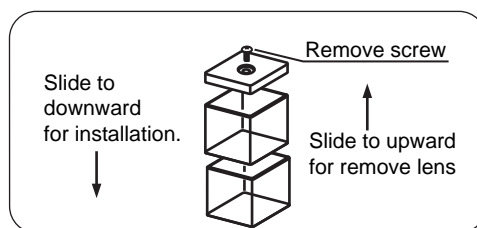
※ Use a small-current, no-voltage contact (twin contacts recommended) or an open-collector transistor.
 ※ Absolutely do not connect direct power in a signal wire, damage the internal circuit.

5. MAINTENANCE

1. Change Lens

• Please follow the procedure mentioned below to change the lens.

- ① Make sure power is turned off when changing lens.
- ② Loosen head cover screw, then put the lens off.
- ③ Put in the new lens, then installing head cover.

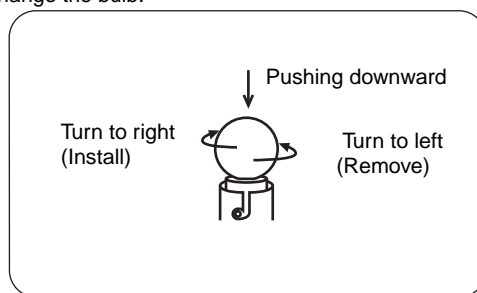


※ Be sure to reinstall the rubber packing to the body globe and head cover (one size for all applications), or the unit will no longer be splash proof.

2. Change Bulb [Type KJ(B),KJS(B)]

• Please follow the procedure mentioned below to change the bulb.

- ① Make sure power is turned off when changing bulb.
 - ② Remove lens. (Refer to the "Change Lens" instruction mentioned above.)
 - ③ The bulb can be easily removed by pressing it downward to turn to left.
 - ④ The new bulb can be easily installed by pressing it downward to turn to right.
 - ⑤ Put in the lens, then installing head cover.
- ※ Make sure not to use any other bulbs except ones described in specifications.
 ※ If you have any questions of the product, please feel free to contact us.



7. BEFORE REQUESTING SERVICE

• Please check the list shown below before requesting repairs. If the product still not work, please contact us for repairs.
 Please feel free to contact our sales office with any questions concerning the product.

Problems	Where to check	What to do
The reflector would not rotate and the lamp stays turned off.	Is the power on?	Check the power wiring, plug connection and fuse. If a switch is installed, check to see that it is turned on.
The reflector rotates but the lamp is off	Is the light bulb burned out?	If it is, replace it with a new one.
The lamp is turned on but the reflector stays stopped.	Is the motor stopped? Is the motor lubricated?	The motor is broken or has reached the end of its life. Request a repair.
The buzzer dose not work.	Is the power polarity opposite on the DC 12 or 24 volt version?	Check and correct the polarity.

※ Please note that any malfunction or damage resulting from modification by the customer will not be covered under the warranty.