

Creative Passion



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PART7

SQUARE LIGHT

SQUARE LIGHT

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- 629 Square matrix light

SQUARE LIGHT

LED Square Light

	Model Name	Rated Voltage	Lamp Color	Certification
	KH-5020L	20 X 20	Red Green Yellow Amber (Orange) Blue White	
	KH-5030L	30 X 30	Red Green Yellow Amber (Orange) Blue White	
	KH-5040L	30 X 40		

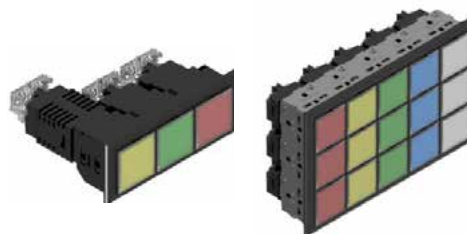
Square Matrix Light

	Model	Material	Lamp Color	Certification
	KH-500TL-1 KH-500TL-1L	Housing: Heat-resistant ABS Name Plate: AS Color Plate: Acrylic Lamp Cap: AS	Red Green Yellow White	
	KH-500TL-2 KH-500TL-2L			
	KH-500TL-3 KH-500TL-3L			
	KH-5001-1 KH-5001-1L KH-5002-1 KH-5002-1L	Housing: Heat-resistant ABS Name Plate: AS Color Plate: Acrylic Lamp Cap: AS	Red Green Yellow White	
	KH-5001-2 KH-5001-2L KH-5002-2 KH-5002-2L			
	KH-5001-3 KH-5001-3L KH-5002-3 KH-5002-3L			

SQUARE LIGHT



LED Square Light



Classification

KH-5030L-24PCK

Classification	KH-5020L: 20 x 20 mm	
	KH-5030L: 30 x 30mm	
	KH-5040L: 30 x 40mm	
Input Voltage	12	12VDC
	24	24VDC
	12PCK	12VDC with positive check input
	24PCK	24VDC with positive check input
	DC110PCK	110VDC with positive check input
	12NCK	12VDC with negative check input
	24NCK	24VDC with negative check input
	DC110NCK	110VDC with negative check input
	12T	110VAC with AC-DC converter
	22T	220VAC with AC-DC converter
Certifications		CE: EN 5501 / 60947-5-2

※ Order Specifications: DC48V, DC110V, DC125V, DC220V

Specifications

Model Name		KH-5020L	KH-5030L	KH-5040L
Classification				
Led Unit Size		20 x 20	30x30	30x40
Light Source		LED		
Current Consumption		20mA max.		
Rated Voltage		12VDC, 24VDC		
Converter Attached		—	110VDC, 110VAC, 220VAC	
Color		Red, Green, Yellow, Orange, Blue, White	Red, Green, Yellow, Orange, Blue, White	
Insulation Resistance		100M Ω min. (DC500V Insulation Resistance Meter)		
Withstand Voltage		Between Charging and Non-Charging Sections: AC 1,500V (50/60Hz) for 1 minute		
Operating Ambient Temperature		-25℃ to +55℃ (without freezing)		
Material		Housing: ABS, Color Plate: Acrylic, Reflector: Acrylic		
Terminal		Terminal clamping type M2.5 x 7	Terminal screw M3.5 x 7 Check terminal screw M3 x 6	
Maximum Combination Size	Row	13	20	20
	Column	13	20	20
Certifications		CE: EN 60947-1, EN 60947-5-1, EN 61000-6-1, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3 UL: UL 60947-1, UL 60947-5-1		

※ Button color caps may vary in color depending on the LOT

K Photo sensor

L Proximity sensor

M Counter Timer

N Buzzer

O Signal phone

P Tower light

Q Square light

R Touch switch

S Floatless controller

T Temp. controller

SQUARE LIGHT

Dimensions

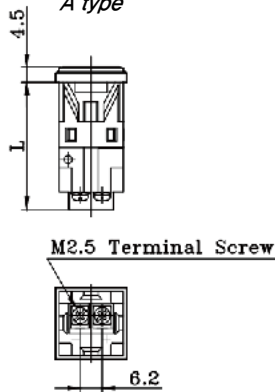
※ For DC Lamp, use the check terminal to verify whether the front panel is illuminated.
AC models do not have a Check terminal

Type	Model	R	S	L1	L2	T(Attachment)
A	KH-5020L-12,24	20	20	L:35,5		—
B	KH-5030L-12,24	30	30	52,2	56,7	—
	KH-5040L-12,24	40	30			—
	KH-5030L-12PCK,24PCK	30	30			KC-PCK
	KH-5040L-12PCK,24PCK	40	30			KC-PCK
	KH-5030L-12NCK,24NCK	30	30			KC-NCK
	KH-5040L-12NCK,24NCK	40	30			KC-NCK
C	KH-5030L-DC110PCK	30	30	77,7	82,2	KC-PCK
	KH-5040L-DC110PCK	40	30			KC-PCK
	KH-5030L-DC110NCK	30	30			KC-NCK
	KH-5040L-DC110NCK	40	30			KC-NCK
D	KH-5030L-12T,22T	30	30			KC-12T,22T
	KH-5040L-12T,22T	40	30			

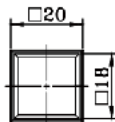
KH-5020L SQUARE LIGHT

LED display type

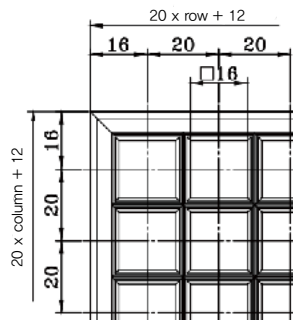
A type



Single windows



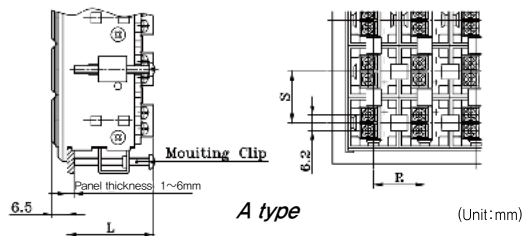
Multiple windows



Mounting panel cutting

P1 (mm) = 20 × Number of column (rows) + 4
P2 (mm) = 20 × Number of column (rows) + 4
Panel cutout dimensions for individual mounting:
18 mm (W) × 18 mm (H)

Input terminal layout



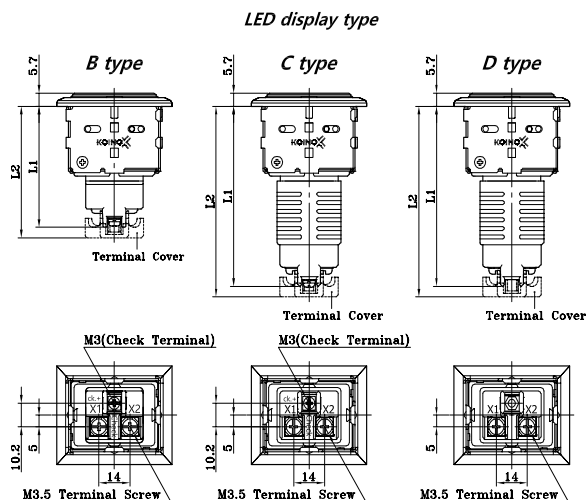
Dimensions

- | | |
|---|----------------------|
| K | Photo sensor |
| L | Proximity sensor |
| M | Counter Timer |
| N | Buzzer |
| O | Signal phone |
| P | Tower light |
| Q | Square light |
| R | Touch switch |
| S | Floatless controller |
| T | Temp. controller |

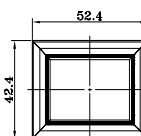
SQUARE LIGHT

Dimensions

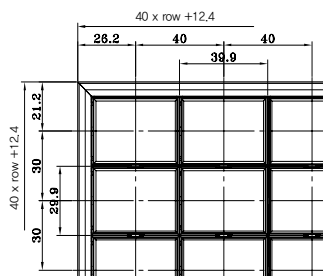
KH-5040L SQUARE LIGHT



Single window



Multiple windows

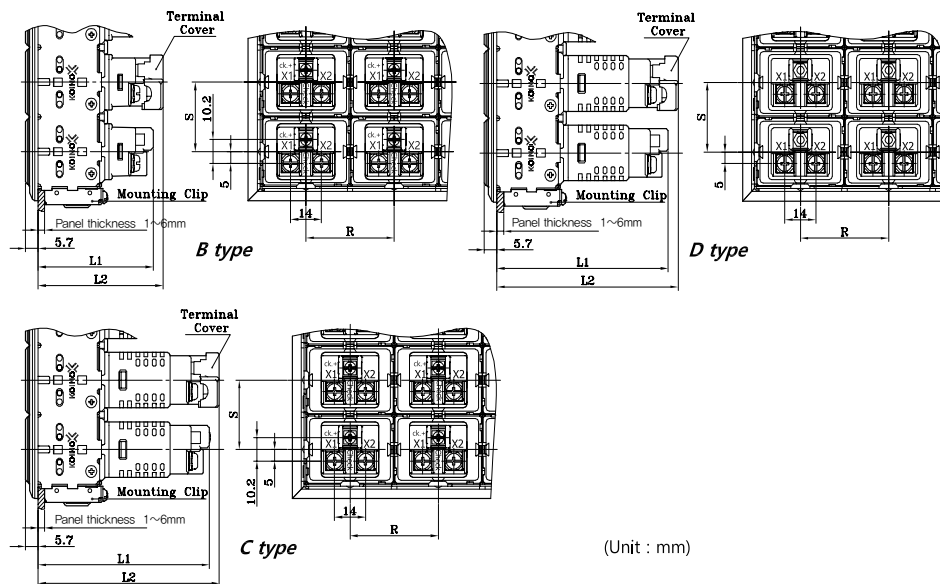


Mounting panel cutting

P1 (mm) = 40 × Number of poles (rows) + 5

P2 (mm) = 30 × Number of poles (rows) + 5

Input terminal layout

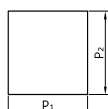


Mounting panel cutting



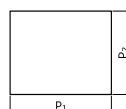
KH-5020L

P1 (mm) = 20 × Number of poles (rows) + 4
P2 (mm) = 20 × Number of poles (rows) + 4
Panel cutout dimensions for individual mounting:
18 mm (W) × 18 mm (H)



KH-5030L

P1 (mm) = 30 × Number of poles (rows) + 5
P2 (mm) = 30 × Number of poles (rows) + 5



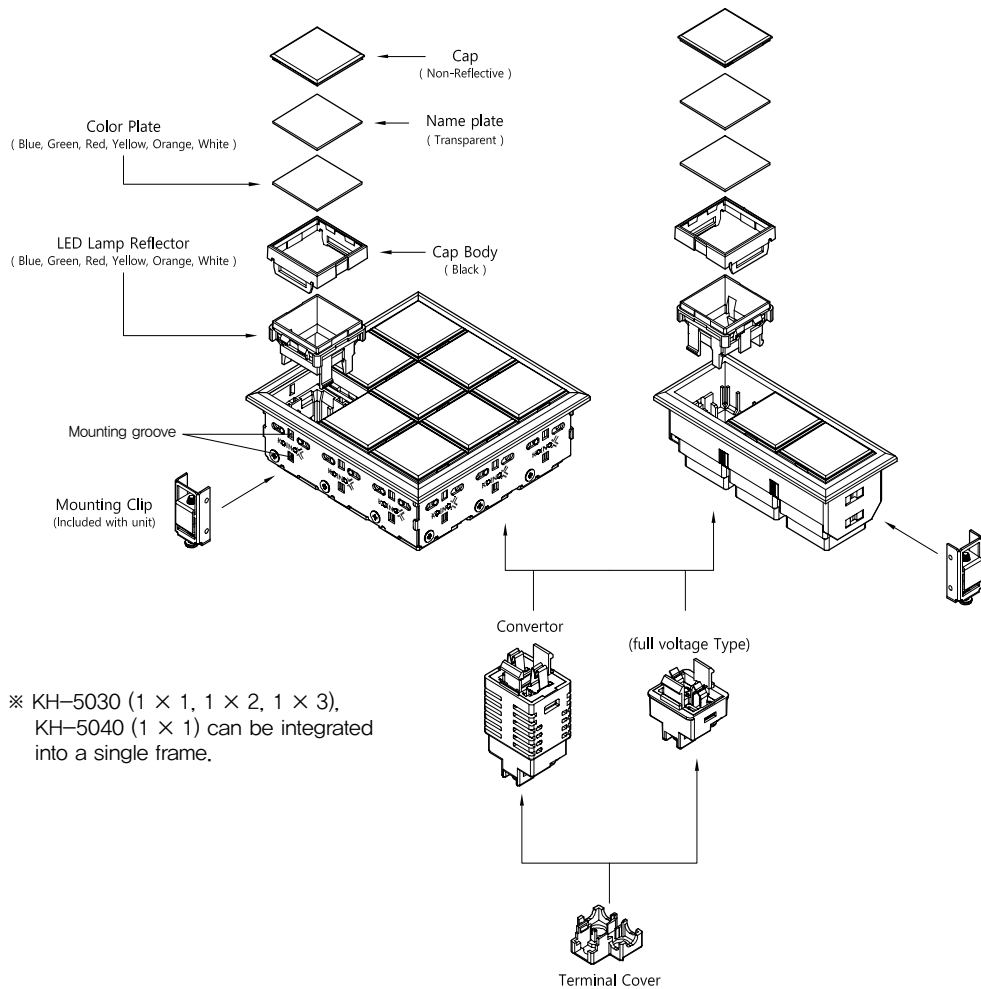
KH-5040L

P1 (mm) = 40 × Number of poles (rows) + 5
P2 (mm) = 30 × Number of poles (rows) + 5

SQUARE LIGHT

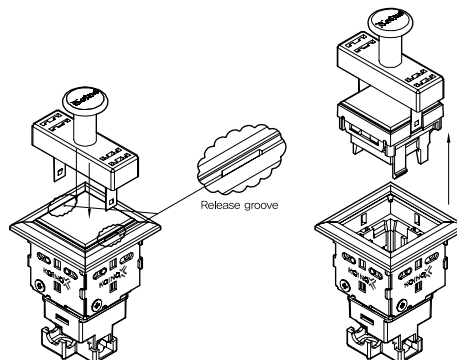
Installation Method

※ KH-5030 (1x1, 1x2, 1x3) and KH-5040 (1x1) are available with an integrated frame.



Illuminated Dimmer Unit Separation Method

Align the tip of the lamp replacement tool with the release groove on the cap body, then pull it out in the direction of the arrow to remove the lamp unit



K Photo sensor

L Proximity sensor

M Counter Timer

N Buzzer

O Signal phone

P Tower light

Q Square light

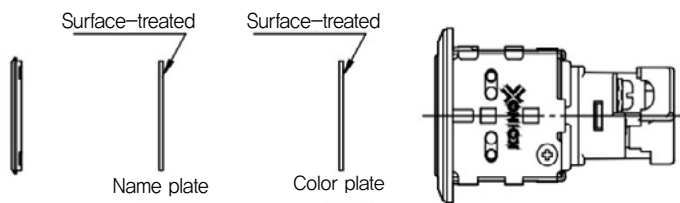
R Touch switch

S Floatless controller

T Temp. controller

SQUARE LIGHT

Nameplate and Color Plate Combination



Mounting Clip Combination Example

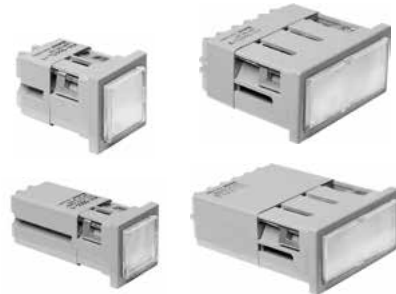
Row \ Column	1~2	3~8	9~15	16~20
1~2				
3~6				
7~10				
11~15				
16~20				

SQUARE LIGHT

Square Matrix Light

Features

- Supports color-specific lighting control and features a built-in nameplate for engraving text and symbols
- KH-500 model supports 1-zone, 2-zone, and 3-zone illuminated zones.
- It supports both close-fitting assembly and standalone mounting.
- Bulb replacement and wiring work are simple.



Classification

KH-500 1-1 L

Company Name		KOINO X KUN HUNG ELECTRIC CO., LTD.
Product code		Square Matrix Light (□ 40mm)
Rated Voltage	TL	Full-voltage type
	1	110VAC
	2	220VAC
Number of Lamps	1	1
	2	2
	3	3
Illuminated Method	No Marking	Filament lamp type
	L	LED Lamp type
Filament Lamp		LED Lamp
		

Specifications

Model	KH-500TL-1, 1L KH-500TL-2, 2L KH-500TL-3, 3L	KH-5001-1, 1L KH-5001-2, 2L KH-5001-3, 3L	KH-5002-1, 1L KH-5002-2, 2L KH-5002-3, 3L
Power Supply Voltage	Full-voltage type	110VAC	220VAC
Filament Lamp	12V, 24V: 2W	18V, 2W	18V, 2W
LED Lamp	12V, 24V: 20mA or less	18V: 20mA or less	18V: 20mA or less
Insulation resistance	100 mΩ min. (DC 500V Insulation Resistance Meter)		
Withstand Voltage	Between charging and non-charging sections: 1,500VAC (50/60Hz) for 1 minute		
Vibration resistance	10~55Hz, Double amplitude 0.5mm, X, Y, Z directions		
Shock resistance	Approx. 10G (100 ㊦)		
Wiring	Terminal clamp type		
Ingress Protection	IP 40		
Operating ambient temperature	-25°C to +55°C (without freezing)		
Ambient operating humidity	45~85% RH		

※ Button color caps may vary in color depending on the LOT

SQUARE LIGHT



KH-500TL-1, 1L



KH-500TL-2, 2L



KH-500TL-3, 3L

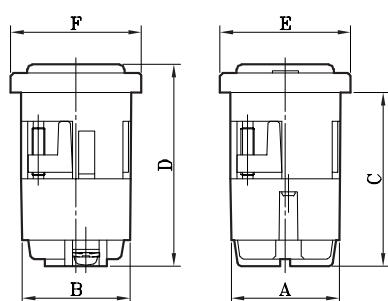
Specifications

Category	Model	Input Voltage	Filament Lamp		LED Lamp		Color	Material	Weight
			Voltage	Power Consumption	Voltage	Power Consumption			
KH-500TL-1, 1L		12V, 24V	12V, 24V	2.0W or less	12V, 24V	20mA or less	Red Green Yellow White	Housing: Heat resistant ABS Name Plate: AS Color Plate: Acrylic Lamp Cap: AS	For 12V, 24V Approx. 63g
		DC110V	—	—	24V	—			
KH-500TL-2, 2L		12V, 24V	12V, 24V	2.0W or less	12V, 24V	20mA or less			For 12V, 24V Approx. 122g
		DC110V	—	—	24V	—			
KH-500TL-3, 3L		12V, 24V	12V, 24V	2.0W or less	12V, 24V	20mA or less			For 12V, 24V Approx. 134g
		DC110V	—	—	24V	—			

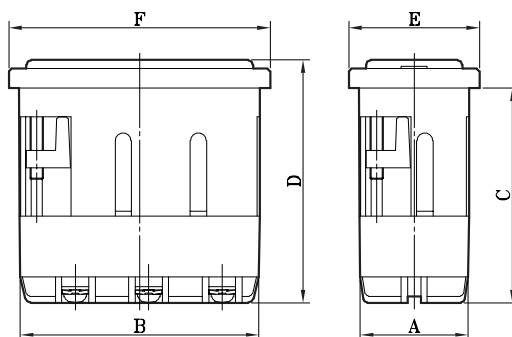
■ When using this product in an enclosed space, ensure ventilation with a fan or similar device to allow air exchange with the outside.

■ The external dimensions of the KH-500TL for 110V are identical to the KH-5001 model.

Dimensions



KH-500TL-1, 1L



KH-500TL-2, 2L, KH-500TL-3, 3L

Classification	A	B	C	D	E	F
KH-500TL-1, 1L	34	34	54	63	40	40
KH-500TL-2, 2L	34	74	66.5	76	40	80
KH-500TL-3, 3L	34	74	66.5	76	40	80

SQUARE LIGHT



KH-5001-1, 1L
KH-5002-1, 1L



KH-5001-2, 2L
KH-5002-2, 2L



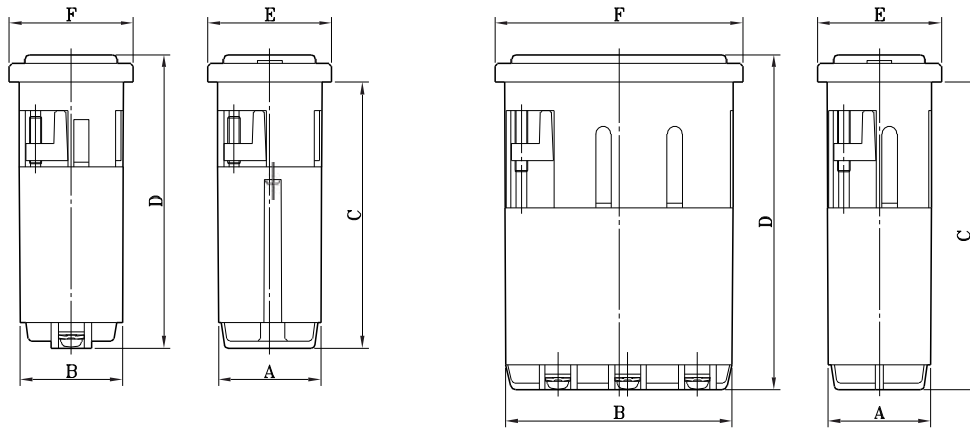
KH-5001-3, 3L
KH-5002-3, 3L

Specifications

Model	Input Voltage	Filament Lamp		LED Lamp		Color	Material	Weight
		Voltage	Power Consumption	Voltage	Power Consumption			
KH-5001-1, 1L	110VAC	18V	2.0W or less	18V	20mA or less	Red Green Yellow White	Housing: Heat-resistant ABS Display: AS Color Panel: Acrylic Lamp Cap: AS	Approx. 147g
KH-5001-2, 2L	110VAC	18V	2.0W or less	18V	20mA or less			Approx. 297g
KH-5001-3, 3L	110VAC	18V	2.0W or less	18V	20mA or less			Approx. 389g
KH-5002-1, 1L	220VAC	18V	2.0W or less	18V	20mA or less			Approx. 147g
KH-5002-2, 2L	220VAC	18V	2.0W or less	18V	20mA or less			Approx. 297g
KH-5002-3, 3L	220VAC	18V	2.0W or less	18V	20mA or less			Approx. 389g

■ When using this product in an enclosed space, ensure ventilation with a fan or similar device to allow air exchange with the outside.

Dimensions



KH-5001-1, 1L, KH-5002-1, 1L

KH-5001-2, 2L, KH-5002-2, 2L
KH-5001-3, 3L, KH-5002-3, 3L

Name	Model	A	B	C	D	E	F
KH-5001-1, 1L, KH-5002-1, 1L		34	34	85	94	40	40
KH-5001-2, 2L, KH-5002-2, 2L		34	74	98	107	40	80
KH-5001-3, 3L, KH-5002-3, 3L		34	74	98	107	40	80

K Photo sensor

L Proximity sensor

M Counter Timer

N Buzzer

O Signal phone

P Tower light

Q Square light

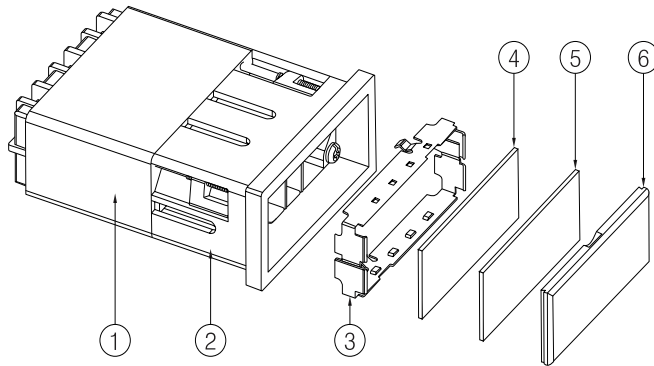
R Touch switch

S Floatless controller

T Temp. controller

SQUARE LIGHT

Internal Structure and Material



Classification Part Number	Part Name	Material	Hull Color
①	Transformer Housing	"ABS (Heat-Resistant)"	Gray
②	Lamp Housing	"ABS (Heat-Resistant)"	Gray
③	Illuminated Light Diffuser Mounting Frame	Stainless steel	—

Classification Number	Part Name	Material	Hull Color	Applicable Product	Dimensions
④	Color plate	Acrylic	Red Green Yellow White	KH-5001, 2-1, 1L	28 X 28
				KH-5001, 2-2, 2L	68 X 28
				KH-5001, 2-3, 3L	68 X 28
⑤	Keypad	AS	Translucent	KH-5001, 2-1, 1L	28 X 28
				KH-5001, 2-2, 2L	68 X 28
				KH-5001, 2-3, 3L	68 X 28
⑥	Lamp Cap	AS	Transparent	KH-5001, 2-1, 1L	28 X 28
				KH-5001, 2-2, 2L	68 X 28
				KH-5001, 2-3, 3L	68 X 28

Panel Mounting Method

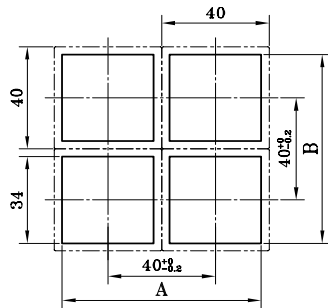
- Separate the illuminated dimming plate mounting frame (③) from the lamp housing within the indicator light's internal structure.
- Insert the indicator light into the machined mounting panel.
- Turn the four Phillips screws inside the lamp housing counterclockwise about five times.
- Turning the Phillips screws clockwise will secure the mounting flange on the lamp housing exterior to the mounting panel and housing. (The mounting tabs are attached to the Phillips screws.)
- After fully installing the assembly indicator light, insert the dimming panel mounting frame into the lamp housing.
- When mounting two or more group indicator lights together, use the + -shaped connectors for close-fitting group mounting.

Close-Fit Assembly Installation Method

- Tighten the internal screws inside the lamp housing clockwise to secure the indicator assembly.
- Insert the assembled indicator into the pre-machined panel cutout.
- Turn the housing screws clockwise; the mounting flange will automatically engage to securely fasten the unit to the panel.
- Once the indicator is fully installed, snap the diffuser mounting frame into the lamp housing.
- For flush-mount installations, ensure adequate ventilation around the unit to facilitate proper heat dissipation and prevent overheating.

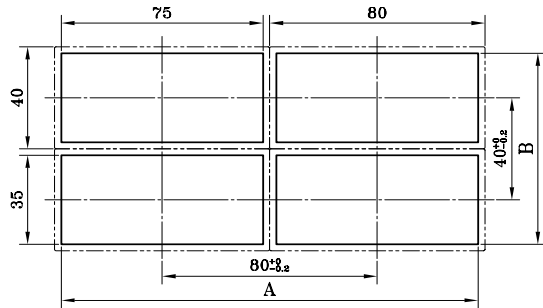
SQUARE LIGHT

Panel Mounting Method



Panel cutting A(mm)=40×row-5
B(mm)=40×column-5

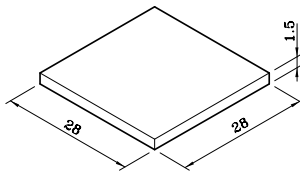
- KH-500TL-1, 1L
- KH-5001-1, 1L
- KH-5002-1, 1L



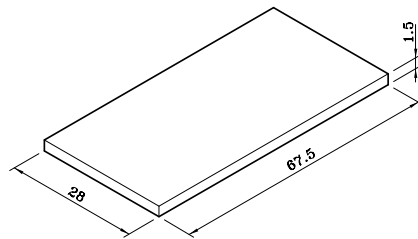
Panel cutting A(mm)=80×row-5
B(mm)=40×column-5

- KH-500TL-2, 2L, 3, 3L
- KH-5001-2, 2L, 3, 3L
- KH-5002-2, 2L, 3, 3L

Name Plate Dimensions



- KH-500TL-1, 1L
- KH-5001-1, 1L
- KH-5002-1, 1L



- KH-500TL-2, 2L, 3, 3L
- KH-5001-2, 2L, 3, 3L
- KH-5002-2, 2L, 3, 3L

Mounting bracket



Lamp replacement tool



- For Ø10(E10), Ø12(E12) lamps

K Photo sensor

L Proximity sensor

M Counter Timer

N Buzzer

O Signal phone

P Tower light

Q Square light

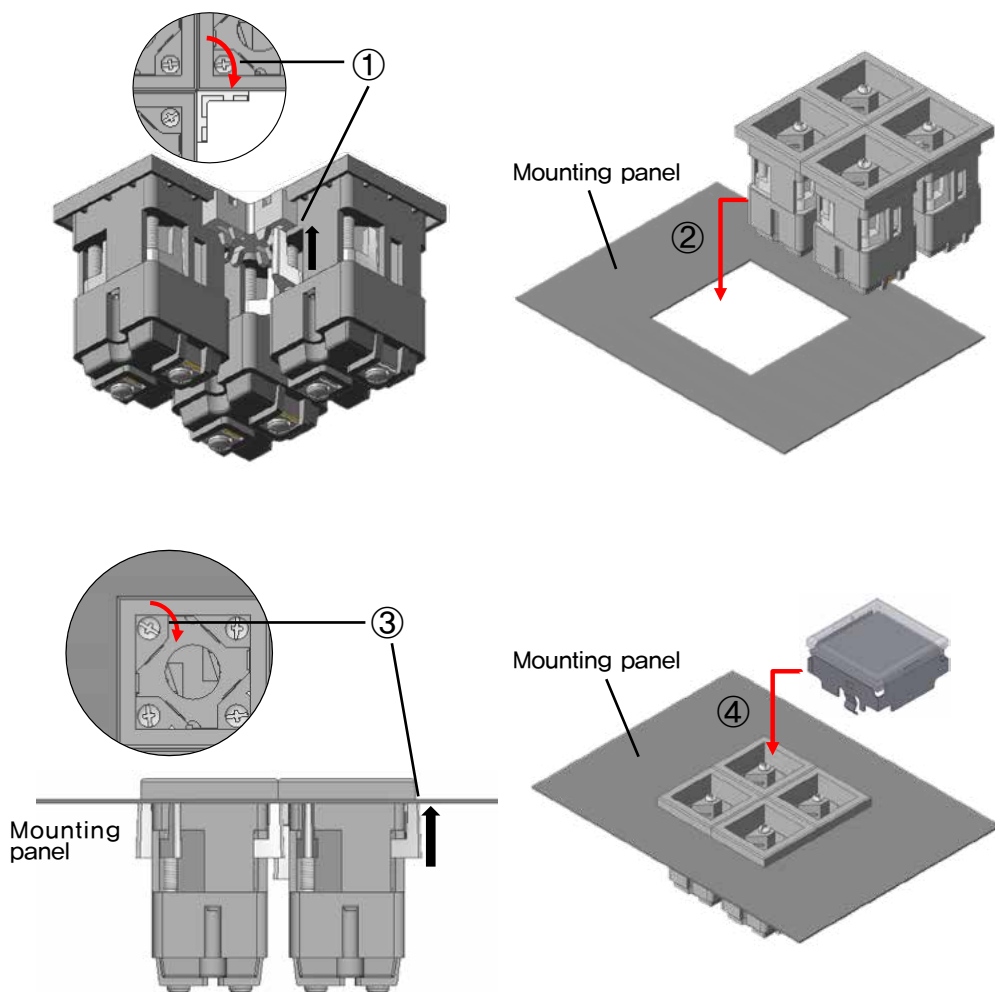
R Touch switch

S Floatless controller

T Temp. controller

SQUARE LIGHT

Close-Fit Assembly Installation Method



- ① Turn the Phillips screw inside the lamp housing clockwise to assemble the Indicator light using the Phillips connector.
- ② Insert the assembled flush-mounted indicator light into the pre-machined mounting panel.
- ③ Turn the Phillips screws inside the assembled flush-mounted indicator's external lamp housing clockwise to secure the mounting panel and housing.
- ④ After fully mounting the assembled indicator light, insert the illuminated light diffuser frame into the lamp housing.
- ⑤ For flush mounting, ensure proper heat dissipation for the Indicator light. Ventilate the area to prevent overheating of the Indicator light.