

# PART1

## SQUARE LIGHT



KH-50XX Series

KH-500X Series

## KH-50XX Series

### CLASSIFICATION

KH - 5030L - 24PCK



|                 |          |                             |
|-----------------|----------|-----------------------------|
| ① MODEL         | 20L      | 20 x 20 mm                  |
|                 | 30L      | 30 x 30 mm                  |
|                 | 40L      | 40 x 40 mm                  |
| ② INPUT VOLTAGE | 12       | 12VDC                       |
|                 | 24       | 24VDC                       |
|                 | 12PCK    | 12VDC positive check input  |
|                 | 24PCK    | 24VDC positive check input  |
|                 | DC110PCK | 110VDC positive check input |
|                 | 12NCK    | 12VDC negative check input  |
|                 | 24NCK    | 24VDC negative check input  |
|                 | DC110NCK | 110VDC negative check input |
|                 | 12T      | 110VAC AC - DC converter    |
|                 | 22T      | 220VAC AC - DC converter    |

### Technical Information

|                       |              | KH - 5020L  | KH - 5030L  | KH - 5040L |
|-----------------------|--------------|---|-------------|------------|
| Panel unit size       |              | 20X20   | 30X30       | 30X40      |
| Light Source          |              | LED   |             |            |
| Current consumption   |              | Max. 20mA   |             |            |
| Rated Voltage         | Full Voltage | 12V DC  |             |            |
|                       |              | 24V DC  |             |            |
| Converter type        |              | -   | 110 V AC    |            |
|                       |              | -   | 220 V AC    |            |
| Color                 |              | R,G,Y,O   | R,G,Y,O,B,W |            |
| Insulation resistance |              | 100MΩ(DC500V)                                       |             |            |
| Dielectric Strength   |              | AC 1,500v(50/60Hz)                                  |             |            |
| Ambient Temp.         |              | - 10~ +55   |             |            |
| Material              |              | Enclosure: PC, Color plate: Acryl, Reflector: Noryl |             |            |
| Terminal              |              | M2.5X7  | M3.5X7      |            |
| Max. Combination      | Column       | 13  | 20          | 20         |
|                       | Row          | 13  | 20          | 20         |

## Wiring

| TYPE | MODEL                 | R  | S  | L1    | L2  | T(attachment) |
|------|-----------------------|----|----|-------|-----|---------------|
| A    | KH-5020L-12, 24       | 20 | 20 | L: 40 |     | -             |
| B    | KH-5030L-12, 24       | 30 | 30 | 56    | 63  | -             |
|      | KH-5030L-12, 24       | 40 | 30 |       |     |               |
| C    | KH-5030L-12PCK, 24PCK | 30 | 30 | 107   | 111 | KC-PCK        |
|      | KH-5030L-12PCK, 24PCK | 40 | 30 |       |     |               |
|      | KH-5030L-12NCK, 24NCK | 30 | 30 |       |     | KC-NCK        |
|      | KH-5030L-12NCK, 24NCK | 40 | 30 |       |     |               |
| D    | KH-5030L-12T, 24T     | 30 | 30 | 105   | 111 | KC12T, 22T    |
|      | KH-5030L-12T, 24T     | 40 | 30 |       |     |               |

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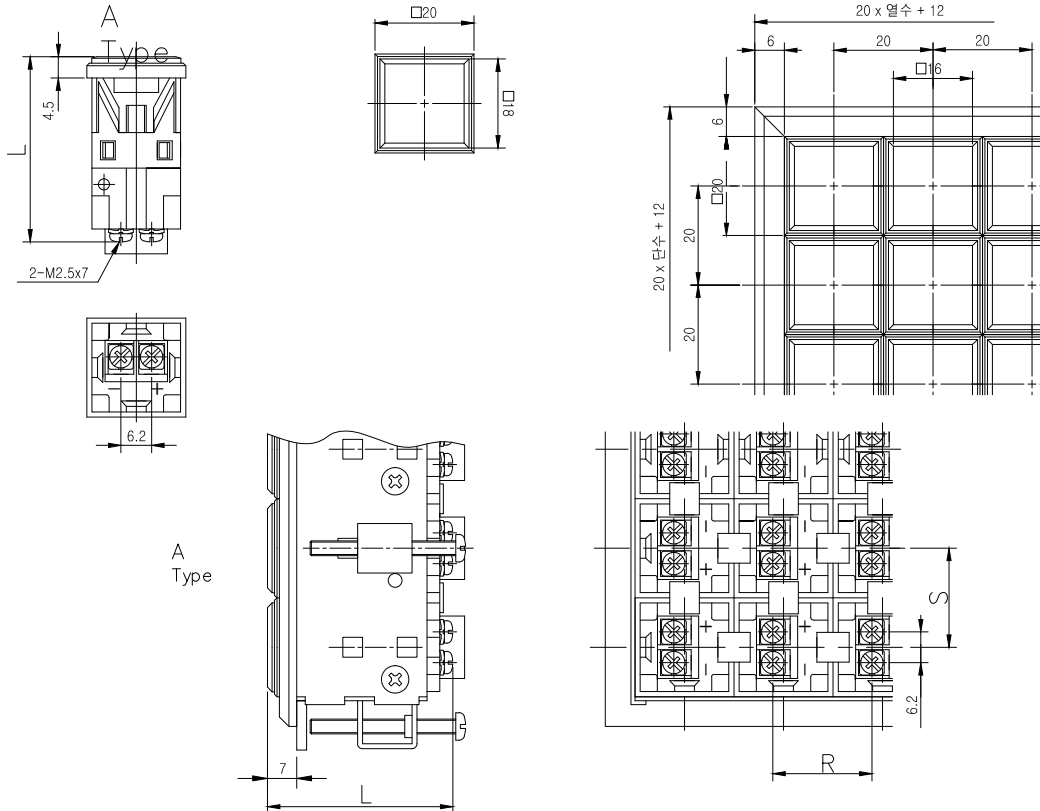
SOCKETS

TERMINAL BLOCKS

CONTROL BOX

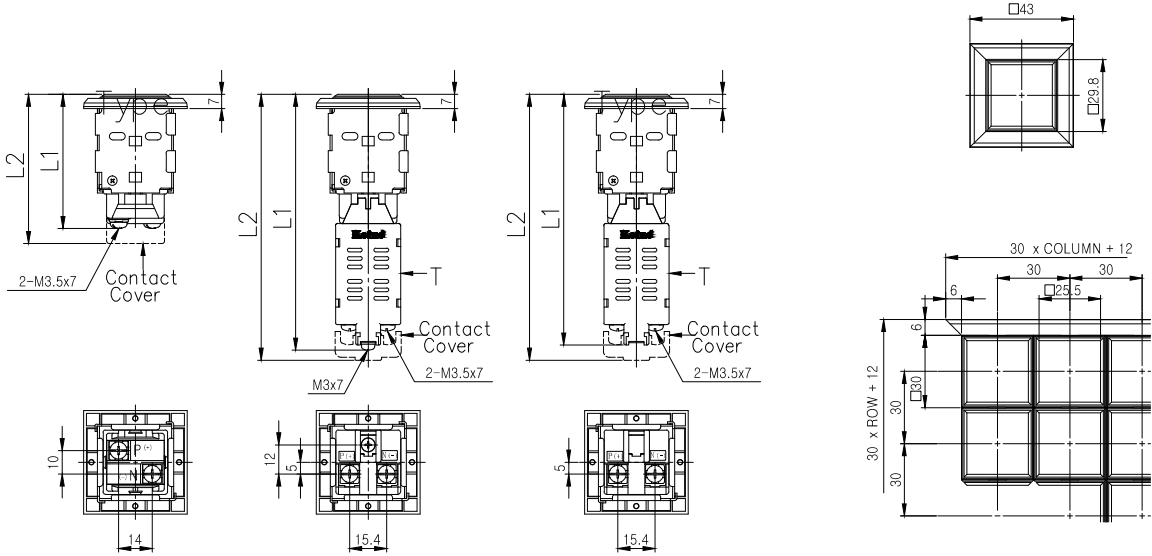
## Dimensions

KH-5020L

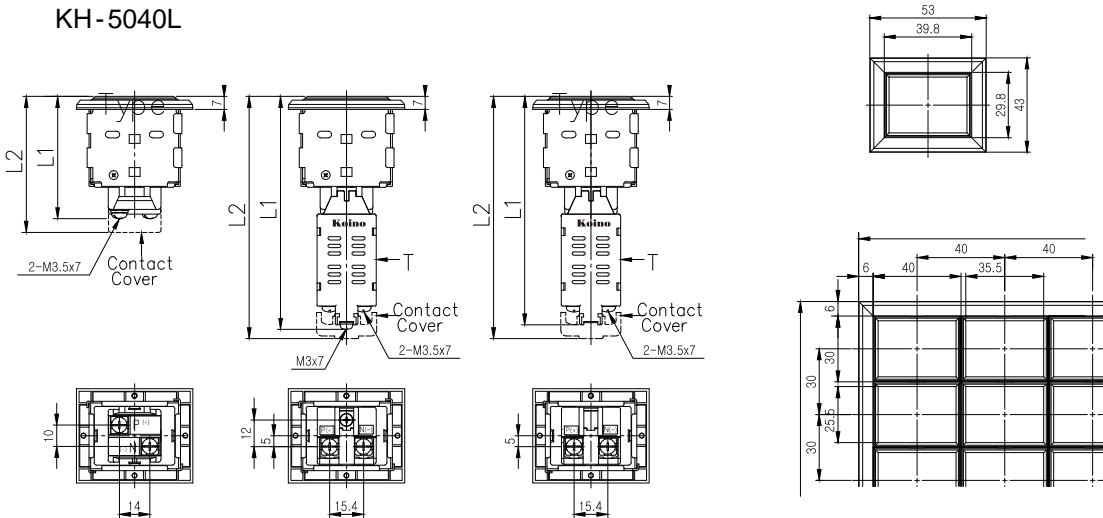


## Dimensions

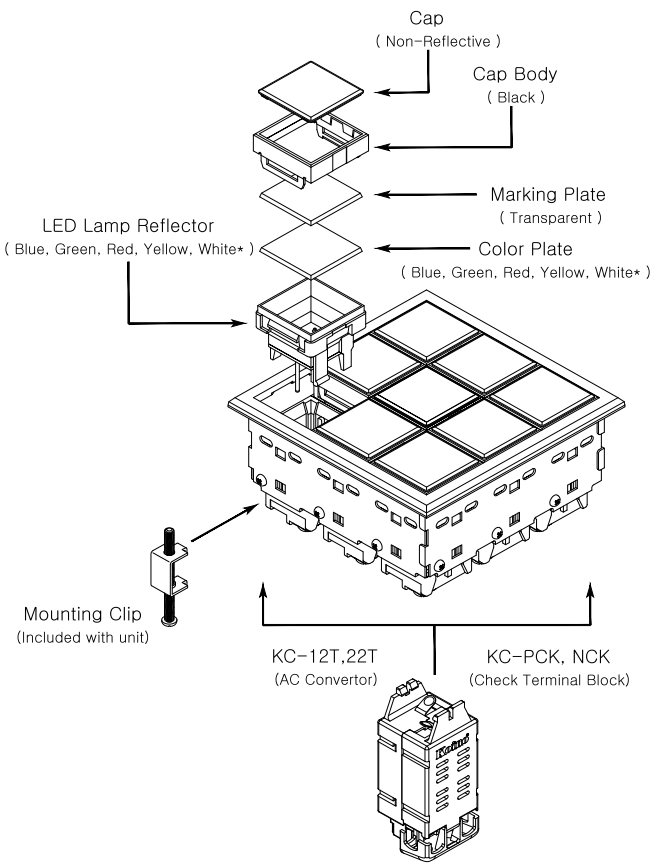
### KH-5030L



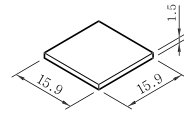
### KH-5040L



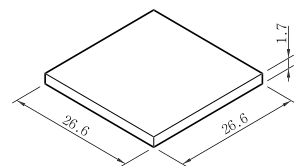
## Installing



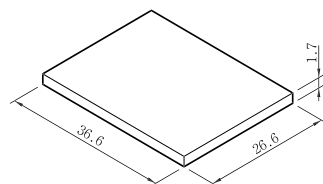
## Windows



**KH-5020L**



**KH-5030L**

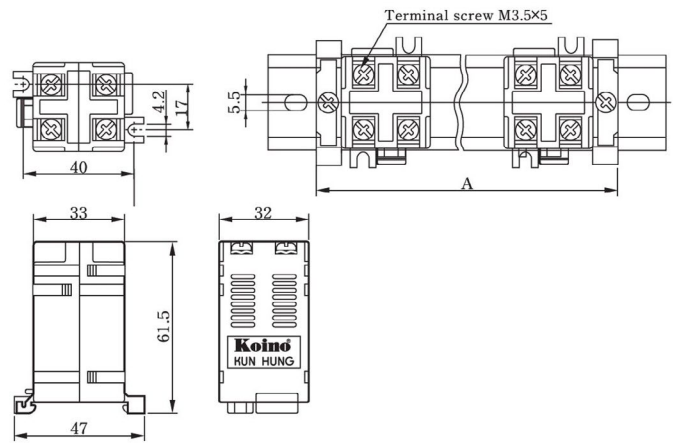


**KH-5040L**

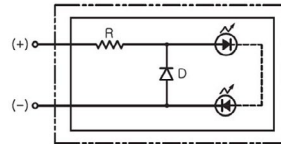
## AC-DC Converter Dimensions



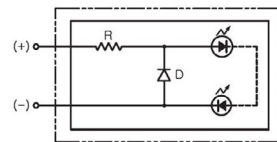
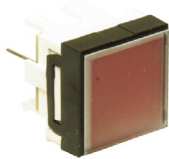
**KC-12, 22**



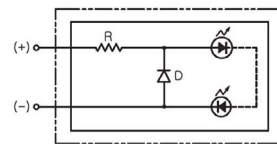
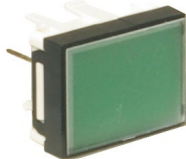
LED unit for KH - 5020L



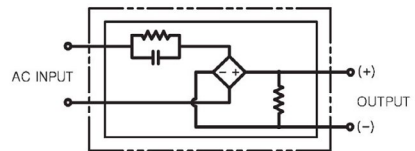
LED unit for KH - 5030L



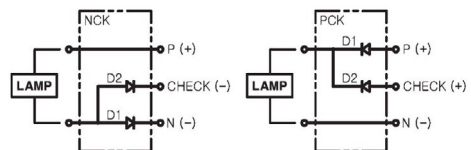
LED unit for KH - 5040L



AC/DC Converter



Check terminal unit



Jumpers



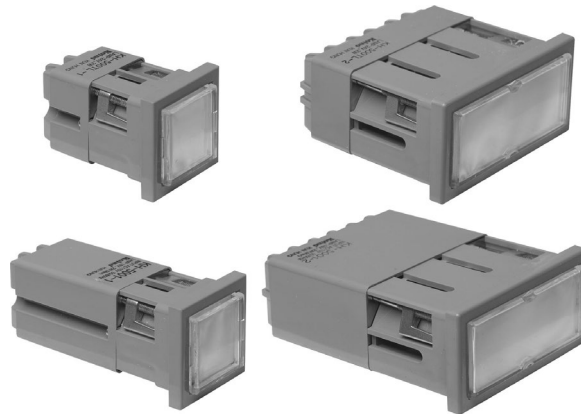
Lamp remover



Bracket




## KH-500X Series



### CLASSIFICATION

KH - 500 1 - 1 L

|                   |      |                     |  |
|-------------------|------|---------------------|--|
| ① RATED VOLTAGE   | TL   | Without Transformer |  |
|                   | 1    | 110VAC              |  |
|                   | 2    | 220VAC              |  |
| ② NUMBER OF LAMPS | 1    | 1                   |  |
|                   | 2    | 2                   |  |
|                   | 3    | 3                   |  |
| ③ LAMP TYPE       | NONE | Filament            |  |
|                   | L    | LED                 |  |

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# SQUARE LIGHTS

## Technical Information

|                       |   |  |  |
|-----------------------|---|--|--|
| Input Voltage         | KH - 500TL - 1,1L<br>KH - 500TL - 2,2L<br>KH - 500TL - 3,3L | KH - 5001 - 1,1L<br>KH - 5001 - 2,2L<br>KH - 5001 - 3,3L | KH - 5002 - 1,1L<br>KH - 5002 - 2,2L<br>KH - 5002 - 3,3L |
| Input Voltage         | DC 12V/24V/110V   | 110VAC   | 220VAC   |
| Filament Lamp         | 12/24VDC: 2W  | 18V 2W   | 18V 2W   |
| LED Lamp              | 12/24VDC: 20mA Max.   | 18V : 20mA Max.  | 18V : 20mA Max.  |
| Insulation Resistance | 100M $\Omega$ min.(DC500V)                                  |  |  |
| Dielectric Strength   | 1,500 VAC(50/60Hz) for 1 minute                             |  |  |
| Vibration Resistance  | 10~55 Hz double amplitude 0.5mm at X, Y Z directions        |  |  |
| Shock Resistance      | 10G   |  |  |
| Protection            | IP50  |  |  |
| Ambient Temperature   | - 10~+55  |  |  |
| Ambient Humidity      | 45~85% RH   |  |  |

## Quick Selection Guide

| Input Voltage   | Size  | No. of bulbs | Lamp          | Model           |
|-----------------|-------|--------------|---------------|-----------------|
| DC 12V/24V/110V | 34X34 | 1            | Filament Lamp | KH - 500TL - 1  |
|                 |       |              | LED Lamp      | KH - 500TL - 1L |
|                 | 34X74 | 2            | Filament Lamp | KH - 500TL - 2  |
|                 |       |              | LED Lamp      | KH - 500TL - 2L |
|                 |       | 3            | Filament Lamp | KH - 500TL - 3  |
|                 |       |              | LED Lamp      | KH - 500TL - 3L |
| AC 110V         | 34X34 | 1            | Filament Lamp | KH - 5001 - 1   |
|                 |       |              | LED Lamp      | KH - 5001 - 1L  |
|                 | 34X74 | 2            | Filament Lamp | KH - 5001 - 2   |
|                 |       |              | LED Lamp      | KH - 5001 - 2L  |
|                 |       | 3            | Filament Lamp | KH - 5001 - 3   |
|                 |       |              | LED Lamp      | KH - 5001 - 3L  |
| AC 220V         | 34X34 | 1            | Filament Lamp | KH - 5002 - 1   |
|                 |       |              | LED Lamp      | KH - 5002 - 1L  |
|                 | 34X74 | 2            | Filament Lamp | KH - 5002 - 2   |
|                 |       |              | LED Lamp      | KH - 5002 - 2L  |
|                 |       | 3            | Filament Lamp | KH - 5002 - 3   |
|                 |       |              | LED Lamp      | KH - 5002 - 3L  |



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## Specification



KH-500TL-1, 1L



KH-500TL-2, 2L

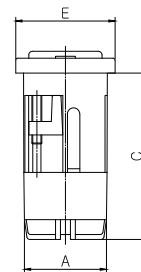
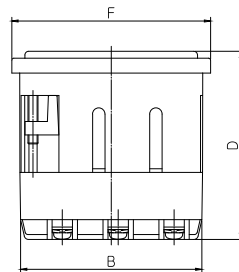
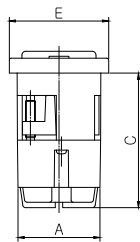
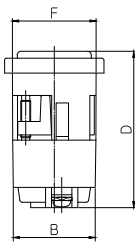


KH-500TL-3, 3L

## Ratings

|               | 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 Max.         | 12V/24V  | 20mA Max.         | Red<br>Green<br>Yellow<br>White | Body: ABS<br>Lettering Plate: AS<br>Color Plate: Acryl<br>Lamp Cap: AS | 63g    |
|               | DC 110V       | 48V           | 1.0W Max.         | -        | -                 |                                 |  | 63g    |
| KH-500TL-2,2L | 12V/24V       | 12V/24V       | 2.0W Max.         | 12V/24V  | 20mA Max.         |                                 |  | 122g   |
|               | DC 110V       | 48V           | 1.0W Max.         | -        | -                 |                                 |  | 122g   |
| KH-500TL-3,3L | 12V/24V       | 12V/24V       | 2.0W Max.         | 12V/24V  | 20mA Max.         |                                 |  | 134g   |
|               | DC 110V       | 48V           | 1.0W Max.         | -        | -                 |                                 |  | 134g   |

## Dimensions



|               | 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 | 67 | 40 | 80 |

# SQUARE LIGHTS

## Specification



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



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

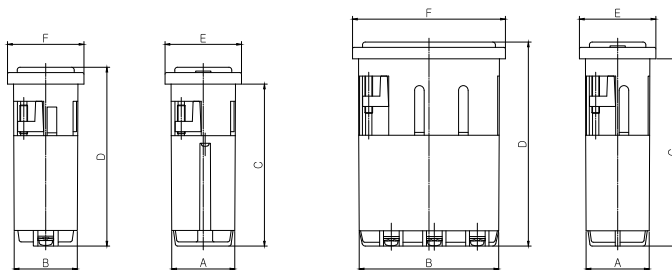


KH-5001-3, 3L  
KH-5002-3, 3L

## Ratings

|              | Input Voltage | Filament Lamp |                   | LED Lamp |                   | Color                           | Material  | Weight |
|--------------|---------------|---------------|-------------------|----------|-------------------|---------------------------------|---|--------|
|              |               | Voltage       | Power Consumption | Voltage  | Power Consumption |                                 |   |        |
| KH-5001-1,1L | 110VAC        | 18V           | 2.0W Max.         | 18V      | 20mA Max.         | Red<br>Green<br>Yellow<br>White | Body: ABS<br>Lettering<br>Plate: AS<br>Color Plate:<br>Acryl<br>Lamp Cap:<br>AS | 147g   |
| KH-5001-2,2L | 110VAC        | 18V           | 2.0W Max.         | 18V      | 20mA Max.         |                                 |   | 297g   |
| KH-5001-3,3L | 110VAC        | 18V           | 2.0W Max.         | 18V      | 20mA Max.         |                                 |   | 389g   |
| KH-5002-1,1L | 220VAC        | 18V           | 2.0W Max.         | 18V      | 20mA Max.         |                                 |   | 147g   |
| KH-5002-2,2L | 220VAC        | 18V           | 2.0W Max.         | 18V      | 20mA Max.         |                                 |   | 297g   |
| KH-5002-3,3L | 220VAC        | 18V           | 2.0W Max.         | 18V      | 20mA Max.         |                                 |   | 389g   |

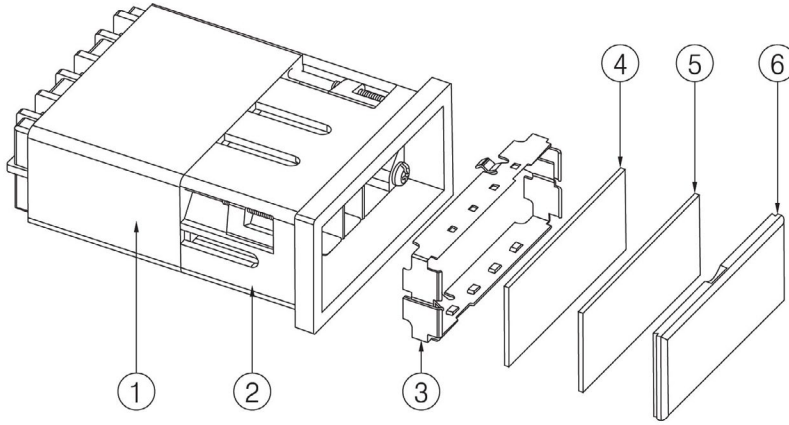
## Dimensions



|                            | 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 |

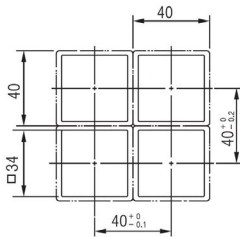
# SQUARE LIGHTS

## Material

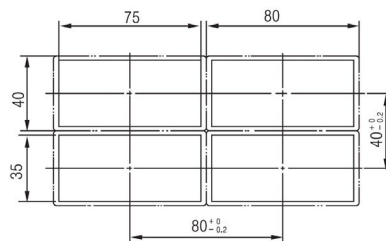


| Name                  | Material             | Color |  | Name        | Material | Color       | Item             | Dimension |
|-----------------------|----------------------|-------|--|-------------|----------|-------------|------------------|-----------|
| Transformer housing   | ABS( heat-resisting) | Grey  |  | Label plate | 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   |
| Lamp housing          | ABS( heat-resisting) | Grey  |  | Color plate | Acryl    | R, G, Y, W  | KH-5001, 2-1, 1L | 28 X 28   |
|                       |                      |       |  |             |          |             | KH-5001, 2-2, 2L | 68 X 28   |
|                       |                      |       |  |             |          |             | KH-5001, 2-3, 3L | 68 X 28   |
| Lighting panel holder | Stainless steel      |       |  | Lamp cover  | AS       | Clear       | 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-cut Dimension



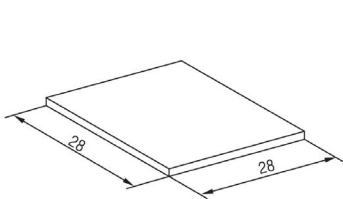
KH-500TL-1, 1L, KH-5001, 2-1, 1L



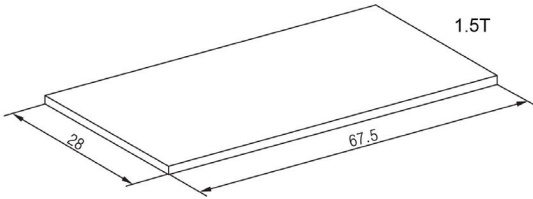
KH-500TL-2, 2L, KH-5001, 2-2L, 3, 3L

# SQUARE LIGHTS

## Label-plate Dimension

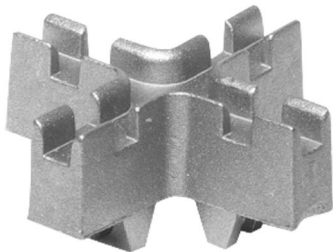


KH-500TL-1, 1L, KH-5001, 2-1, 1L



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

## Misc.



Linker



Lamp puller