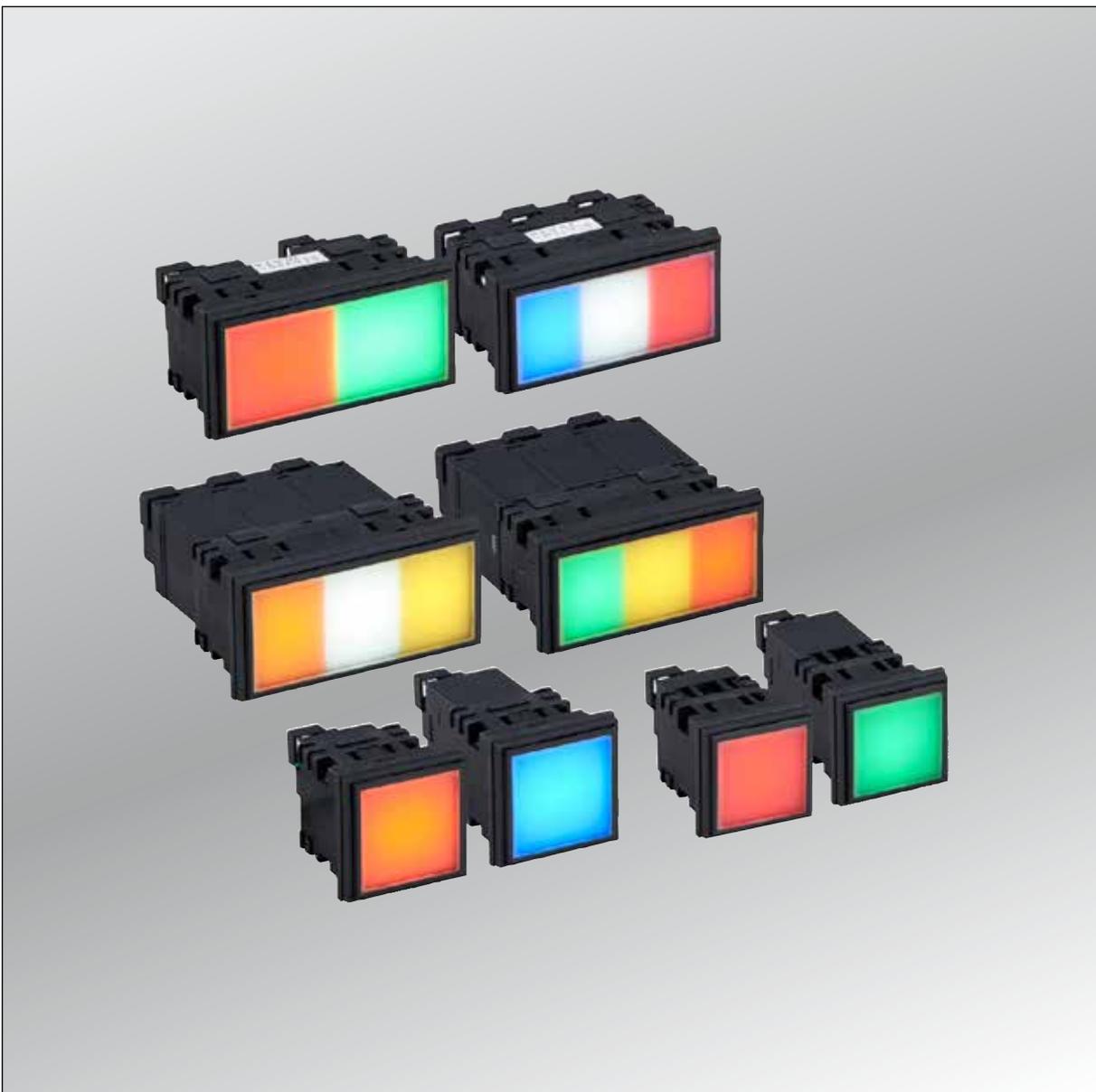


# SLDN Series Display Lights



# SLDN series Display Lights

## Super Bright LED Illumination Increased Visibility for Higher Safety

- Super bright LED illumination. Color arrangements can be easily changed on split illumination types.
- The spring-up terminals save wiring time and ensures safety.
- The integrated terminal cover prevents electrical shocks.
- Marking films (not supplied) can be inserted or easy legend marking.
- Prevention against dim lighting caused by leakage currents and induced voltage.
- UL and c-UL recognized. TÜV approved. EN compliant.

Applicable Standards	Mark	File No. or Organization
UL508 CSA C22.2 No.14		UL/c-UL Listed File No. E68961
EN60947-5-1 (Note)		TÜV SÜD
		EU Low Voltage Directive

Note: Except for DC-DC converter types.



### Reduced Wiring Time

The captive spring-up terminals reduce wiring time. The integrated terminal cover prevents electrical shocks. For 2-color alternate and check terminal type units, separate terminal covers are available.

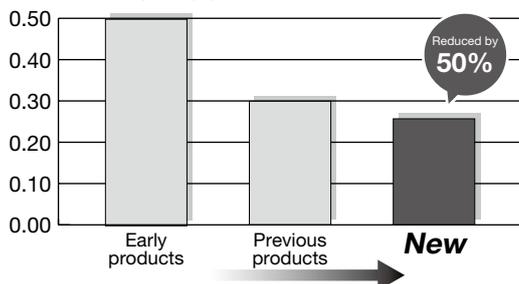
Jumpers with protection sheath enhance safety



### Energy Saving Design

Power consumption is reduced by 50% compared with early products.

Power Consumption (W)



### Easy Replacement of LED Units

Two or three LED units are installed in the split-illumination display units. Since the LED units are removable, the color arrangement can be changed easily.



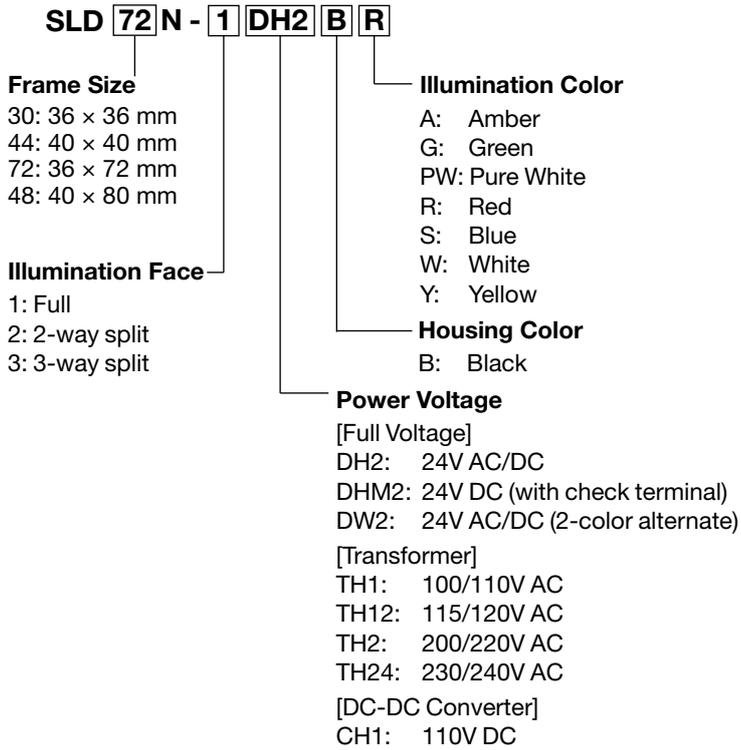
# SLDN series Display Lights

## Selection Guide

Model	Shape	Frame Size (Lens Size)	Input Voltage	Illumination Face	Rated Voltage	Illumination Color
SLD30N		DIN Size 36 × 36 mm (28 × 28 mm)	Full Voltage	1-color Full	24V AC/DC	Amber, Green, Pure White, Red, Blue, White, Yellow
				1-color Full w/check terminal	24V DC	
				2-color Alternate	24V AC/DC	
			Transformer	1-color Full	100/110V AC 115/120V AC 200/220V AC 230/240V AC	Amber, Green, Pure White, Red, Blue, White, Yellow
DC-DC Converter	1-color Full	110V DC (90 to 140V DC)				
SLD44N		40 × 40 mm (32 × 32 mm)	Full Voltage	1-color Full	24V AC/DC	Amber, Green, Pure White, Red, Blue, White, Yellow
				1-color Full w/check terminal	24V DC	
				2-color Alternate	24V AC/DC	
			Transformer	1-color Full	100/110V AC 115/120V AC 200/220V AC 230/240V AC	Amber, Green, Pure White, Red, Blue, White, Yellow
DC-DC Converter	1-color Full	110V DC (90 to 140V DC)				
SLD72N		DIN Size 36 × 72 mm (28 × 64 mm)	Full Voltage	1-color Full	24V AC/DC	Amber, Green, Pure White, Red, Blue, White, Yellow
				2-way Split		
				3-way Split		
				1-color Full w/check terminal	24V DC	
				2-color Alternate	24V AC/DC	
			Transformer	1-color Full	100/110V AC 115/120V AC 200/220V AC 230/240V AC	Amber, Green, Pure White, Red, Blue, White, Yellow
2-way Split						
3-way Split						
DC-DC Converter	1-color Full	110V DC (90 to 140V DC)				
SLD48N		40 × 80 mm (32 × 72 mm)	Full Voltage	1-color Full	24V AC/DC	Amber, Green, Pure White, Red, Blue, White, Yellow
				2-way Split		
				3-way Split		
				1-color Full w/check terminal	24V DC	
				2-color Alternate	24V AC/DC	
			Transformer	1-color Full	100/110V AC 115/120V AC 200/220V AC 230/240V AC	Amber, Green, Pure White, Red, Blue, White, Yellow
			2-way Split			
3-way Split						
DC-DC Converter	1-color Full	110V DC (90 to 140V DC)				

# SLDN Series Display Lights

## Part No. Development



## Packaging

SLDN series are packaged in two different ways depending on the model and illumination face.

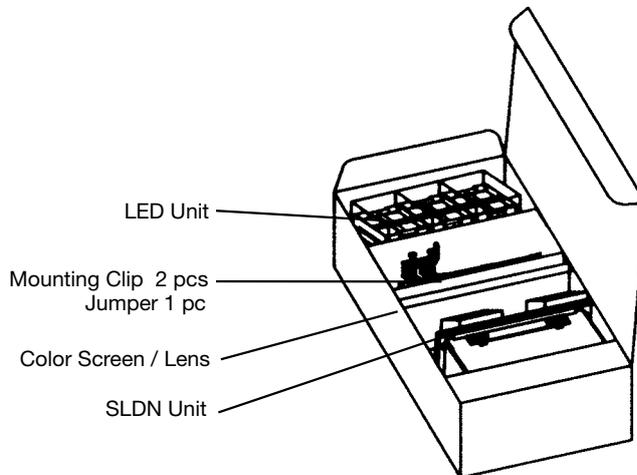
### 1. SLDN series with built-in LED units

SLD30N, SLD44N - All models

SLD72N, SLD48N - 1-color full, 2-way split (combinations GR and RG), 3-way split (combinations GAR)

### 2. SLDN series supplied with LED units (not built-in)

SLDN72N, SLD48N - 2-way split (except combinations GR and RG), 3-way split (except combinations GAR)



## Color Designation for 2-way and 3-way Split

Specify the color designation from the table below. (Except illumination combinations GR and RG for 2-way split and combinations GAR for 3-way split)

### 2-way Split

Color Code	Combination	Color Code	Combination
AA	AA	RS	RS SR
AG	AG GA	RW	RW WR
AR	AR RA	RY	RY YR
AS	AS SA	SS	SS
AW	AW WA	SW	SW WS
AY	AY YA	SY	SY YS
APW	APW PWA	WW	WW
GG	GG	WY	WY YW
GS	GS SG	YY	YY
GW	GW WG	PWPW	PWPW
GY	GY YG	PWR	PWR RPW
GPW	GPW PWG	PWS	PWS SPW
RR	RR	PWY	PWY YPW

### 3-way Split

Color Code	Combination	Color Code	Combination	Color Code	Combination	Color Code	Combination	Color Code	Combination	Color Code	Combination	Color Code	Combination
AAA	AAA	AGPW	AGPW APWG GAPW GPWA PWAG PWGA	AWY	AWY AYW WAY WYA YAW YWA	GRR	GRR RGR RRG	GPWPW	GPWPW PWGPW PWPWG	RWW	RWW WRW WWR	PWPWR	PWPWR RPWPW PWRPW
AAG	AAG AGA GAA					GRS	GRS GSR RGS RSG SGR SRG	GPWR	GPWR GRPW PWGR PWRG RGPW RPWG	RWY	RWY RYW WRY WYR YRW YWR	PWPWS	PWPWS PWSW SPWPW
AAR	AAR ARA RAA	ARR	ARR RAR RRA	AYY	AYY YAY YYA							PWPWY	PWPWY YPWY PWPYPW
AAS	AAS ASA SAA	ARS	ARS ASR RAS RSA SAR SRA	APWPW	APWPW PWAPW PWPWA	GRW	GRW GWR RGW RWG WGR WRG	GPWS	GPWS GSPW PWGS PWSG SPGW SPWG	RYY	RYY YRY YYR	PWRR	PWRR RPWR RRPW
AAW	AAW AWA WAA			APWR	APWR ARPW PWAR					SSS	SSS	PWRS	PWRS PWRPWS RSPW SPWR SRPW
AAY	AAY AYA YAA	ARW	ARW AWR RAW RWA WAR WRA	APWS	APWS ASPW PWAS PWSA SAPW SPWA	GRY	GRY GYR RGY RYG YGR YRG	GPWY	GPWY GYPW PWSG YGPW YPWG	SSW	SSW SWS WSS	PWRY	PWRY PWYR RPWY RYPW YPWY YRPW
AAPW	AAPW APWA PWAA			APWS	APWS ASPW PWAS PWSA SAPW SPWA					SSY	SSY SYS YSS		
AGG	AGG GAG GGA	ARY	ARY AYR RAY RYA YAR YRA	APWY	APWY AYPW PWAY PWYA YAPW YPWA	GSS	GSS SGS SSG	RRR	RRR	SWW	SWW WSW WWS		
AGR	AGR ARG GRA RAG RGA GAR (Note)	ASS	ASS SAS SSA			GSW	GSW GWS SGW SWG WGS WSG	RRS	RRS RSR RRR	SWY	SWY SYW WSY WYS YSW YWS	PWSS	PWSS SPWS SSPW
AGS	AGS ASG GAS GSA SAG SGA	ASW	ASW AWS SAW SWA WAS WSA	GGG	GGG	GSY	GSY GYS SGY SYG YGS YSG	RRY	RRY RYR YRR	YYY	YYY YSY YYS		
				GGR	GGR GRG RGG			RSS	RSS SRS SSR	WWW	WWW	PWYY	PWYY YPWY YYPW
AGW	AGW AWG GAW GWA WAG WGA	ASY	ASY AYS SAY SYA YAS YSA	GGG	GGG GSG SGG	GWW	GWW GWG WWG	RSW	RSW RWS SRW SWR WRS WSR	WWY	WWY WYW YWW		
				GGW	GGW GWG WGG	GWY	GWY GYW WGY WYG YGW YWG			WYY	WYY YWY YYW		
AGY	AGY AYG GAY GYA YAG YGA	AWW	AWW WAW WWA	GGY	GGY GYG YGG			RSY	RSY RYS SRY SYR YRS YSR	YYY	YYY	PWPWPW	PWPWPW
				GGPW	GGPW GPWG PWGG	GYY	GYY YGY YYG						

Note: LED built-in models available.

# SLDN Series Display Lights

SLD30N

DIN36mm Square (lens size 28mm square)



## Specifications

Input	Full Voltage	Transformer	DC-DC Converter
Rated Voltage	24V AC/DC 24V DC (Note 1)	100/110, 115/120, 200/220, 230/240V AC	110V DC
Light Source	1-color LED unit 2-color LED unit (Note 2)	1-color LED unit	
LED Life (reference)	Approx. 50,000 hours (when used on complete DC at 25°C, brightness reduces to 50% of the initial intensity)		
Illumination Face	Full		
Illumination Color	Amber, Green, Pure White, Red, Blue, White, Yellow Red/Green (Note 2)	Amber, Green, Pure White, Red, Blue, White, Yellow	
Color Screen (supplied)	Combination of white and clear color screens		
Color Screen Size	27 × 27 × 1 mm (marking film 27 × 27 × 0.2 mm can be inserted)		
Engraving Area	25 × 25 mm		
Insulation Resistance	Between live and dead parts: 100 MΩ minimum (500V DC megger)		
Dielectric Strength	Between live and dead parts: 2000V, 1 minute	2500V, 1 minute	
Vibration Resistance	5 to 55 Hz, amplitude 0.5 mm		
Shock Resistance	1000 m/s <sup>2</sup> (100G)		
Operating Temperature	-20 to +40°C (no freezing)	-10 to +40°C (no freezing)	
Storage Temperature	-30 to +80°C (no freezing)		
Operating Humidity	45 to 85% RH (no condensation)		
Housing Color	Black (Munsell N1.5 or equivalent)		
Weight (approx.)	38g (1-color full) 43g (w/check terminal) 43g (2-color alternate)	85g (1-color full)	53g (1-color full)

Note 1: 24V DC is only for units with a check terminal.

Note 2: For 2-color alternate only.

## SLD30N

Input	Illumination Face	Rated Voltage	Part No.	Illumination Color Code	Built-in LED Unit (see ratings on page 18)
Full Voltage	1-color Full	24V AC/DC	<b>SLD30N-1DH2B*</b>	A, G, PW, R, S, W, Y	<b>SLDN-32M-*T</b>
	1-color Full w/check terminal	24V DC	<b>SLD30N-1DHM2B*</b>	A, G, PW, R, S, W, Y	
	2-color Alternate	24V AC/DC	<b>SLD30N-1DW2BRG</b>	RG (red/green)	<b>SLDN-32MW-RGT</b>
Transformer	1-color Full	100/110V AC	<b>SLD30N-1TH1B*</b>	A, G, PW, R, S, W, Y	<b>SLDN-32M-*T</b>
		115/120V AC	<b>SLD30N-1TH12B*</b>	A, G, PW, R, S, W, Y	
		200/220V AC	<b>SLD30N-1TH2B*</b>	A, G, PW, R, S, W, Y	
		230/240V AC	<b>SLD30N-1TH24B*</b>	A, G, PW, R, S, W, Y	
DC-DC Converter	1-color Full	110V DC (90 to 140V DC)	<b>SLD30N-1CH1B*</b>	A, G, PW, R, S, W, Y	

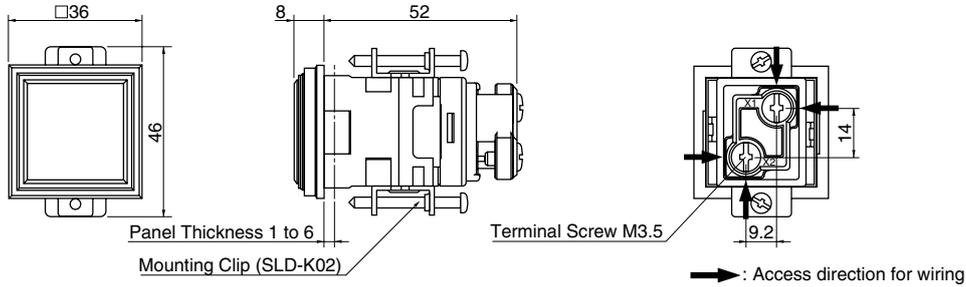
- Specify a color code in place of \* in the Part No.: A (amber), G (green), PW (pure white), R (red), S (blue), W (white), Y (yellow).
- The above SLD30N units contain an LED unit of the specified color. LED units are installed in the SLD30N housings at the factory. See page 18 for maintenance LED units.
- Every SLD30N unit contains a clear and white color screen. When colored display is required during power off, order a color screen separately and replace the clear color screen with the color screen. For instructions, see page 23.

**SLD30N**

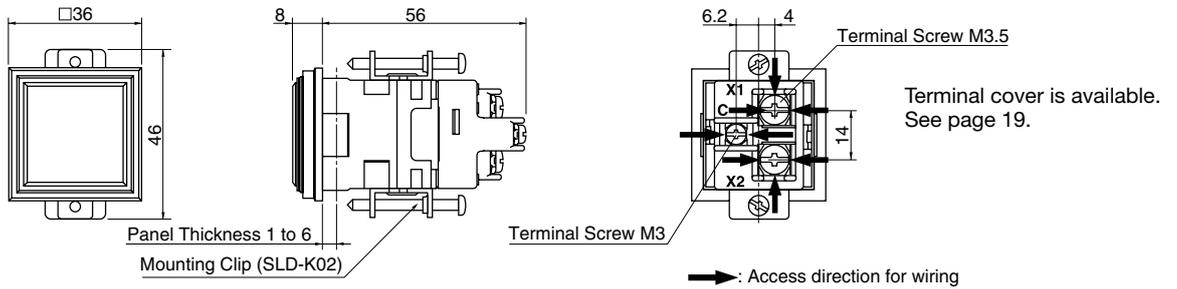
**DIN36mm Square (lens size 28mm square)**

## Dimensions

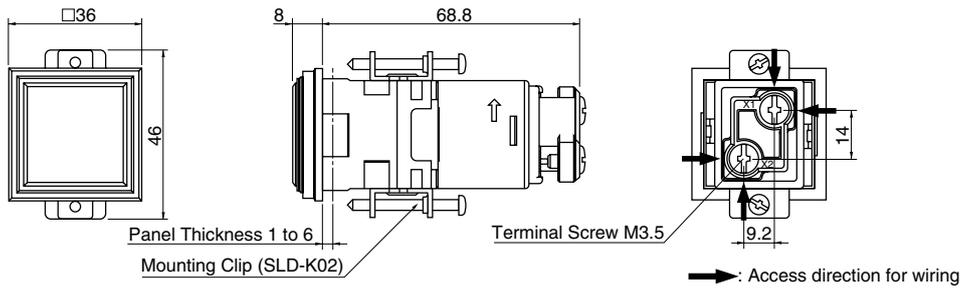
### Full Voltage (1-color full)



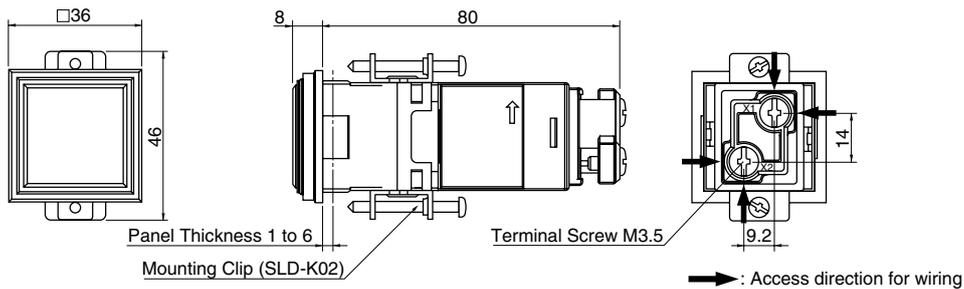
### Full Voltage (1-color full w/check terminal and 2-color alternate)



### Transformer

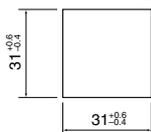


### DC-DC Converter

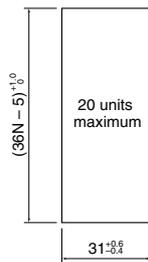


## Panel Cut-out

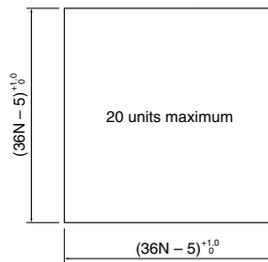
### Single Mounting



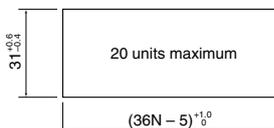
### Vertical Mounting



### Integrated Mounting



### Horizontal Mounting



N: No. of units (rows/columns)

See page 25 to assemble the cross-shaped joints for integrated mounting.

When using leaf springs for temporary fastening, order SLD-30KVP separately. See page 19.

# SLDN Series Display Lights

SLD44N

40mm Square (lens size 32mm square)



## Specifications

Input	Full Voltage	Transformer	DC-DC Converter
Rated Voltage	24V AC/DC, 24V DC (Note 1)	100/110, 115/120, 200/220, 230/240V AC	110V DC
Light Source	1-color LED unit 2-color LED unit (Note 2)	1-color LED unit	
LED Life (reference)	Approx. 50,000 hours (when used on complete DC at 25°C, brightness reduces to 50% of the initial intensity)		
Face Division	Full		
Illumination Color	Amber, Green, Pure white, Red, Blue, White, Yellow Red/Green (Note 2)	Amber, Green, Pure White, Red, Blue, White, Yellow	
Color Screen (supplied)	Combination of clear and white color screens		
Color Screen Size	31 × 31 × 1 mm (marking film 31 × 31 × 0.2 mm can be inserted)		
Engraving Area	29 × 29 mm		
Insulation Resistance	Between live and dead parts: 100 MΩ minimum (500V DC megger)		
Dielectric Strength	Between live and dead parts: 2000V, 1 minute	2500V, 1 minute	
Vibration Resistance	5 to 55 Hz, amplitude 0.5 mm		
Shock Resistance	1000 m/s <sup>2</sup> (100G)		
Operating Temperature	-20 to +40°C (no freezing)	-10 to +40°C (no freezing)	
Storage Temperature	-30 to +80°C (no freezing)		
Operating Humidity	45 to 85% RH (no condensation)		
Housing Color	Black (Munsell N1.5 or equivalent)		
Weight (approx.)	46g (1-color full) 49g (w/check terminal) 49g (2-color alternate)	93g (1-color full)	60g (1-color full)

Note 1: 24V DC is only for units with a check terminal.

Note 2: For 2-color alternate only.

## SLD44N

Input	Illumination Face	Rated Voltage	Part No.	Illumination Color Code	Built-in LED Unit (see ratings on page 18)
Full Voltage	1-color Full	24V AC/DC	<b>SLD44N-1DH2B*</b>	A, G, PW, R, S, W, Y	<b>SLDN-92M-*T</b>
	1-color Full w/check terminal	24V DC	<b>SLD44N-1DHM2B*</b>	A, G, PW, R, S, W, Y	
	2-color Alternate	24V AC/DC	<b>SLD44N-1DW2BRG</b>	RG (red/green)	<b>SLDN-92MW-RGT</b>
Transformer	1-color Full	100/110V AC	<b>SLD44N-1TH1B*</b>	A, G, PW, R, S, W, Y	<b>SLDN-92M-*T</b>
		115/120V AC	<b>SLD44N-1TH12B*</b>	A, G, PW, R, S, W, Y	
		200/220V AC	<b>SLD44N-1TH2B*</b>	A, G, PW, R, S, W, Y	
		230/240V AC	<b>SLD44N-1TH24B*</b>	A, G, PW, R, S, W, Y	
DC-DC Converter	1-color Full	110V DC (90 to 140V DC)	<b>SLD44N-1CH1B*</b>	A, G, PW, R, S, W, Y	

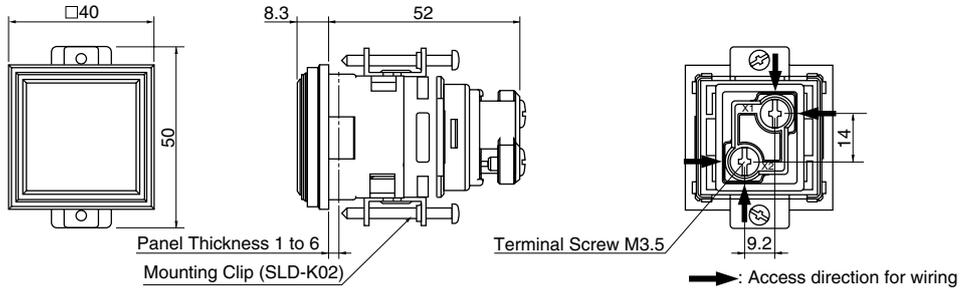
- Specify a color code in place of \* in the Part No.: A (amber), G (green), PW (pure white), R (red), S (blue), W (white), Y (yellow).
- The above SLD44N units contain an LED unit of the specified color. The LED unit is installed in the SLD44N housing at the factory. See page 18 for maintenance LED units.
- Every SLD44N unit contains a clear and white color screen. When colored display is required during power off, order a color screen separately and replace the clear color screen with the color screen. For instructions, see page 23.

**SLD44N**

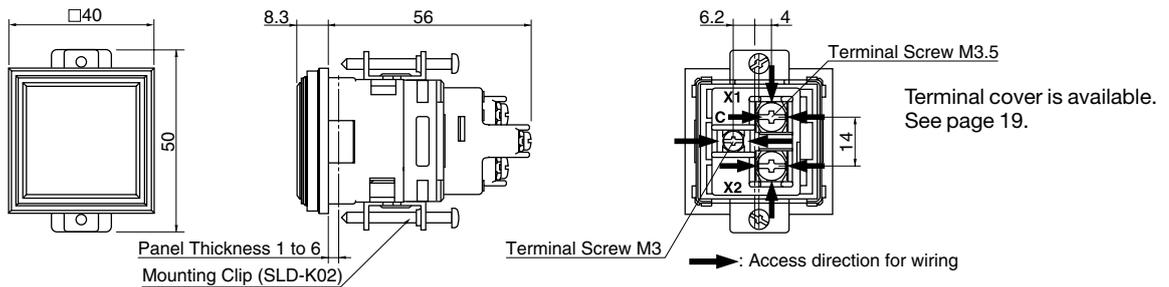
**40mm Square (lens size 32mm square)**

## Dimensions

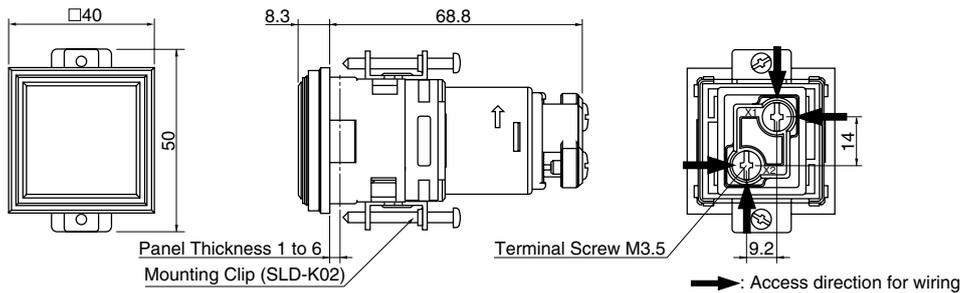
### Full Voltage (1-color full)



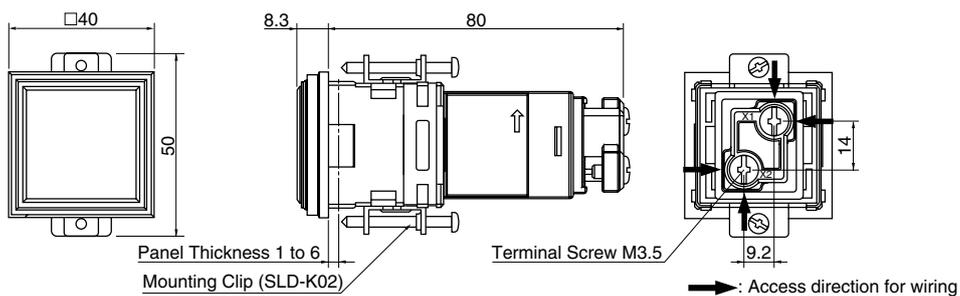
### Full Voltage (1-color full w/check terminal and 2-color alternate)



### Transformer

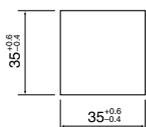


### DC-DC Converter

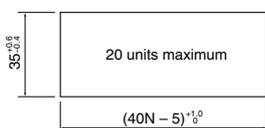


## Panel Cut-Out

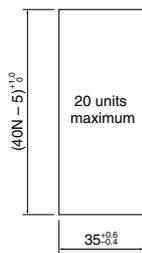
### Single Mounting



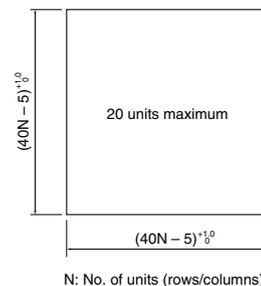
### Horizontal Mounting



### Vertical Mounting



### Integrated Mounting



See page 25 to assemble the cross-shaped joints for integrated mounting.

N: No. of units (rows/columns)

When using leaf springs for temporary fastening, order SLDN-44KVP separately. See page 19.

All dimensions in mm.

# SLDN Series Display Lights

SLD72N

DIN36 × 72mm (lens size 28 × 64mm)



## Specifications

Input	Full Voltage	Transformer	DC-DC Converter
Rated Voltage	24V AC/DC 24V DC (Note 1)	100/110, 115/120, 200/220, 230/240V AC	110V DC
Light Source	1-color LED unit 2-color LED unit (Note 2)	1-color LED unit	
LED Life (reference)	Approx. 50,000 hours (when used on complete DC at 25°C, brightness reduces to 50% of the initial intensity)		
Face Division	Full, 2-way split, 3-way split (Note 2)	Full, 2-way split, 3-way split	Full
Illumination Color	Amber, Green, Pure White, Red, Blue, White, Yellow, Red/Green (Note 2)	Amber, Green, Pure White, Red, Blue, White, Yellow	
Color Screen (supplied)	Combination of clear and white color screen		
Color Screen Size	Full: 27 × 63 × 1 mm (marking film 27 × 63 × 0.2 mm can be inserted) 2-way split: 27 × 31.5 × 1 mm 3-way split: 27 × 21 × 1 mm		
Engraving Area	Full: 25 × 61 × 1.0 mm 2-way split: 25 × 29.5 × 1.0 mm 3-way split: 25 × 19 × 1.0 mm		
Insulation Resistance	Between live and dead parts: 100 MΩ minimum (500V DC megger)		
Dielectric Strength	Between live and dead parts: 2000V, 1 minute	2500V, 1 minute	
Vibration Resistance	5 to 55 Hz, amplitude 0.5 mm		
Shock Resistance	1000 m/s <sup>2</sup> (100G)		
Operating Temperature	-20 to +40°C (no freezing)		-10 to +40°C (no freezing)
Storage Temperature	-30 to +80°C (no freezing)		
Operating Humidity	45 to 85% RH (no condensation)		
Housing Color	Black (Munsell N1.5 or equivalent)		
Weight (approx.)	78g (1-color full, 2-way split) 86g (w/check terminal, 2-color alternate) 89g (3-way split)	172g (1-color full, 2-way split) 245g (3-way split)	107g (1-color full)

Note 1: 24V DC is only for units with a check terminal.

Note 2: The 2-color alternate is full face illumination only.

**SLD72N**

**DIN36 × 72mm (lens size 28 × 64mm)**

## SLD72N (with LED units installed in housing)

The LED units are built-in the SLD72N at the factory. The LED unit can be replaced using an exclusive tool (MT-101).

Input	Illumination Face	Rated Voltage	Part No.	Illumination Color Code	Built-in LED Units (see ratings on page 18)
Full Voltage	1-color Full	24V AC/DC	<b>SLD72N-1DH2B*</b>	A, G, PW, R, S, W, Y	<b>SLDN-92M-*T</b> (2 units)
	1-color Full w/check terminal	24V DC	<b>SLD72N-1DHM2B*</b>	A, G, PW, R, S, W, Y	<b>SLDN-92M-*T</b> (2 units)
	2-way Split	24V AC/DC	<b>SLD72N-2DH2BGR</b>	GR	<b>SLDN-92M-*T</b> (2 units)
			<b>SLD72N-2DH2BRG</b>	RG	
	3-way Split	24V AC/DC	<b>SLD72N-3DH2BGAR</b>	GAR	<b>SLDN-72M-*T</b> (3 units)
2-color Alternate	24V AC/DC	<b>SLD72N-1DW2BRG</b>	RG (red/green)	<b>SLDN-92MW-RGT</b> (2 units)	
Transformer	1-color Full	100/110, 115/120, 200/220, 230/240V AC	<b>SLD72N-1TH□B*</b>	A, G, PW, R, S, W, Y	<b>SLDN-92M-*T</b> (2 units)
	2-way Split		<b>SLD72N-2TH□BGR</b>	GR	<b>SLDN-92M-*T</b> (2 units)
			<b>SLD72N-2TH□BRG</b>	RG	
3-way Split	<b>SLD72N-3TH□BGAR</b>	GAR	<b>SLDN-72M-*T</b> (3 units)		
DC-DC Converter	1-color Full	110V DC (90 to 140V DC)	<b>SLD72N-1CH1B*</b>	A, G, PW, R, S, W, Y	<b>SLDN-92M-*T</b> (2 units)

- Specify a color code in place of \* in the Part No. : A (amber), G (green), PW (pure white), R (red), S (blue), W (white), Y (yellow).
- Specify a rated voltage code of the transformer in place of □ in the Part No.: 1 (100/110V AC), 12 (115/120V AC), 2 (200/220V AC), 24 (230/240V AC).
- The above SLD72N units contain LED units of the specified color. See page 18 for maintenance LED units.
- Every SLD72N unit contains a clear and white color screen. When colored display is required during power off, order a color screen separately and replace the clear color screen with a color screen. For instructions, see page 23.

## SLD72N (with LED units supplied in package)

The LED units are not built-in but supplied in the same packaging. Color combination can be selected by the customer.

Input	Illumination Face	Rated Voltage	Part No.	Illumination Color Code	Supplied LED Units (see ratings on page 18)
Full Voltage	2-way Split	24V AC/DC	<b>SLD72N-2DH2B**</b>	A, G, PW, R, S, W, Y	<b>SLDN-92M-*T</b> (2 units)
	3-way Split		<b>SLD72N-3DH2B***</b>	A, G, PW, R, S, W, Y	<b>SLDN-72M-*T</b> (3 units)
Transformer	2-way Split	100/110, 115/120, 200/220, 230/240V AC	<b>SLD72N-2TH□B**</b>	A, G, PW, R, S, W, Y	<b>SLDN-92M-*T</b> (2 units)
	3-way Split		<b>SLD72N-3TH□B***</b>	A, G, PW, R, S, W, Y	<b>SLDN-72M-*T</b> (3 units)

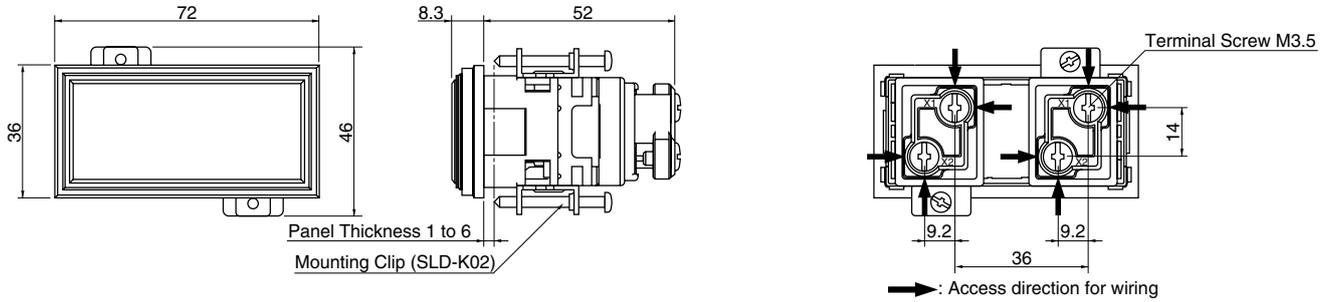
- Specify a color code in place of \* in the Part No. : A (amber), G (green), PW (pure white), R (red), S (blue), W (white), Y (yellow). See page 5 for color designation.
- Specify a rated voltage code of the transformer in place of □ in the Part No.: 1 (100/110V AC), 12 (115/120V AC), 2 (200/220V AC), 24 (230/240V AC).
- The above SLD72N units contain LED units of the specified color. See page 18 for maintenance LED units.
- Every SLD72N unit contains a clear and white color screen. When colored display is required during power off, order a color screen separately and replace the clear color screen with a color screen. For instructions, see page 23.

# SLDN Series Display Lights

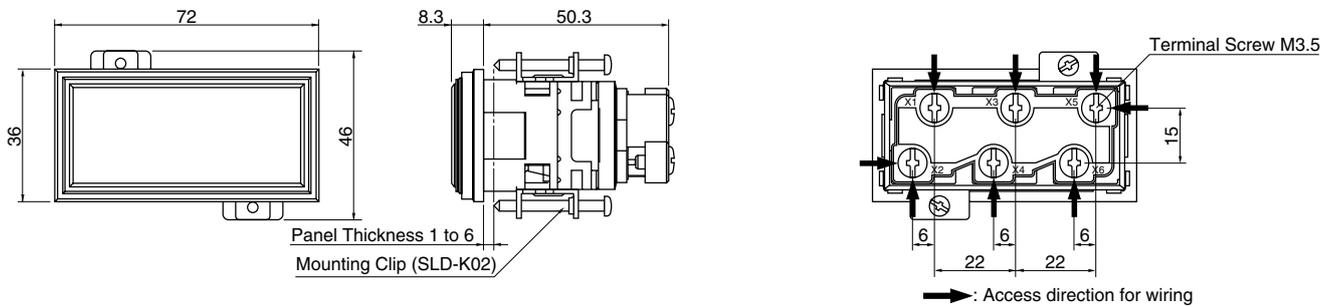
**SLD72N**      **DIN36 × 72mm (lens size 28 × 64mm)**

## Dimensions

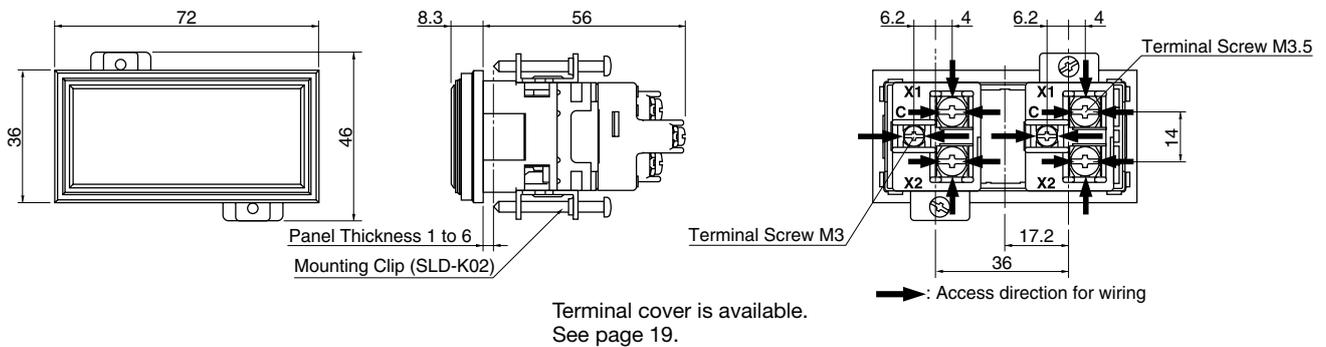
### Full Voltage (1-color full and 2-way split)



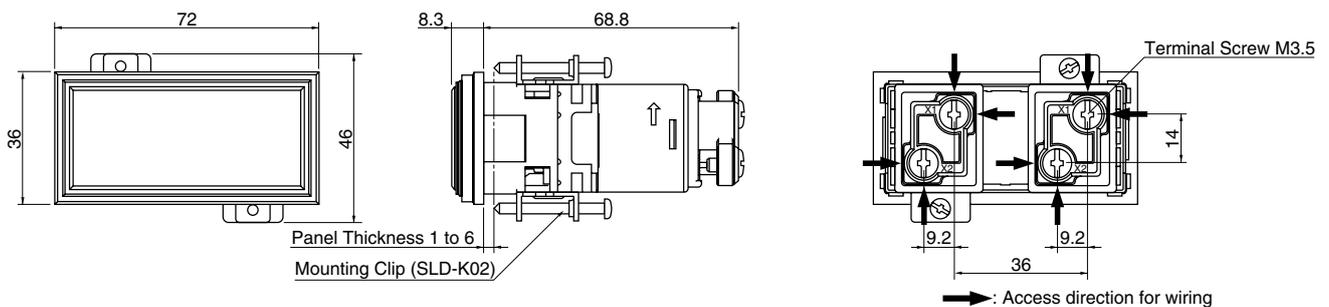
### Full Voltage (3-way split)



### Full Voltage (1-color full w/check terminal and 2-color alternate)



### Transformer (1-color full and 2-way split)



When using leaf springs for temporary fastening, order SLD-30KVP or SLD-7KVP separately. See page 19.

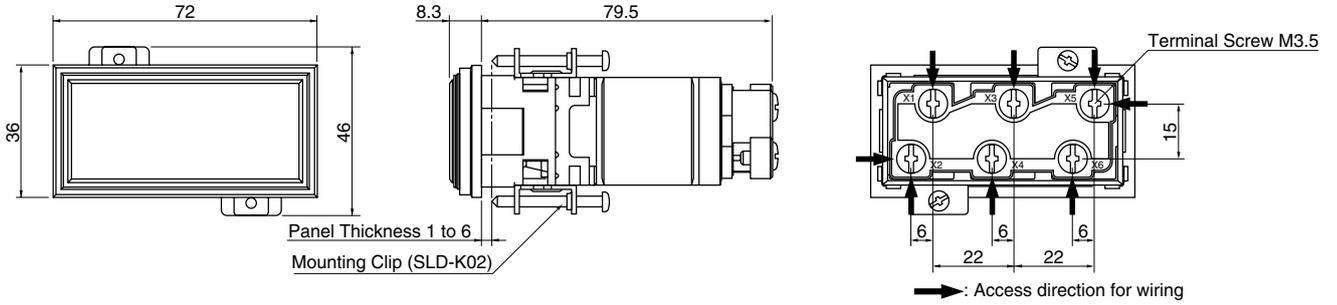
All dimensions in mm.

**SLD72N**

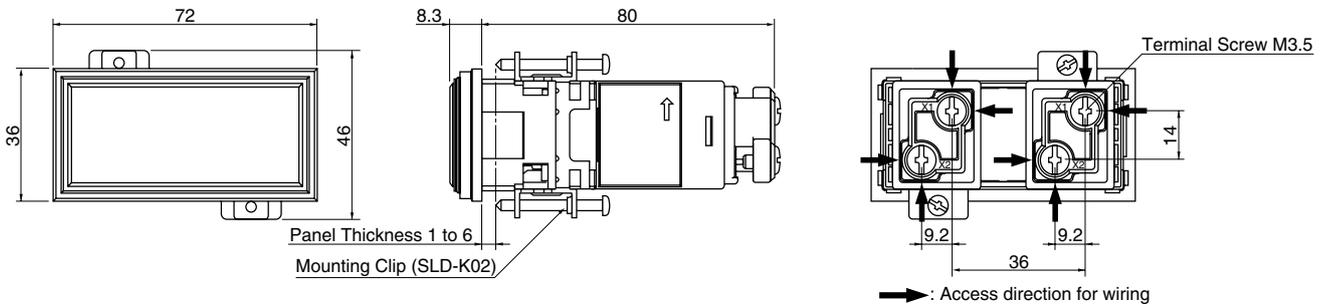
**DIN36 × 72mm (lens size 28 × 64mm)**

## Dimensions

### Transformer (3-way split)

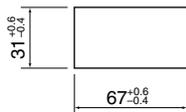


### DC-DC Converter



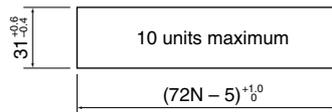
## Panel Cut-out

### Single Mounting

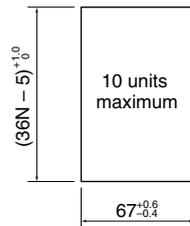


N: No. of units (rows/columns)

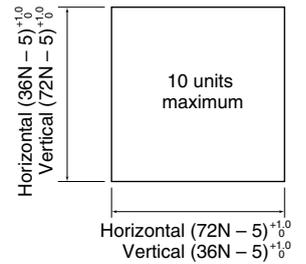
### Horizontal Mounting



### Vertical Mounting



### Integrated Mounting



When using leaf springs for temporary fastening, order SLD-30KVP or SLD-7KVP separately. See page 19.

See page 27 to assemble the cross-shaped joints for integrated mounting.

All dimensions in mm.

# SLDN Series Display Lights

SLD48N

40 × 80mm (lens size 32 × 72mm)



## Specifications

Input	Full Voltage	Transformer	DC-DC Converter
Rated Voltage	24V AC/DC 24V DC (Note 1)	100/110, 115/120, 200/220, 230/240V AC	110V DC
Light Source	1-color LED unit 2-color LED unit (Note 2)	1-color LED unit	
LED Life (reference)	Approx. 50,000 hours (when used on complete DC at 25°C, brightness reduces to 50% of the initial intensity)		
Face Division	Full, 2-way split, 3-way split (Note 2)	Full, 2-way split, 3-way split	Full
Illumination Color	Amber, Green, Pure White, Red, Blue, White, Yellow, Red/Green (Note 2)	Amber, Green, Pure White, Red, Blue, White, Yellow	
Color Screen (supplied)	Combination of clear and white color screen		
Color Screen Size	Full: 31 × 71 × 1 mm (marking film 31 × 71 × 0.2 mm can be inserted) 2-way split: 31 × 35.5 × 1 mm 3-way split: 31 × 23.5 × 1 mm		
Engraving Area	Full: 29 × 69 × 1.0 mm 2-way split: 29 × 33.5 × 1.0 mm 3-way split: 29 × 21.5 × 1.0 mm		
Insulation Resistance	Between live and dead parts: 100 MΩ minimum (500V DC megger)		
Dielectric Strength	Between live and dead parts: 2000V, 1 minute		2500V, 1 minute
Vibration Resistance	5 to 55 Hz, amplitude 0.5 mm		
Shock Resistance	1000 m/s <sup>2</sup> (100G)		
Operating Temperature	-20 to +40°C (no freezing)		-10 to +40°C (no freezing)
Storage Temperature	-30 to +80°C (no freezing)		
Operating Humidity	45 to 85% RH (no condensation)		
Housing Color	Black (Munsell N1.5 or equivalent)		
Weight (approx.)	92g (1-color full, 2-way split) 100g (w/check terminal, 2-color alternate) 102g (3-way split)	186g (1-color full, 2-way split) 259g (3-way split)	121g (1-color full)

Note 1: 24V DC is only for units with a check terminal.

Note 2: The 2-color alternate is full face illumination only.

**SLD48N**

**40 × 80mm (lens size 32 × 72mm)**

## SLD48N (with LED units installed in housing)

The LED units are built-in the SLD72N at the factory. The LED unit can be replaced using an exclusive tool (MT-101).

Input	Illumination Face	Rated Voltage	Part No.	Illumination Color Code	Built-in LED Units (see ratings on page 18)
Full Voltage	1-color Full	24V AC/DC	<b>SLD48N-1DH2B*</b>	A, G, PW, R, S, W, Y	<b>SLDN-92M-*T</b> (2 units)
	1-color Full w/check terminal	24V DC	<b>SLD48N-1DHM2B*</b>	A, G, PW, R, S, W, Y	<b>SLDN-92M-*T</b> (2 units)
	2-way Split	24V AC/DC	<b>SLD48N-2DH2BGR</b>	GR	<b>SLDN-92M-*T</b> (2 units)
			<b>SLD48N-2DH2BRG</b>	RG	
	3-way Split	24V AC/DC	<b>SLD48N-3DH2BGAR</b>	GAR	<b>SLDN-72M-*T</b> (3 units)
2-color Alternate	24V DC	<b>SLD48N-1DW2BRG</b>	RG (red/green)	<b>SLDN-92MW-RGT</b> (2 units)	
Transformer	1-color Full	100/110, 115/120, 200/220, 230/240V AC	<b>SLD48N-1TH□B*</b>	A, G, PW, R, S, W, Y	<b>SLDN-92M-*T</b> (2 units)
	2-way Split		<b>SLD48N-2TH□BGR</b>	GR	<b>SLDN-92M-*T</b> (2 units)
			<b>SLD48N-2TH□BRG</b>	RG	
3-way Split	<b>SLD48N-3TH□BGAR</b>	GAR	<b>SLDN-72M-*T</b> (3 units)		
DC-DC Converter	1-color Full	110V DC (90 to 140V DC)	<b>SLD48N-1CH1B*</b>	A, G, PW, R, S, W, Y	<b>SLDN-92M-*T</b> (2 units)

- Specify a color code in place of \* in the Part No. : A (amber), G (green), PW (pure white), R (red), S (blue), W (white), Y (yellow).
- Specify a rated voltage code of the transformer in place of □ in the Part No.: 1 (100/110V AC), 12 (115/120V AC), 2 (200/220V AC), 24 (230/240V AC).
- The above SLD72N units contain LED units of the specified color. See page 18 for maintenance LED units.
- Every SLD72N unit contains a clear and white color screen. When colored display is required during power off, order a color screen separately and replace the clear color screen with a color screen. For instructions, see page 23.

## SLD48N (with LED units supplied in package)

The LED units are not built-in but supplied in the same packaging. Color combination can be selected by the customer.

Input	Illumination Face	Rated Voltage	Part No.	Illumination Color Code	Supplied LED Units (see ratings on page 18)
Full Voltage	2-way Split	24V AC/DC	<b>SLD48N-2DH2B**</b>	A, G, PW, R, S, W, Y	<b>SLDN-92M-*T</b> (2 units)
	3-way Split		<b>SLD48N-3DH2B***</b>	A, G, PW, R, S, W, Y	<b>SLDN-72M-*T</b> (3 units)
Transformer	2-way Split	100/110, 115/120, 200/220, 230/240V AC	<b>SLD48N-2TH□B**</b>	A, G, PW, R, S, W, Y	<b>SLDN-92M-*T</b> (2 units)
	3-way Split		<b>SLD48N-3TH□B***</b>	A, G, PW, R, S, W, Y	<b>SLDN-72M-*T</b> (3 units)

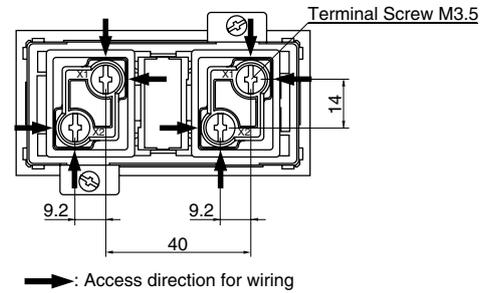
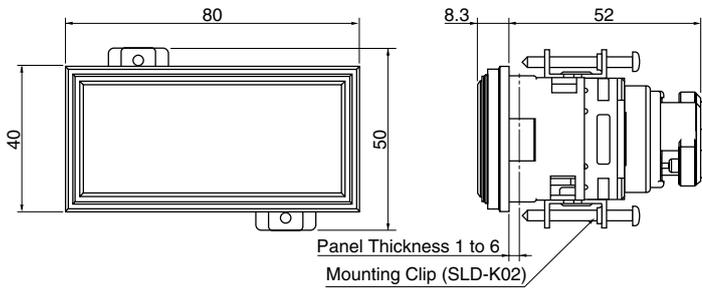
- Specify a color code in place of \* in the Part No. : A (amber), G (green), PW (pure white), R (red), S (blue), W (white), Y (yellow). See page 5 for color designation.
- Specify a rated voltage code of the transformer in place of □ in the Part No.: 1 (100/110V AC), 12 (115/120V AC), 2 (200/220V AC), 24 (230/240V AC).
- The above SLD72N units contain LED units of the specified color. See page 18 for maintenance LED units.
- Every SLD72N unit contains a clear and white color screen. When colored display is required during power off, order a color screen separately and replace the clear color screen with a color screen. For instructions, see page 23.

# SLDN Series Display Lights

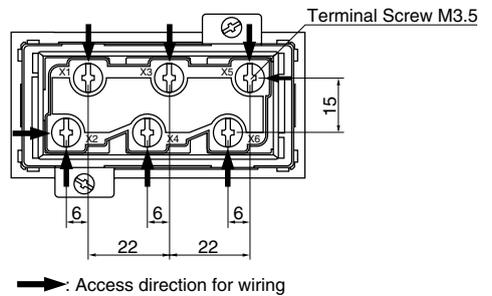
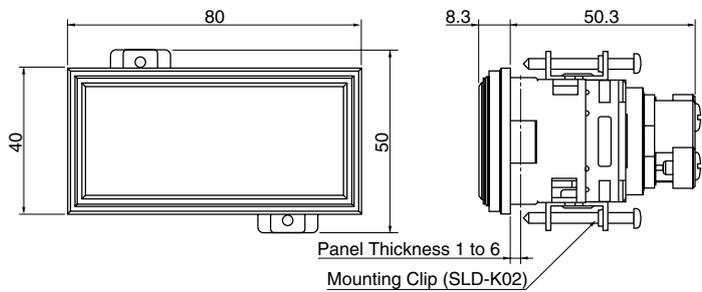
**SLD48N** | **40 × 80mm (lens size 32 × 72mm)**

## Dimensions

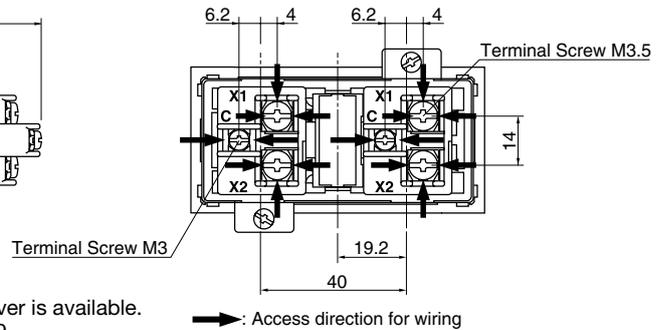
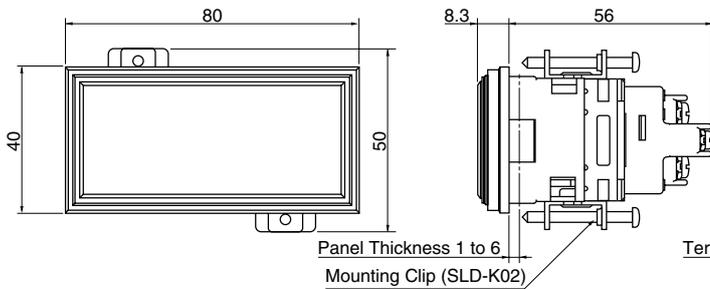
### Full Voltage (1-color full and 2-way split)



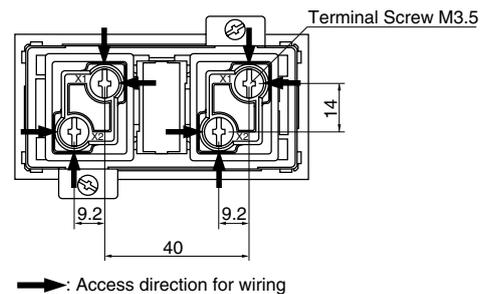
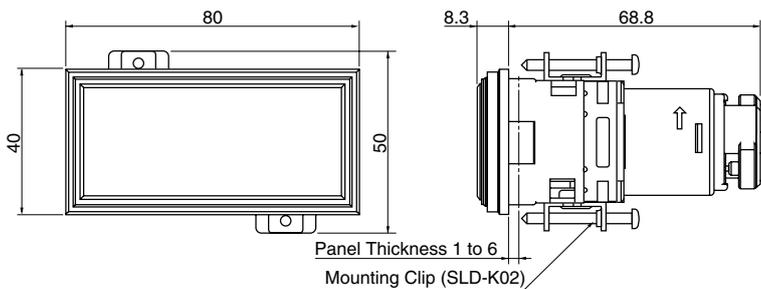
### Full Voltage (3-way split)



### Full Voltage (1-color full w/check terminal and 2-color alternate)



### Transformer (1-color full and 2-way split)



When using leaf springs for temporary fastening, order SLDN-44KVP or SLDN-8KVP separately. See page 19.

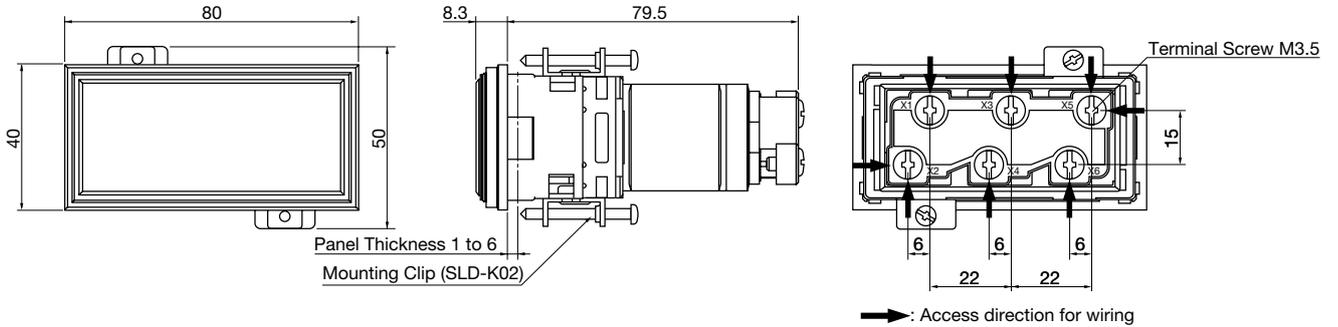
All dimensions in mm.

**SLD48N**

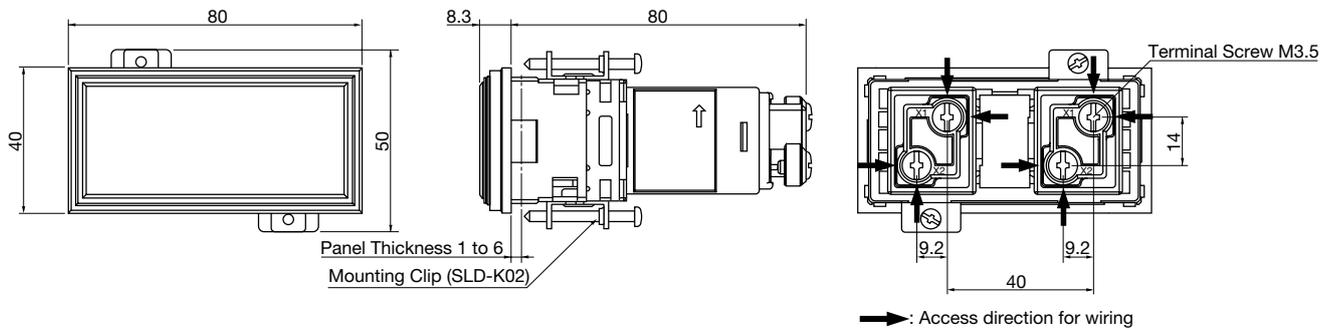
**40 × 80mm (lens size 32 × 72mm)**

## Dimensions

### Transformer (3-way split)

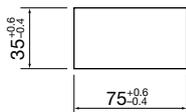


### DC-DC Converter



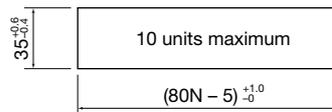
## Panel Cut-out

### Single Mounting

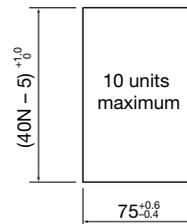


N: No. of units (rows/columns)

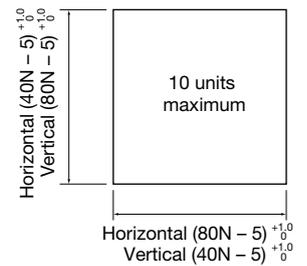
### Horizontal Mounting



### Vertical Mounting



### Integrated Mounting



When using leaf springs for temporary fastening, order SLDN-44KVP or SLDN-8KVP separately. See page 19.

See page 27 to assemble the cross-shaped joints for integrated mounting.

All dimensions in mm.

# SLDN Series Display Lights

## Maintenance LED Units

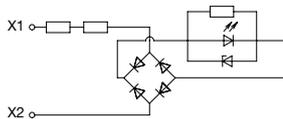
### 24V AC/DC (1-color) and 24V DC (2-color)

Shape	Applicable Model	Part No.	Illumination Color	Rating	Package Quantity
 (supplied)	SLD30N	SLDN-32M-AT	Amber	24V AC/DC, 12 mA	1
		SLDN-32M-GT	Green	24V AC/DC, 11 mA	
		SLDN-32M-PWT	Pure White	24V AC/DC, 11 mA	
		SLDN-32M-RT	Red	24V AC/DC, 12 mA	
		SLDN-32M-ST	Blue	24V AC/DC, 11 mA	
		SLDN-32M-WT	White	24V AC/DC, 12 mA	
		SLDN-32M-YT	Yellow	24V AC/DC, 11 mA	
 (supplied)	SLD44N SLD72N (Full/2-way split) SLD48N (Full/2-way split)	SLDN-92M-AT	Amber	24V AC/DC, 12 mA	1
		SLDN-92M-GT	Green	24V AC/DC, 11 mA	
		SLDN-92M-PWT	Pure White	24V AC/DC, 11 mA	
		SLDN-92M-RT	Red	24V AC/DC, 12 mA	
		SLDN-92M-ST	Blue	24V AC/DC, 11 mA	
		SLDN-92M-WT	White	24V AC/DC, 12 mA	
		SLDN-92M-YT	Yellow	24V AC/DC, 11 mA	
 (supplied)	SLD72N (3-way split) SLD48N (3-way split)	SLDN-72M-AT	Amber	24V AC/DC, 12 mA	1
		SLDN-72M-GT	Green	24V AC/DC, 11 mA	
		SLDN-72M-PWT	Pure White	24V AC/DC, 11 mA	
		SLDN-72M-RT	Red	24V AC/DC, 12 mA	
		SLDN-72M-ST	Blue	24V AC/DC, 11 mA	
		SLDN-72M-WT	White	24V AC/DC, 12 mA	
		SLDN-72M-YT	Yellow	24V AC/DC, 11 mA	

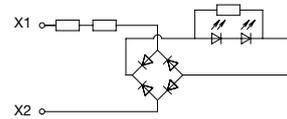
### LED Unit Internal Circuits

#### SLDN-32M-\*T

One-color full (except white)

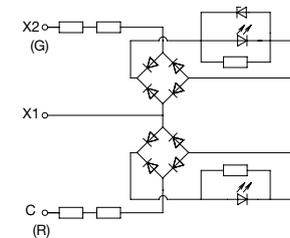


One-color full (white)



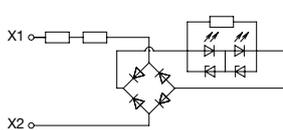
#### SLDN-32MW-RGT

2-way split (two-color alternate)

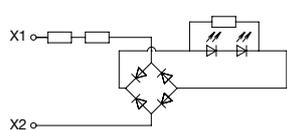


#### SLDN-92M-\*T

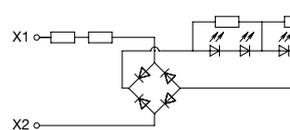
One-color full (blue, green, pure white, yellow)



One-color full (amber, red)

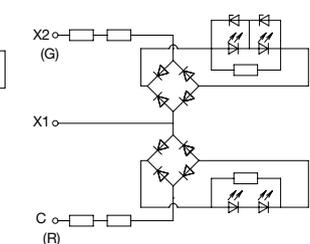


One-color full (white)



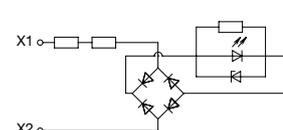
#### SLDN-92MW-RGT

2-way split (two-color alternate)

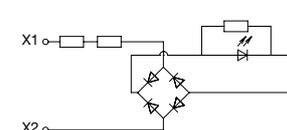


#### SLDN-72M-\*T

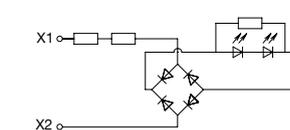
One-color full (blue, green, pure white, yellow)



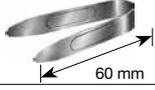
One-color full (amber, red)



One-color full (white)



## Accessories

Name & Shape	Applicable Model	Material	Part No.	Ordering No.	Package Quantity	Remarks
 LED Unit Removal Tool	All SLDN	Metal	<b>MT-101</b>	<b>MT-101</b>	1	Used to remove the LED unit from the SLDN housing.
 Lens Unit Removal Tool	All SLDN	Rubber	<b>MT-S01</b>	<b>MT-S01</b>	1	Used to remove the lens unit from the SLDN housing.
 Cross-shaped Joint	SLD30N SLD72N	Diecast	<b>SLD-F30</b>	<b>SLD-F30PN05</b>	5	Used to connect SLDN units for integrated mounting. Weight: 25g
	SLD44N SLD48N		<b>SLD-F44</b>	<b>SLD-F44PN05</b>	5	
 I-shaped Joint	SLD72N	Diecast	<b>SLD-L72</b>	<b>SLD-L72PN05</b>	5	Used to connect cross-shaped joint on the longer sides of the SLD72N or SLD48N for integrated mounting. Weight: 10g
	SLD48N		<b>SLD-L48</b>	<b>SLD-L48PN05</b>	5	
 Terminal Cover	All SLDN w/check terminal, 2-color alternate	PPE	<b>SLC30-VL6</b>	<b>SLC30-VL6</b>	1	Terminal cover for 1-color w/check terminal and 2-color alternate.

## Leaf Springs

Applicable Model	Part No. (Horizontal Mounting)		Part No. (Vertical Mounting)	
	Type A	Type B	Type A	Type B
SLD30N	<b>SLD30KVP</b>	—	<b>SLD30KVP</b>	—
SLD44N	<b>SLDN-44KVP</b>	—	<b>SLDN-44KVP</b>	—
SLD72N	<b>SLD30KVP</b>	<b>SLD-7KVP</b>	<b>SLD30KVP</b>	<b>SLD-7KVP</b>
SLD48N	<b>SLDN-44KVP</b>	<b>SLDN-8KVP</b>	<b>SLDN-44KVP</b>	<b>SLDN-8KVP</b>

• See page 25 for instructions on mounting leaf springs.

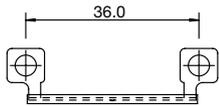
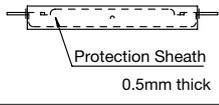
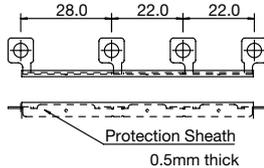
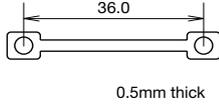
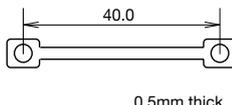
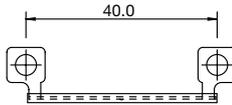
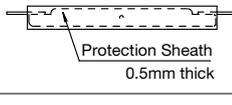
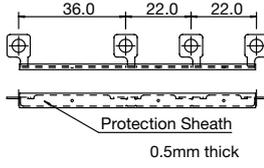
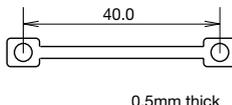
## Maintenance Parts

Name & Shape	Applicable Model	Material	Part No.	Ordering No.	Package Quantity	Remarks	
 Mounting Clip	All SLDN	Metal	<b>SLD-K02</b>	<b>SLD-K02PN10</b>	10	Used to fasten SLDN units to the panel from the rear in single, row, or integrated mounting. Two mounting clips are supplied with every SLDN unit. Weight: 6g	
 Color Screen	SLD30N	Acrylic	<b>SLDN-3C-*</b>	<b>SLDN-3C-*</b> PN05	5	Specify a color code in place of *. White display when power off: FW (white) Colored display when power off (sold separately): A (amber), C (clear) G (green), R (red) S (blue), Y (yellow) See page 24 for details on color screen.	
	SLD44N		<b>SLDN-44C-*</b>	<b>SLDN-44C-*</b> PN05			
	SLD72N		Full	<b>SLDN-7C-*</b>			<b>SLDN-7C-*</b> PN05
			2-way split	<b>SLDN-7C2-*</b>			<b>SLDN-7C2-*</b> PN05
	SLD48N		3-way split	<b>SLDN-7C3-*</b>			<b>SLDN-7C3-*</b> PN05
			Full	<b>SLDN-8C-*</b>			<b>SLDN-8C-*</b> PN05
			2-way split	<b>SLDN-8C2-*</b>			<b>SLDN-8C2-*</b> PN05
	3-way split		<b>SLDN-8C3-*</b>	<b>SLDN-8C3-*</b> PN05			
 Lens (supplied)	SLD30N	Polycarbonate	<b>SLC-3LF-U</b>	<b>SLC-3LF-U</b>	1	□28 H2.8	
	SLD44N		<b>SLD-44L</b>	<b>SLD-44L</b>		□32 H2.6	
	SLD72N		<b>SLD-7L</b>	<b>SLD-7L</b>		W72 D32 H2.6	
	SLD48N		<b>SLD-8L</b>	<b>SLD-8L</b>		W64 D28 H2.6	
 Lens Frame (supplied)	SLD30N	ABS	<b>SLD-3W-B</b>	<b>SLD-3W-B</b>	1		
	SLD44N		<b>SLDN-44W-B</b>	<b>SLDN-44W-B</b>			
	SLD72N		<b>SLDN-7W-B</b>	<b>SLDN-7W-B</b>			
	SLD48N		<b>SLDN-8W-B</b>	<b>SLDN-8W-B</b>			
 Light Barrier (supplied)	SLD72N	2-way split 3-way split	PBT	<b>SLDN-7SH</b>	<b>SLDN-7SHPN05</b>	5	
	SLD48N	2-way split		<b>SLDN-8SH</b>	<b>SLDN-8SHPN05</b>		

# SLDN Series Display Lights

## Maintenance Parts

### Jumpers

Applicable Model		Part No.	Ordering No.	Package Quantity	Dimensions	Application Example
SLD30N	w/Check Terminal 2-color Alternate	<b>LJ-2</b>	<b>LJ-2PN10</b>	10	 <p>36.0 0.5mm thick</p>	<ul style="list-style-type: none"> <li>• SLD30N/SLD44N 1-color</li> </ul> 
	Full	<b>SLDN-JP301</b>	<b>SLDN-JP301PN10</b>	10	 <p>36.0 0.5mm thick</p>	
SLD72N	Full 2-way Split				 <p>Protection Sheath 0.5mm thick</p>	<ul style="list-style-type: none"> <li>• SLD72N/SLD48N 3-way split</li> </ul> 
	3-way Split	<b>SLDN-JP723</b>	<b>SLDN-JP723PN10</b>	10	 <p>28.0 22.0 22.0 Protection Sheath 0.5mm thick</p>	
	w/Check Terminal 2-color Alternate	<b>LJ-2</b>	<b>LJ-2PN10</b>	10	 <p>36.0 0.5mm thick</p>	
SLD44N	w/Check Terminal 2-color Alternate	<b>LJ-6</b>	<b>LJ-6PN10</b>	10	 <p>40.0 0.5mm thick</p>	
	Full	<b>SLCN-JP45</b>	<b>SLCN-JP45PN10</b>	10	 <p>40.0 0.5mm thick</p>	
SLD48N	Full 2-way Split				 <p>Protection Sheath 0.5mm thick</p>	
	3-way Split	<b>SLDN-JP483</b>	<b>SLDN-JP483PN10</b>	10	 <p>36.0 22.0 22.0 Protection Sheath 0.5mm thick</p>	
	w/Check Terminal 2-color Alternate	<b>LJ-6</b>	<b>LJ-6PN10</b>	10	 <p>40.0 0.5mm thick</p>	

## Transformer

Shape	Rated Voltage	Operating Voltage	Part No.	Package Quantity
	100/110V AC	100/110V AC ±10%	<b>TWR512</b>	1
	200/220V AC	200/220V AC ±10%	<b>TWR522</b>	1
	400/440V AC	400/440V AC ±10%	<b>TWR542</b>	1

- Terminal covers (TWR-VL3) are supplied.

## Applicable LED Units

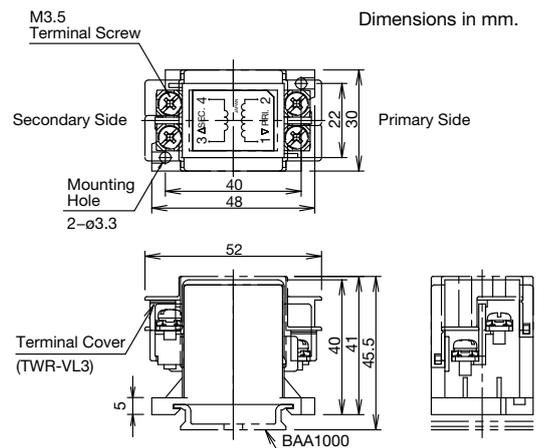
SLDN	LED Unit Part No.	Can be used with
SLD30N	<b>SLDN-32M-*T</b>	Full face illumination
SLD44N	<b>SLDN-92M-*T</b>	Full face illumination
SLD72N	<b>SLDN-92M-*T</b>	Full face and 2-way split illumination
	<b>SLDN-72M-*T</b>	3-way split illumination, 24V AC
SLD48N	<b>SLDN-92M-*T</b>	Full face and 2-way split illumination
	<b>SLDN-72M-*T</b>	3-way split illumination, 24V AC

- Only one LED unit can be connected to each transformer.
- Specify the color code in place of \* in the Part No.

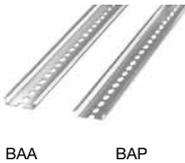
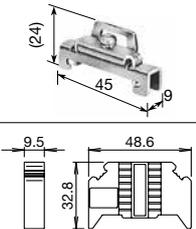
## Specifications

Rated Voltage	100/110V AC, 200/220V AC, 400/440V AC (50/60 Hz)
Power Consumption	2.4VA
Rated Insulation Voltage	600V
Insulation Resistance	100 MΩ minimum (500V DC megger)
Dielectric Strength	2500V AC, 1 minute
Operating Temperature	-30 to +60°C (no freezing)
Storage Temperature	-40 to +80°C (no freezing)
Relative Humidity	35 to 85% (no condensation)
Vibration Resistance	Operating Extremes: 5 to 55 Hz, amplitude 0.5 mm Damage Limits: 30 Hz, amplitude 1.5 mm
Shock Resistance	Operating Extremes: 100 m/s <sup>2</sup> Damage Limits: 1,000 m/s <sup>2</sup>
Terminal Screw	M3.5
Applicable Wire	2 mm <sup>2</sup> maximum, 2 wires maximum
Weight	Approx. 87g

## Dimensions



## Accessories

Name	Shape	Description	Part No.	Ordering No.	Package Quantity
DIN Rail	 BAA BAP	Aluminum Weight: Approx. 200g Length: 1m	<b>BAA1000</b>	<b>BAA1000PN10</b>	
		Steel Weight: Approx. 320g Length: 1m	<b>BAP1000</b>	<b>BAP1000PN10</b>	
End Clip	 (24) 45 9 9.5 48.6 32.8	Steel Weight: Approx. 15g	<b>BNL6</b>	<b>BNL6PN10</b>	10
		Plastic Weight: Approx. 15g	<b>BC9Z-E/NS35N</b>	<b>BC9Z-E/NS35NPN10</b>	

# SLDN Series Display Lights

## Notes for Ordering

1. When ordering SLDN units and accessories, specify the Part No. and quantity.
2. LED units for 2-way or 3-way split illumination SLD72N and SLD48N units are not built in the SLDN unit at the factory but supplied in the package. However, 2-way split with color combination RG and 3-way split with color combination GAR have LED units built-in at factory. (All colors of full illumination units have LED units built-in.)
3. All SLDN units are supplied with two mounting clips. Leaf springs are not supplied. When using leaf springs for temporary fastening, order applicable leaf springs separately. See pages 19.
4. All SLDN units are supplied with a clear color screen with full face size and white color screens of the specified split face size. When colored display is required during power off, order color screens of the split face size and replace with the clear color screen. See page 23.

5. Jumpers supplied with SLDN units are as listed in the table below.

Applicable Model		Jumper Part No. (For use as split illumination)	Jumper Part No. (For use as full illumination)
SLD72N	2-way split models	<b>SLD-JP301</b>	<b>SLDN-JP301</b> (× 2 pcs)
	3-way split models	<b>SLDN-JP723</b>	—
SLD48N	2-way split models	<b>SLD-JP45</b>	<b>SLDN-JP45</b> (× 2 pcs)
	3-way split models	<b>SLDN-JP483</b>	—

## Safety Precautions

- Turn off the power to the SLDN units before installation, removal, wiring, maintenance, or inspection. Before removing the LED units, make sure that power is turned off. Failure to turn off the power may cause electrical shock, fire hazards, or damages.
- Do not use the SLDN units without the lens, otherwise ingress of foreign objects may cause short circuit, and LED units may be damaged resulting in the deterioration of LED brightness or no lighting.
- When lighting the SLDN units continuously, observe the conditions described in "Notes for Continuous Lighting". If the limits are exceeded, the units may heat up and create fire hazards or cause damages.

- To avoid burning your hand, use the lamp holder tool when replacing incandescent lamps.
- For wiring, use wires of a proper size to meet the voltage and current requirements and tighten the terminal screws to the tightening torque shown below. Loose terminal screws may cause excessive heating, resulting in fire hazards.

Terminal Screw	Tightening Torque
M3	0.6 to 1.0 N·m
M3.5	1.0 to 1.3 N·m

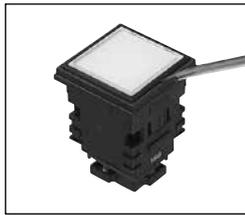
- Do not install or operate the SLDN units where they are subjected to direct sunlight. Excessive heating may create fire hazards or damage the units.

## Operating Instructions

### Illumination Units

#### Removing the Display Window

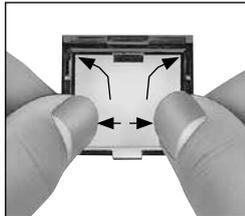
To remove the display window, insert the tip of a flat screwdriver into the slot on top or bottom of the lens frame. Lens unit removal tool MT-S01 can also be used to remove the display window.



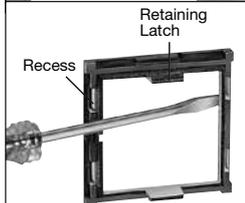
#### Replacing the Lens and Color Screen

##### [Removal]

The lens has two retaining projections each on right and left sides. To remove the lens and color screens from the lens frame, push open the lens frame with both hands as shown.



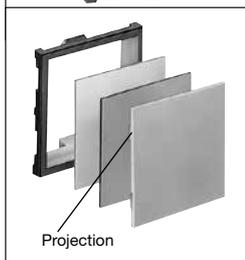
The lens can also be removed by inserting a screwdriver into one of the sides with recesses. Since the lens has an orientation due to projections, be sure to insert the screwdriver in the direction as shown. Take care not to damage or scratch the lens surface.



##### [Installation]

Install the color screens into the lens frame.

To install the lens, insert its retaining projections into the recesses inside the lens frame, and press the lens on the other side into the lens frame.



#### Replacing the LED Unit

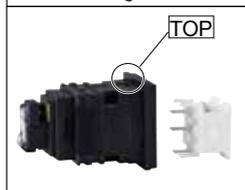
##### [Removal]

Use the LED unit removal tool (MT-101) to pull out the LED unit.



##### [Installation]

The LED unit has an orientation. To install the LED unit, place the voltage marking on the LED unit in the same direction as the TOP marking on the on the LED unit, and push in the LED unit.



### Placement of Color Screens

Insert color screens and marking film as described below.

Can be used with	Placement
White Display (lamp off)	
Colored display (lamp off) Install a color screen and a white plate.	
Marking Film (not supplied)	

• Clear color screen and white color screen can be interchanged if necessary.

### Notes for Continuous Lighting (Integrated Mounting)

• Up to 10 SLD30N or SLD44N units can be lit continuously. Up to six SLD72N or SLD48N units can be lit continuously. When more units are mounted, consider the following restrictions.

- When more SLDN units are mounted, do not light more than 50% of the SLDN units continuously.
- When more than 50% of the units are lit continuously, limit the lighting duration to 40 minutes. Before lighting the units again, make sure that all units have cooled down.

• When using the SLDN units in other conditions, consult IDEC.

• When using 2-color alternate units, do not light the two colors simultaneously.

### Notes for Panel Mounting

• Recommended tightening torque for SLD-K02 mounting clip: 0.39 to 0.49 N·m.

• Do not repeat installation and removal of mounting clips many times. The mounting clips will become deformed and fail to ensure proper tightening.

# SLDN Series Display Lights

## Operating Instructions

### Wiring

- Recommended tightening torque of terminal screws are shown in the table below:

Terminal Screw	Recommended Tightening Torque	Wiring Size
M3	0.6 to 1.0 N·m	Solid wire $\phi 1.6\text{mm}$ (up to 2 wires)
M3.5	1.0 to 1.3 N·m	Stranded wire $2\text{mm}^2$ (up to 2 wires)

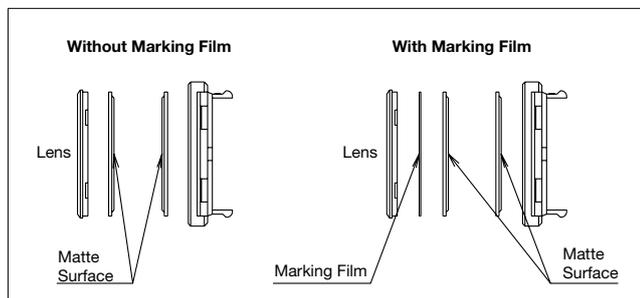
- Use an insulation sheath or marking tube on the crimping part of crimping terminals to prevent electrical shocks.

### Marking

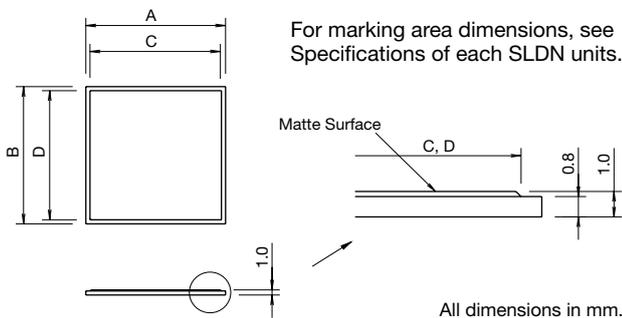
- Markings can be engraved on clear color screens (or other color screens) and white color screens as well as inserting marking films. Two sheets of 0.1-mm-thick films or one sheet of 0.2-mm-thick film is applicable. Marking films are not supplied with the SLDN units and must be prepared by the user. Polyester films are recommended.

Applicable Model	Marking Film Dimensions
SLD30N	27 × 27 mm
SLD44N	31 × 31 mm
SLD72N	27 × 63 mm
SLD48N	31 × 71 mm

- When using a marking film, place the matte surfaces of the clear color screen (or other color screens) in the same direction. If the matte surfaces face with each other, the marking film cannot be inserted.
- Thin marking films can be inserted as illustrated below.



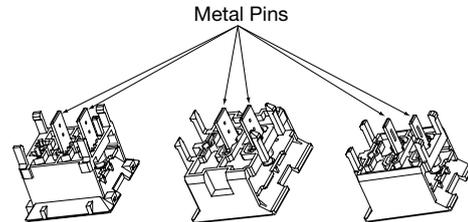
- Legends can be engraved on the clear color screens (color screens) and white color screens. Dimensions are shown below



Applicable Model	Face	Part No.	A	B	C	D
SLD30N	Full	SLDN-3C-□	27.0	27.0	25.4	25.4
SLD44N	Full	SLDN-44C-□	31.0	31.0	29.4	29.4
SLD72N	Full	SLDN-7C-□	63.0	27.0	61.4	25.4
	2-way split	SLDN-7C2-□	31.5	27.0	29.9	25.4
	3-way split	SLDN-7C3-□	21.0	27.0	19.4	25.4
SLD48N	Full	SLDN-8C-□	71.0	31.0	69.4	29.4
	2-way split	SLDN-8C2-□	35.5	31.0	33.9	29.4
	3-way split	SLDN-8C3-□	23.5	31.0	21.9	29.4

### When Using Blue and Green LED Units

- When replacing LED units, avoid ESD to the LED pins, otherwise the internal LED elements may become damaged.



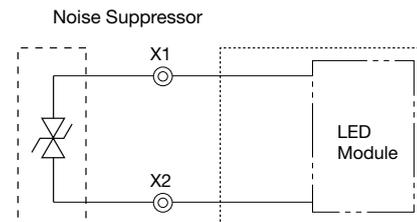
### Panel Thickness

When mounting the SLDN units on a panel, determine the panel thickness taking the weights of the SLDN units and wires into consideration.

### Notes for Using LED Units

#### Precautions for Noise

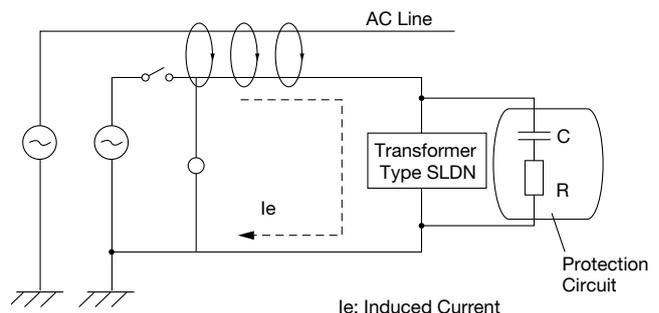
When using the SLDN unit in an environment where the SLDN is subjected to noise, connect a noise suppressor across terminals X1 and X2 as shown below.



#### Countermeasures against Dim Lighting

The SLDN unit contains a provision against dim lighting due to leakage current. If the LED unit appears to be dimly lit due to induced current from nearby AC lines, take appropriate countermeasures as described below.

#### [Sample Circuit]



#### [Countermeasure]

As shown in the diagram above, connect an RC circuit in parallel with the transformer SLDN unit.

For the values of the resistor and capacitor, see the following table.

SLDN Rated Operating Voltage	Resistor R		Capacitor C ( $\mu\text{F}$ )
	( $\Omega$ )	(W)	
100/110V AC (50/60 Hz)	120	0.25	0.33
200/220V AC (50/60 Hz)	120	0.25	0.10

#### Installation Location

When the environment is vulnerable to infrared rays, provide appropriate protection.

## Operating Instructions

### Installation on Panel: SLD30N & SLD44N (Square)

#### Single, Horizontal, or Vertical One-row Mounting

All SLDN units are mounted using the supplied mounting clips. When using leaf springs for temporary fastening, order SLD30KVP (for SLD30N) or SLDN-44KVP (for SLD44N) separately.

A maximum of 20 SLD30N or SLD44N units can be mounted collectively in a row or integrated form.

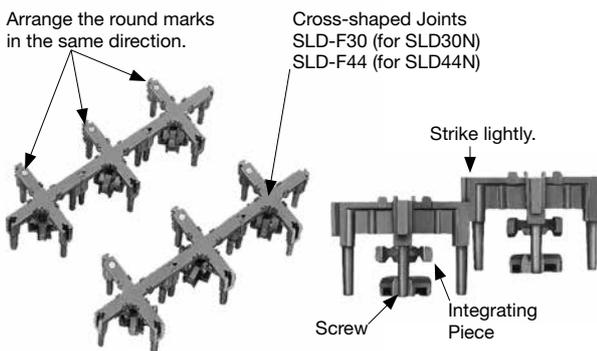
Mounting	Single Mounting	Horizontal Mounting	Vertical Mounting
Outside View			
Mounting Procedure	Push the SLDN unit into the panel cut-out from the front of the panel. When using optional leaf springs for temporary fastening, attach the leaf springs before installing the SLDN unit. Install two mounting clips and tighten the screws.	Push the SLDN units starting from the end of the row into the panel cut-out from the front of the panel. When using optional leaf springs for temporary fastening, attach the leaf springs before installing the SLDN unit. Install two mounting clips to each unit and tighten the screws.	Push the SLDN units starting from the bottom of the column into the panel cut-out from the front of the panel. When using optional leaf springs for temporary fastening, attach the leaf springs before installing the SLDN unit. Install mounting clips to combine adjoining SLDN units and one mounting clip each at the top and bottom of the column, and tighten the screws.

Note: Tighten the mounting clip screws to a torque of approx. 0.39 to 0.49 N-m.

#### Integrated Mounting

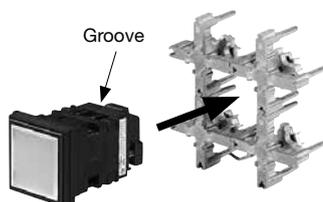
##### 1. Assemble the cross-shaped joints.

First, assemble the cross-shaped joints in a row with round marks in the same direction. Then, combine the rows of assembled cross-shaped joints together.

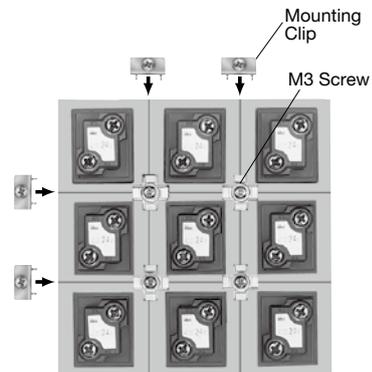


##### 2. Lock the housings with the cross-shaped joints.

Insert the SLDN units into the assembled cross-shaped joints. Then insert the projection of the intergrating piece on the cross-shaped joints into the groove of the unit and tighten it.



##### 3. Install into panel cut-out.



Insert the joint SLDN units into the panel cut-out from the front of the panel. Install the mounting clips as shown and tighten the screws lightly to a torque of approximately 0.39 to 0.49 N-m.

Quantity of mounting clips =  $(N - 1) \times 2 + (N' - 1) \times 2$

Quantity of cross-shaped joints =  $(N - 1) \times (N' - 1)$

where N and N' are the numbers of rows and columns, respectively.

See page 27 on quantities of mounting clips, cross-shaped joints, and I-shaped joints used for integrated mounting.

# SLDN Series Display Lights

## Operating Instructions

### Installation on Panel: SLD72N & SLD48N (Rectangular)

#### Single, Horizontal, or Vertical One-row Mounting

All SLDN units are mounted using the supplied mounting clips. When using leaf springs for temporary fastening, order SLD30KVP or SLD-7KVP (for SLD72N) or SLDN-44KVP or SLDN-8KVP (for SLD48N) separately.

Mounting	Single Mounting	Horizontal Mounting	Vertical Mounting
Outside View		<p><b>Type A</b></p> <p><b>Type B</b></p>	<p><b>Type A</b></p> <p><b>Type B</b></p>
Mounting Procedure	<p>Push the SLDN unit into the panel cut-out from the front of the panel. When using optional leaf springs for temporary fastening, attach the leaf springs before installing the SLDN unit.</p> <p>Install two mounting clips and tighten the screws.</p>	<p><b>Type A</b></p> <p>Push the SLDN units starting from the end of the row into the panel cut-out from the front of the panel. When using optional leaf springs for temporary fastening, attach the leaf springs before installing the SLDN unit.</p> <p>Install two mounting clips to each unit and tighten the screws.</p>	<p><b>Type B</b></p> <p>Push the SLDN units starting from the bottom of the column into the panel cut-out from the front of the panel. When using optional leaf springs for temporary fastening, attach the leaf springs before installing the SLDN unit.</p> <p>Install mounting clips to combine adjoining SLDN units and one mounting clip each at the top and bottom of the column, and tighten the screws.</p>

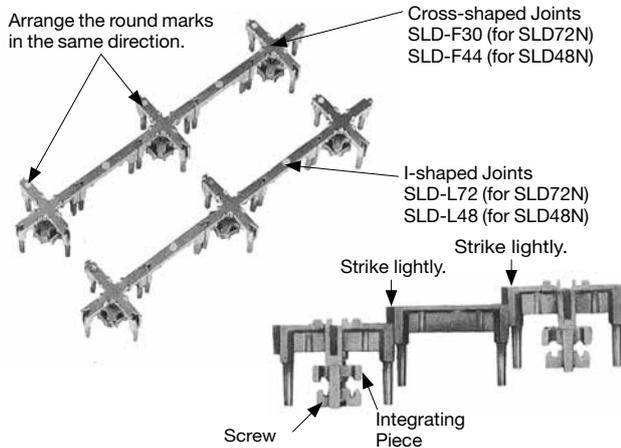
Note: Tighten the mounting clip screws to a torque of approx. 0.39 to 0.47 N-m.  
Leaf springs are not supplied with the SLDN unit must be ordered separately.

## Operating Instructions

### Integrated Mounting

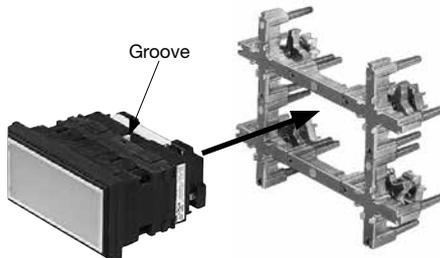
#### 1. Assemble the cross-shaped joints.

First, assemble the cross-shaped joints in a row with round marks in the same direction together with the I-shaped joints. Then, combine the rows of assembled cross-shaped joints together.

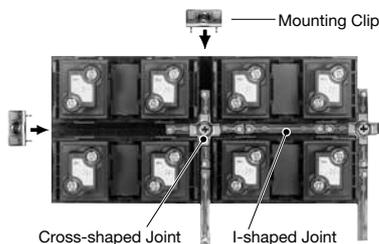


#### 2. Lock the housings with the cross-shaped joints.

Insert the SLDN units into the assembled cross-shaped joints. Then insert the projection of the intergrating piece on the cross-shaped joints into the groove of the unit and tighten the screw.



#### 3. Install into panel cut-out.



Insert the joint SLDN units into the panel cut-out from the front of the panel. Install the mounting clips as shown and tighten the screws lightly to a torque of approximately 0.39 to 0.49 N·m.

Quantity of mounting clips =  $(N - 1) \times 2 + (N' - 1) \times 2$

Quantity of cross-shaped joints =  $(N - 1) \times (N' - 1)$

Quantity of I-shaped joints

For horizontal mounting =  $(N - 1) \times (N' - 2)$

For vertical mounting =  $(N - 2) \times (N' - 1)$

where N and N' are the numbers of rows and columns, respectively.

### Quantities of Mounting Clips, Cross-shaped Joints, and I-shaped Joints Used for Integrated Mounting

Columns (N')	Mounting Clips and Joints	Rows (N)			
		2	3	4	5
2	Mounting Clips	4	6	8	10
	Cross-shaped Joints	1	2	3	4
	I-shaped Joints	0	1	2	3
3	Mounting Clips	6	8	10	12
	Cross-shaped Joints	2	4	6	8
	I-shaped Joints	0	2	4	6
4	Mounting Clips	8	10	12	14
	Cross-shaped Joints	3	6	9	12
	I-shaped Joints	0	3	6	9
5	Mounting Clips	10	12	14	16
	Cross-shaped Joints	4	8	12	16
	I-shaped Joints	0	4	8	12

Quantity of SLDN units =  $N \times N'$

The maximum quantity of square SLD30N and SLD44N units for integrated mounting is 20.

The maximum quantity of rectangular SLD72N and SLD48N units for integrated mounting is 10 as shown with shading in the table above.

Specifications and other descriptions in this brochure are subject to change without notice.



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