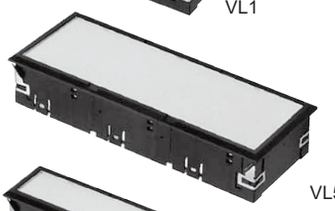
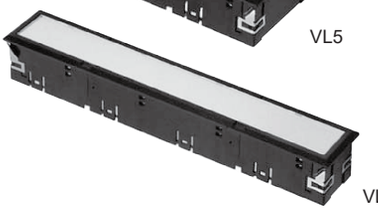
VL Indicator

VL

Available 6 sizes according to number of characters desired to indicate.


VL1


VL5


VL3

■ Display surface：VL1 = 17×72 mm（External dimension ：25×80 mm）
and other 5 sizes.
■ Depth behind panel：20 mm
■ Terminal：Connector（Original connector）
■ Mounting：Snap-in mounting
■ Illumination type：Full-Face, Dual-Color, 2-Split-Face, 2-Split-Dual-Color, Negative
■ Accessories：Wire harness

Negative illumination : The engraved letters are clearly visible only when the light is on,
and when the light is off, the engraved characters are hidden by the semitransparent black cover.

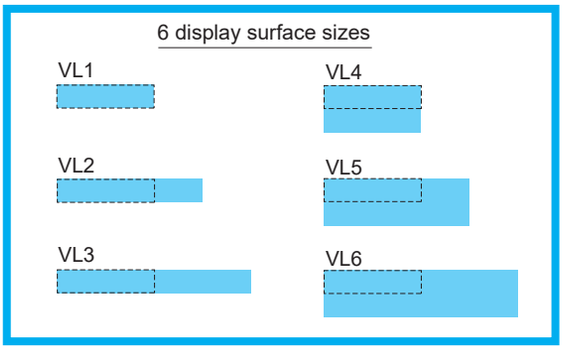
CHARACTERISTICS

Display Surface Size	VL1 : 17×72, VL2 : 17×108, VL3 : 17×144, VL4 : 35×72, VL5 : 35×108, VL6 : 35×144
Illumination Color	Red, Green, Yellow, Super Bule, Super White, Super Green
Illumination Type	Full-Face, Dual-Color, 2-Split-Face, 2-Split-Dual-Color
Supply Voltage	DC5V, 12V, 24V ± 5%
Consumption Current	220mA max. （VL6）
Terminal Shape	Original connector（6 pins）
Insulation Resistance	More than 100 MΩ at DC 500 V
Dielectric Strength	AC 1500 V RMS between terminals and ground 50/60 Hz for 60 sec. at normal ambient temperature and humidity
Peak Reverse Voltage	150V ※ Except DC5V（10V）
Ambient Operating Temperature	−10℃ to 40℃ （No Freeze, No Condensation）
Ambient Operating Humidity	45 to 85%RH max.(No Condensation）
Ambient Storage Temperature	−25℃ to 65℃ （No Freeze, No Condensation）
Ambient Storage Humidity	85%RH max. （No Condensation）
RoHS（10 Substances）	Conform to standards

SPECIFICATIONS

		DC5V	DC12V	DC24V
Illumination type	Full-Face	A	A	A
	3-Color	A	A	A
	2-Split-Face (Vertical)	A	A	A
	2-Split-Face (Horizontal)	A	A	A
	2-Split-Dual-Color	A	A	A
	Multi-Split-Face	A	A	A
Illumination Color	Red（70）	A	A	A
	Green（80）	A	A	A
	Yellow（90）	A	A	A
	Super Blue（14）	N/A	A	A
	Super White（16）	N/A	A	A
	Super Green（18）	N/A	A	A

A : Applicable N/A : Not applicable



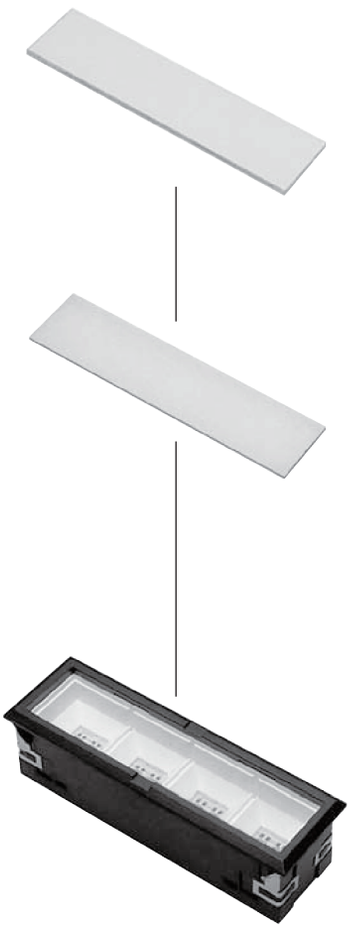
https://www.sunmulon.co.jp/english/products/led_e/vl.html

◇Dimensions：page VL-3～4
◇Accessories：page VL-5
◇Ordering code：page VL-6～9
◇Internal connection arrangements：page VL-11～36
◇LED specifications：page VL-37～38
◇Terminals：page VL-39
◇Mounting design / Panel cutout：page VL-40～41

STRUCTURE

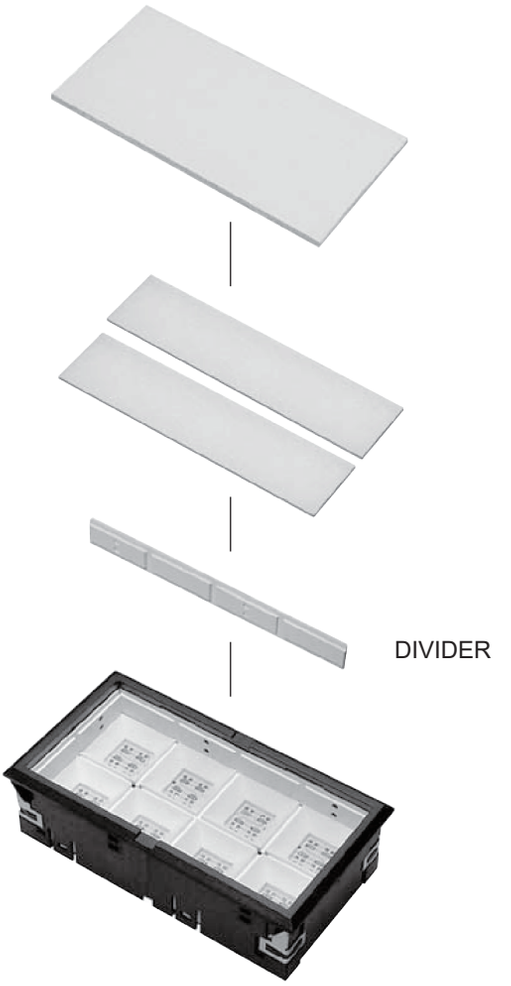
Full-Face

VL1



2-Split-Face

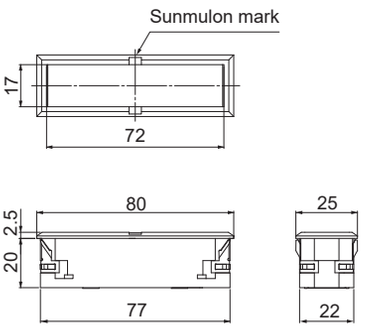
VL4



DIMENSIONS

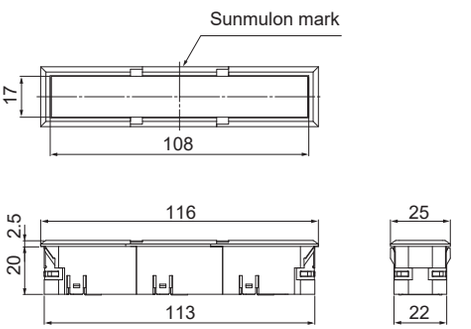
VL1

3D
DXF

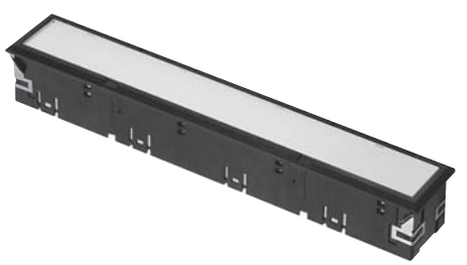


VL2

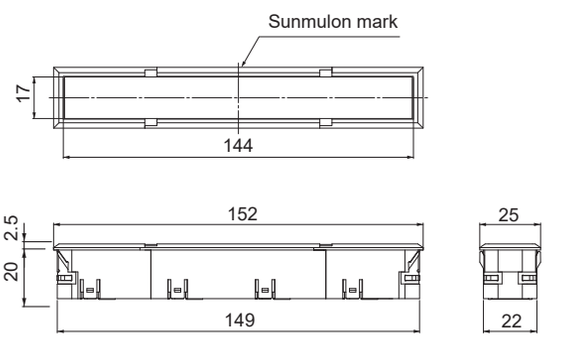
3D
DXF



VL3



3D
DXF



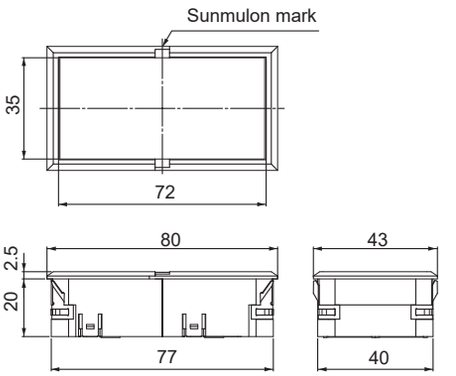
3D・DXF data download site ： **https://www.sunmulon.co.jp/download/**

Tolerance : ± 0.4 mm

DIMENSIONS

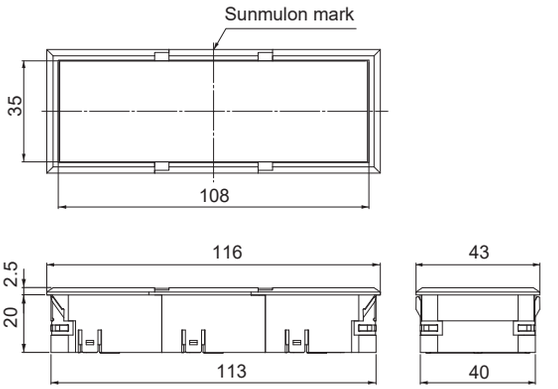
VL4

3D
DXF



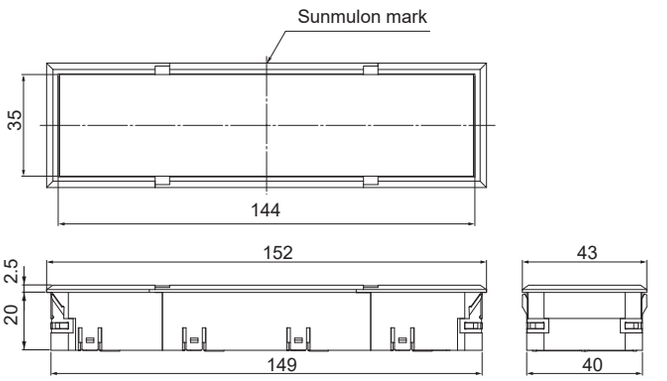
VL5

3D
DXF



VL6

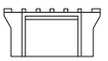
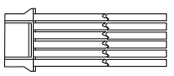
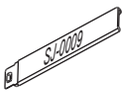
3D
DXF



3D・DXF data download site ： **https://www.sunmulon.co.jp/download/**

Tolerance : ± 0.4 mm

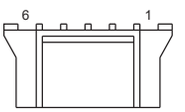
ACCESSORIES

Name	Appearance	Classification	Part no.		Precautions for use
Connector		Housing	EH-3251		- 1 Housing and 6 contacts set. ※ Please specify whether or not to attach it by ordering code. ※ Please contact JST for more information about contact crimping tools.
		Contact			
Wire harness		Wire harness	100cm	EH-3250-1	- For other dimensions, please contact us.
			200cm	EH-3250-2	
		For cross wiring	VL-1058-1		- Attached to VL4,VL5,VL6.
Removing tool		For removal cover	SJ-0009		- Be used to remove cover from housing.

Connector

Part no.	EH-3251

1 Housing & 6 contact pins to be appended.



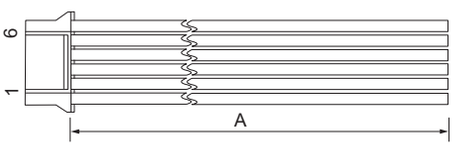
Housing
（JST made PHR-6）

Contact pin
（JST made SPH-002T-P0.5S）

Wire harness

Part no.	EH-3250-1	EH-3250-2
A length	100cm	200cm

Wire：UL1061 AWG26



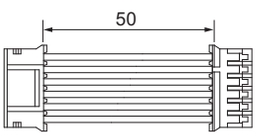
Pin No.	1	2	3	4	5	6
Wire Color	Brown	Red	Orange	Yellow	Green	Blue

Connector for Cross wiring

(Attached to VL4, VL5, VL6)

Part no.	VL-1058-1

Wire：UL1061 AWG26



ORDERING CODE【Full-Face】

Assembled Part

VL □ – W0 □ □ □ □ □ □ □ □

● SHAPE

1	17×72
2	17×108
3	17×144
4	35×72
5	35×108
6	35×144

● ILLUMINATION TYPE

W0	Full-Face

● LED COLOR

70	Red	
80	Green	
90	Yellow	
14	Super-Blue	※1)
16	Super-White	※1)
18	Super-Green	※1)
X	Without LED	

Yellow (90) is actually "ORANGE Yellow" not Lemon Yellow.

● COVER COLOR

C	Transparent	
SK	Semitransparent (For Negative)	※2)

● HOUSING COLOR

K	Black
H	Gray

● FILTER COLOR

1	Red	
2	Green	
3	Orange Yellow	
4	Milk-white	※2)
6	Blue	
X	Without filter	

● TERMINAL

K	Connector with Accessories	※3)
N	Connector without Accessories	

● LED CIRCUIT

A	Anode common
K	Cathode common
X	Wirhout LED

● Supply Voltage to LED

1	DC5V	※1)
2	DC12V	
3	DC24V	
X	Without LED	

● MOUNTING ※4)

1	For Horizontal Mtg.
2	For Vertical Mtg.
X	Without Snap spring

● NOTES

※1) The color of LED Super-Blue, Super-White, Super-White cannot be specified DC 5V, specify DC12V or DC24V.

※2) For Negative illumination, specify filter Milk-white (4). The filter for negative illumination has black silk printing on one side.

※3) Attached to EH-3251. For the connector, refer to Accessories page.

※4) Snap spring metal plates come out Left / Right direction for Vertical mounting, and Top / Bottom direction for Horizontal mounting to avoid interfering mutually. Therefore, in case of independent use, it does not matter. (select 1 Horizontal ordinary)

◇Dimensions：page VL-3～4
◇Accessories：page VL-5
◇Internal connection arrangements：page VL-11～15
◇LED specifications：page VL-37
◇Terminals：page VL-39
◇Mounting design / Panel cutout：page VL-40～41

ORDERING CODE【Dual-Color】

Assembled Part

VL □ – W3 1 2 □ □ □ □ □ □ □

● SHAPE

1	17×72
2	17×108
3	17×144
4	35×72
5	35×108
6	35×144

● ILLUMINATION TYPE

W3	Dual-Color

● LED COLOR ※1)

7	Red
8	Green
9	Yellow
14	Super-Blue
16	Super-White
18	Super-Green

Put the color numbers into frame 1, 2.
（Dual-Color combination）
78・79・714・716・718
914・916・918・1416・1418
1616・1618

Yellow (90) is actually "ORANGE Yellow" not Lemon Yellow.

● COVER COLOR

C	Transparent
SK	Semitransparent (For Negative) ※2）

● HOUSING COLOR

K	Black
H	Gray

● FILTER COLOR

4	Milk-white
X	Without filter

● TERMINAL

K	Connector with Accessories ※3）
N	Connector without Accessories

● LED CIRCUIT

A	Anode common
K	Cathode common

● Supply Voltage to LED

1	DC5V ※1)
2	DC12V
3	DC24V

● MOUNTING ※4)

1	For Horizontal Mtg.
2	For Vertical Mtg.
X	Without Snap spring

● NOTES

※1）The color of LED Super-Blue, Super-White, Super-White cannot be specified DC 5V, specify DC12V or DC24V.

※2）For Negative illumination, specify filter Milk-white (4). The filter for negative illumination has black silk printing on one side.

※3）Attached to EH-3251. For the connector, refer to Accessories page.

※4）Snap spring metal plates come out Left / Right direction for Vertical mounting, and Top / Bottom direction for Horizontal mounting to avoid interfering mutually. Therefore, in case of independent use, it does not matter. (select 1 Horizontal ordinary)

◇Dimensions：page VL-3～4
◇Accessories：page VL-5
◇Internal connection arrangements：page VL-16～20
◇LED specifications：page VL-37
◇Terminals：page VL-39
◇Mounting design / Panel cutout：page VL-40～41

ORDERING CODE【2-Split-Face】

Assembled Part

VL □ — □ 1 2 □ □ 1 2 □ □ □ □

● **SHAPE**

1	17×72
2	17×108
3	17×144
4	35×72
5	35×108
6	35×144

● **ILLUMINATION TYPE**

W1	2-Split-Face (Vertical)
W2	2-Split-Face (Horizontal) ※1)

● **LED COLOR** ※2) ※3)

7	Red
8	Green
9	Yellow
14	Super-Blue
16	Super-White
18	Super-Green
X	Without LED

Put the color numbers into frame 1, 2.

For Non-illuminated Put XX into frame 1, 2.

The combination of With LED and Without LED cannot be specified.
Yellow (90) is actually "ORANGE Yellow" not Lemon Yellow.

● **COVER COLOR**

C	Transparent
SK	Semitransparent (For Negative) ※4)

● **HOUSING COLOR**

K	Black
H	Gray

● **FILTER COLOR** ※2) ※4)

1	Red
2	Green
3	Orange Yellow
4	Milk-white
6	Blue
X	Without filter

Put the color numbers into frame 1, 2.

For Without filter Put XX into frame 1, 2.

The combination of With filter and Without filter cannot be specified.

● **TERMINAL**

K	Connector with Accessories ※5)
N	Connector without Accessories

● **LED CIRCUIT**

A	Anode common
K	Cathode common
X	Wirhout LED

● **Supply Voltage to LED**

1	DC5V ※3)
2	DC12V
3	DC24V
X	Without LED

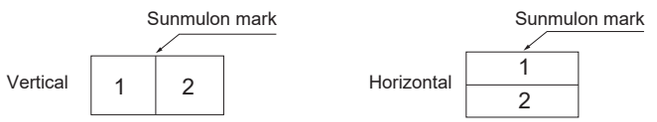
● **MOUNTING** ※6)

1	For Horizontal Mtg.
2	For Vertical Mtg.
X	Without Snap spring

● **NOTES**

※1) Only VL4, VL5, VL6 can be specified for 2-Split-Face (Horizontal).

※2) How to specify the color of LED and filter
Select the color symbols listed in the ordering code, and put them into the frame 1 and 2 referring to the figure below.
The numbers in the figure match the location specified in the ordering code.



※3) The color of LED Super-Blue, Super-White, Super-White cannot be specified DC 5V, specify DC12V or DC24V.

※4) For Negative illumination, specify filter Milk-white (4). The filter for negative illumination has black silk printing on one side.

※5) Attached to EH-3251. For the connector, refer to Accessories page.

※6) Snap spring metal plates come out Left / Right direction for Vertical mounting, and Top / Bottom direction for Horizontal mounting to avoid interfering mutually. Therefore, in case of independent use, it does not matter. (select 1 Horizontal ordinary)

◇Dimensions：page VL-3～4
◇Accessories：page VL-5
◇Internal connection arrangements：page VL-21～28
◇LED specifications：page VL-38
◇Terminals：page VL-39
◇Mounting design / Panel cutout：page VL-40～41

ORDERING CODE【2-Split-Dual-Color】

Assembled Part

VL □ — □ 1 2 3 4 □ □ 1 2 □ □ □ □

● SHAPE

1	17×72
2	17×108
3	17×144
4	35×72
5	35×108
6	35×144

● ILLUMINATION TYPE

W4	2-Split-Face (Vertical)
W5	2-Split-Face (Horizontal) ※1)

● LED COLOR ※2) ※3)

7	Red
8	Green
9	Yellow
14	Super-Blue
16	Super-White
18	Super-Green

Put the two color numbers into frame 1, 2 and 3, 4.
(Dual-Color combination)
78・79・714・716・718
914・916・918・1416・1418
1616・1618

Yellow (90) is actually "ORANGE Yellow" not Lemon Yellow.

● COVER COLOR

C	Transparent
SK	Semitransparent (For Negative) ※4)

● HOUSING COLOR

K	Black
H	Gray

● FILTER COLOR

4	Milk-white	For with filter Put 44 into frame 1, 2.
X	Without filter	For Without filter Put XX into frame 1, 2.

The combination of With filter and Without filter cannot be specified.

● TERMINAL

K	Connector with Accessories ※5)
N	Connector without Accessories

● LED CIRCUIT

A	Anode common
K	Cathode common

● Supply Voltage to LED

1	DC5V	※3)
2	DC12V	
3	DC24V	

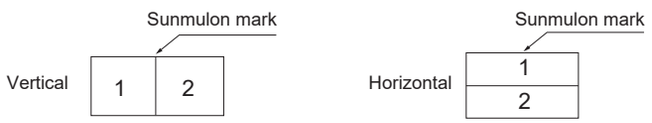
● MOUNTING ※6)

1	For Horizontal Mtg.
2	For Vertical Mtg.
X	Without Snap spring

● NOTES

※1) Only VL4, VL5, VL6 can be specified for 2-Split-Face (Horizontal).

※2) How to specify the color of LED and filter
Select the color symbols listed in the ordering code, and put them into the frame 1 and 2 referring to the figure below.
The numbers in the figure match the location specified in the ordering code.



※3) The color of LED Super-Blue, Super-White, Super-White cannot be specified DC 5V, specify DC12V or DC24V.

※4) For Negative illumination, specify filter Milk-white (4). The filter for negative illumination has black silk printing on one side.

※5) Attached to EH-3251. For the connector, refer to Accessories page.

※6) Snap spring metal plates come out Left / Right direction for Vertical mounting, and Top / Bottom direction for Horizontal mounting to avoid interfering mutually. Therefore, in case of independent use, it does not matter. (select 1 Horizontal ordinary)

◇Dimensions：page VL-3～4
◇Accessories：page VL-5
◇Internal connection arrangements：page VL-29～36
◇LED specifications：page VL-38
◇Terminals：page VL-39
◇Mounting design / Panel cutout：page VL-40～41

REPLACEMENT PARTS

● COVER

	VL1	VL2	VL3	VL4	VL5	VL6
Transparent	VL-1047-1CC	VL-1047-2CC	VL-1047-3CC	VL-1048-1CC	VL-1048-2CC	VL-1048-3CC
Semitransparent （Negative）	VL-1047-1SK	VL-1047-2SK	VL-1047-3SK	VL-1048-1SK	VL-1048-2SK	VL-1048-3SK

● Full-Face FILTER

	VL1	VL2	VL3	VL4	VL5	VL6
Red	VL-1049-4LR	VL-1049-6LR	VL-1049-8LR	VL-1050-4LR	VL-1050-6LR	VL-1050-8LR
Green	VL-1049-4LG	VL-1049-6LG	VL-1049-8LG	VL-1050-4LG	VL-1050-6LG	VL-1050-8LG
Orange Yellow	VL-1049-4LO	VL-1049-6LO	VL-1049-8LO	VL-1050-4LO	VL-1050-6LO	VL-1050-8LO
Milk-white	VL-1049-4LM	VL-1049-6LM	VL-1049-8LM	VL-1050-4LM	VL-1050-6LM	VL-1050-8LM
Blue	VL-1049-4LB	VL-1049-6LB	VL-1049-8LB	VL-1050-4LB	VL-1050-6LB	VL-1050-8LB
Negative	VL-1059-4LM	VL-1059-6LM	VL-1059-8LM	VL-1060-4LM	VL-1060-6LM	VL-1060-8LM
Shape ※1	(4)	(6)	(8)	(12)	(14)	(16)

※ The filter for negative illumination has black silk printing on one side.

● Dual-Color FILTER

	VL1	VL2	VL3	VL4	VL5	VL6
Milk-white	VL-1049-4LM	VL-1049-6LM	VL-1049-8LM	VL-1050-4LM	VL-1050-6LM	VL-1050-8LM
Negative	VL-1059-4LM	VL-1059-6LM	VL-1059-8LM	VL-1060-4LM	VL-1060-6LM	VL-1060-8LM
Shape ※1	(4)	(6)	(8)	(12)	(14)	(16)

※ The filter for negative illumination has black silk printing on one side.

● 2-Split-Face FILTER

	VL1～VL3					VL4～VL6				
Red	VL-1049-1LR	VL-1049-2LR	VL-1049-3LR	VL-1049-5LR	VL-1049-7LR	VL-1049-2LR	VL-1050-2LR	VL-1050-3LR	VL-1050-5LR	VL-1050-7LR
Green	VL-1049-1LG	VL-1049-2LG	VL-1049-3LG	VL-1049-5LG	VL-1049-7LG	VL-1049-2LG	VL-1050-2LG	VL-1050-3LG	VL-1050-5LG	VL-1050-7LG
Orange Yellow	VL-1049-1LO	VL-1049-2LO	VL-1049-3LO	VL-1049-5LO	VL-1049-7LO	VL-1049-2LO	VL-1050-2LO	VL-1050-3LO	VL-1050-5LO	VL-1050-7LO
Milk-white	VL-1049-1LM	VL-1049-2LM	VL-1049-3LM	VL-1049-5LM	VL-1049-7LM	VL-1049-2LM	VL-1050-2LM	VL-1050-3LM	VL-1050-5LM	VL-1050-7LM
Blue	VL-1049-1LB	VL-1049-2LB	VL-1049-3LB	VL-1049-5LB	VL-1049-7LB	VL-1049-2LB	VL-1050-2LB	VL-1050-3LB	VL-1050-5LB	VL-1050-7LB
Negative	VL-1059-1LM	VL-1059-2LM	VL-1059-3LM	VL-1059-5LM	VL-1059-7LM	VL-1059-2LM	VL-1060-2LM	VL-1060-3LM	VL-1060-5LM	VL-1060-7LM
Shape ※1	(1)	(2)	(3)	(5)	(7)	(9)	(10)	(11)	(13)	(15)

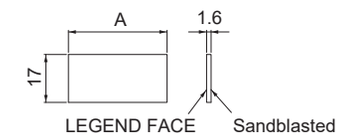
※ The filter for negative illumination has black silk printing on one side.

● 2-Split-Dual-Color FILTER

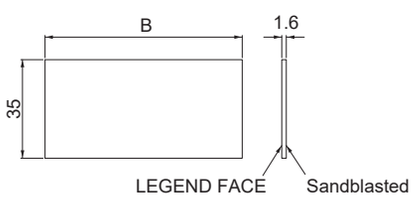
	VL1～VL3					VL4～VL6				
Milk-white	VL-1049-1LM	VL-1049-2LM	VL-1049-3LM	VL-1049-5LM	VL-1049-7LM	VL-1049-2LM	VL-1050-2LM	VL-1050-3LM	VL-1050-5LM	VL-1050-7LM
Negative	VL-1059-1LM	VL-1059-2LM	VL-1059-3LM	VL-1059-5LM	VL-1059-7LM	VL-1059-2LM	VL-1060-2LM	VL-1060-3LM	VL-1060-5LM	VL-1060-7LM
Shape ※1	(1)	(2)	(3)	(5)	(7)	(9)	(10)	(11)	(13)	(15)

※ The filter for negative illumination has black silk printing on one side.
※ 1：Refer to Filter dimensions shape number as below.

● FILTER DIMENSIONS

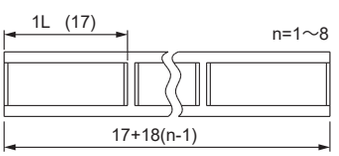


Shape	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A Length	17	35	53	71	89	107	125	143



Shape	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
B Length	17 Same as (2)	35	53	71	89	107	125	143

● DIVIDER



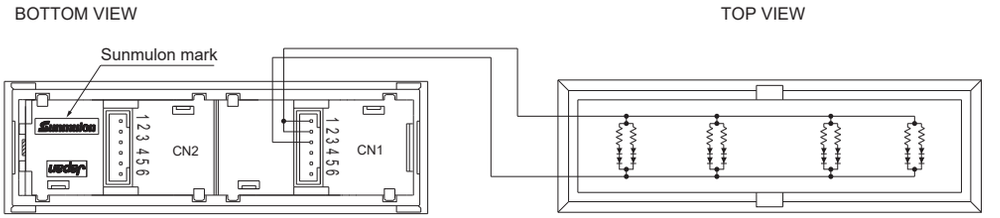
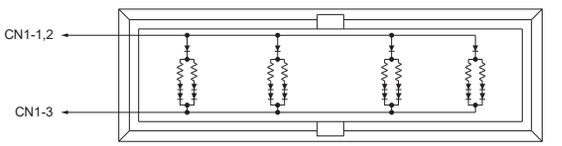
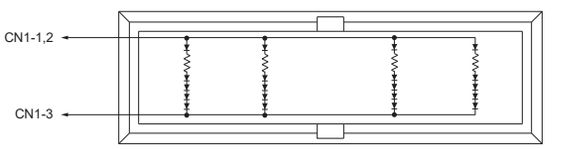
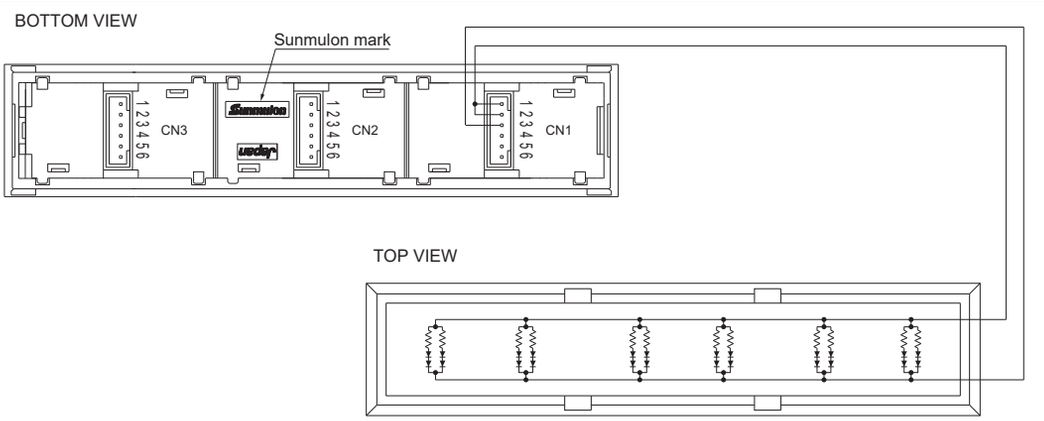
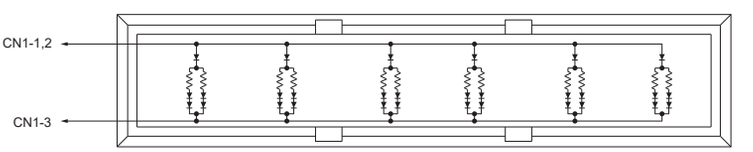
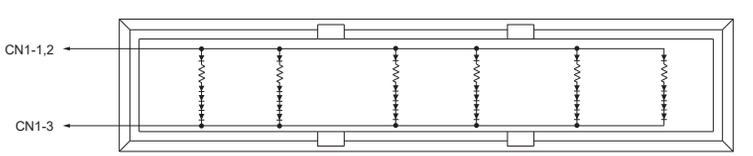
	1L	2L	3L	4L	5L	6L	7L	8L
Length	17	35	53	71	89	107	125	143
Part no.	VL-1057-1	VL-1057-2	VL-1057-3	VL-1057-4	VL-1057-5	VL-1057-6	VL-1057-7	VL-1057-8

Tolerance：± 0.4 mm

INTERNAL CONNECTION ARRANGEMENTS

● Full-Face

DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

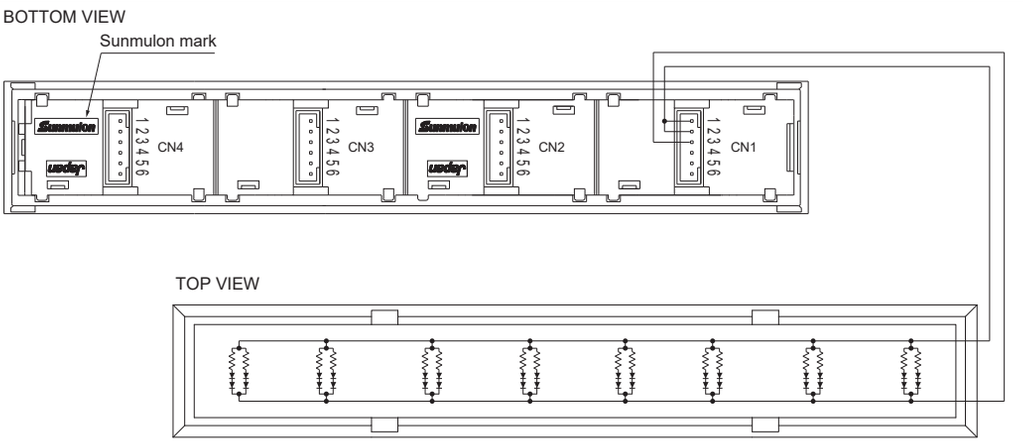
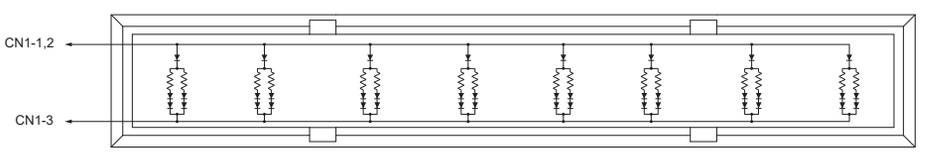
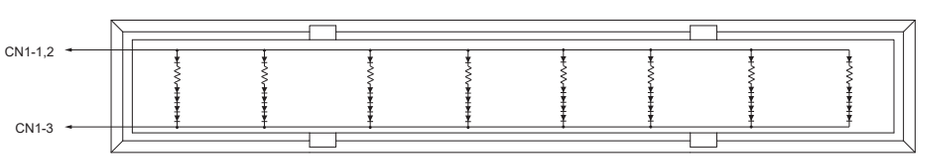
	Voltage	LED（7・8・9） LED（14・16・18）
VL1	DC5V	
	DC12V	
	DC24V	
VL2	DC5V	
	DC12V	
	DC24V	

LED color : 70 (Red), 80 (Green), 90 (Yellow), 14 (Super-Blue), 16 (Super-White), 18 (Super-Green)

INTERNAL CONNECTION ARRANGEMENTS

● Full-Face

DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

	Voltage	LED（7・8・9） LED（14・16・18）
VL3	DC5V	
	DC12V	
	DC24V	

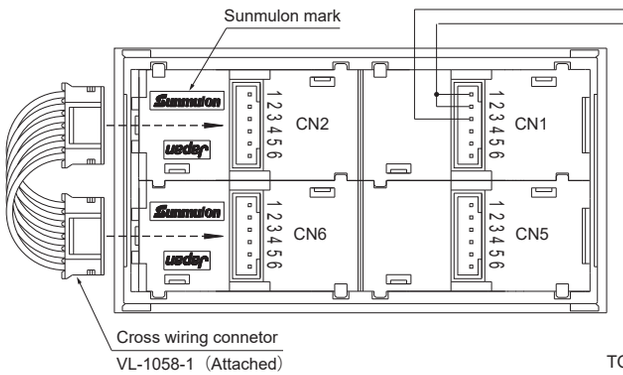
INTERNAL CONNECTION ARRANGEMENTS

● Full-Face

DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

	Voltage	LED（7・8・9） LED（14・16・18）
VL4	DC5V	
	DC12V	
	DC24V	

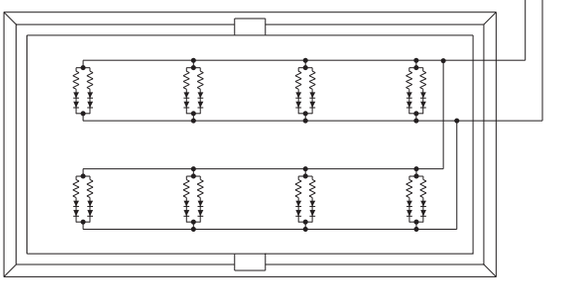
BOTTOM VIEW

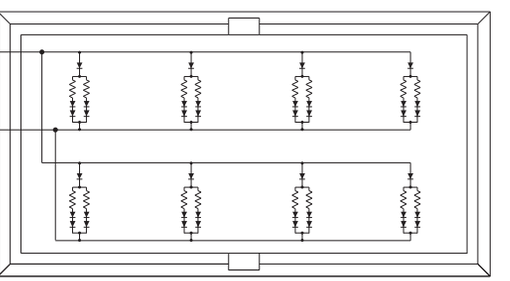


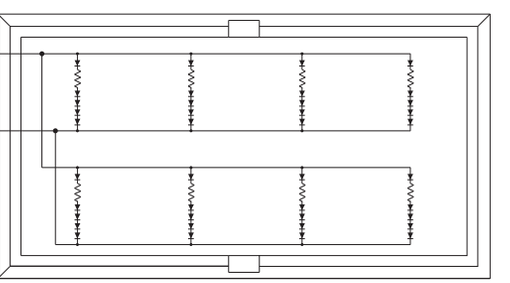
※ It also lights up when connected to CN5.

※ Connect the attached cross wiring connector (VL-1058-1) between CN2 and CN6.

TOP VIEW





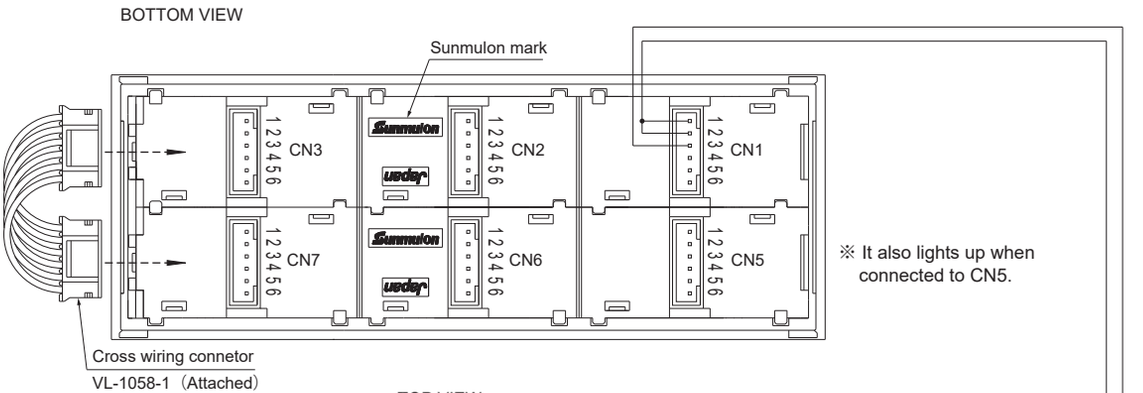


INTERNAL CONNECTION ARRANGEMENTS

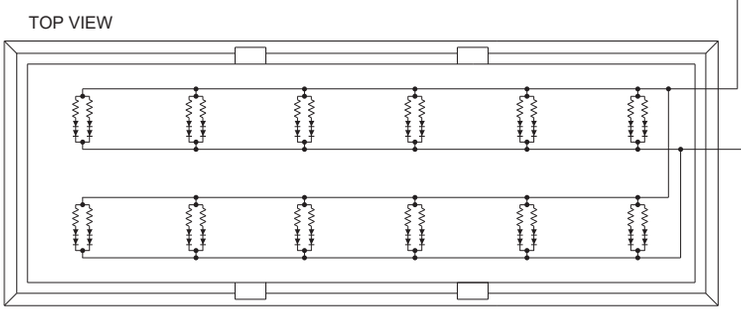
● Full-Face

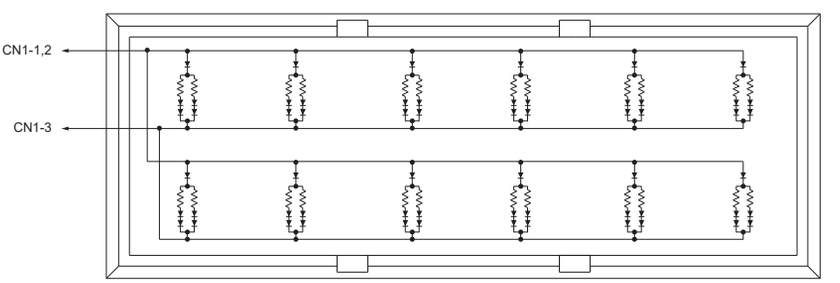
DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

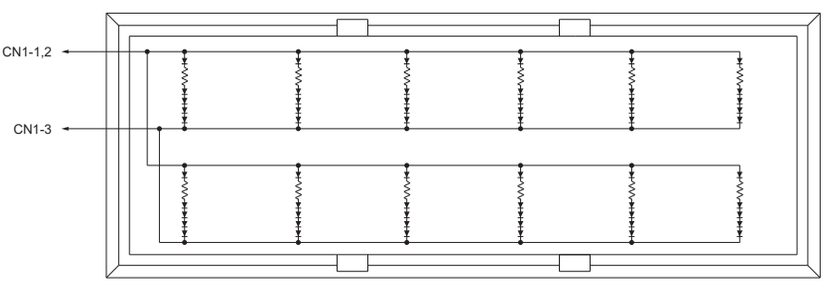
	Voltage	LED（7・8・9） LED（14・16・18）
VL5	DC5V	
	DC12V	
	DC24V	



※ Connect the attached cross wiring connector (VL-1058-1) between CN3 and CN7.





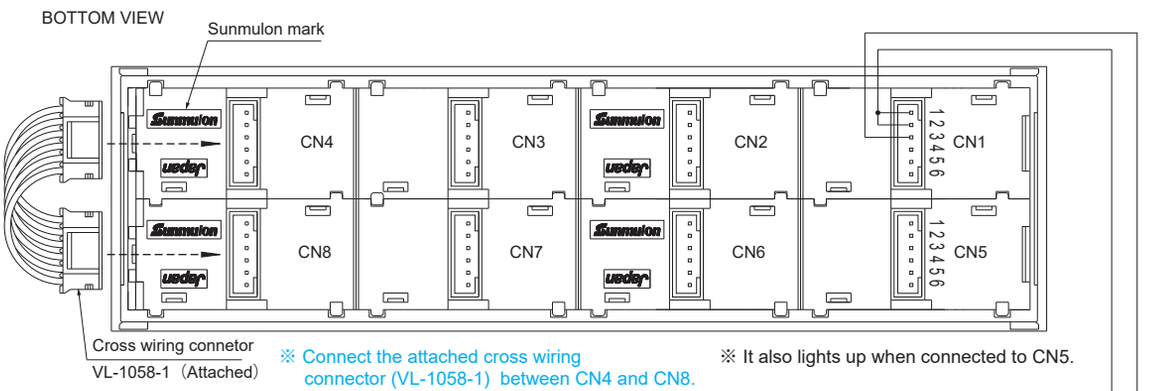


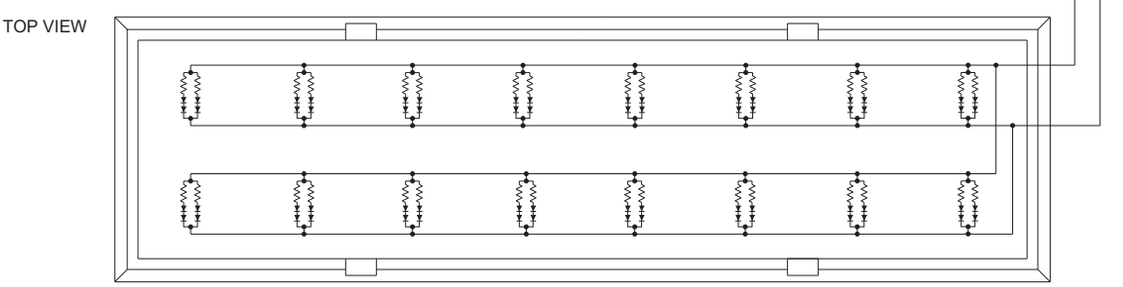
INTERNAL CONNECTION ARRANGEMENTS

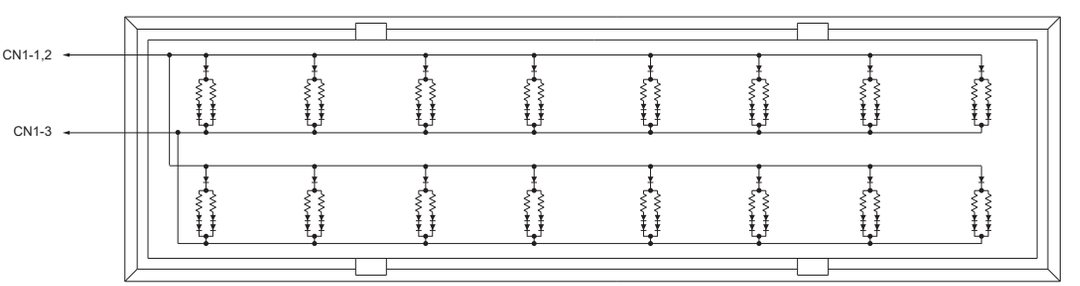
● Full-Face

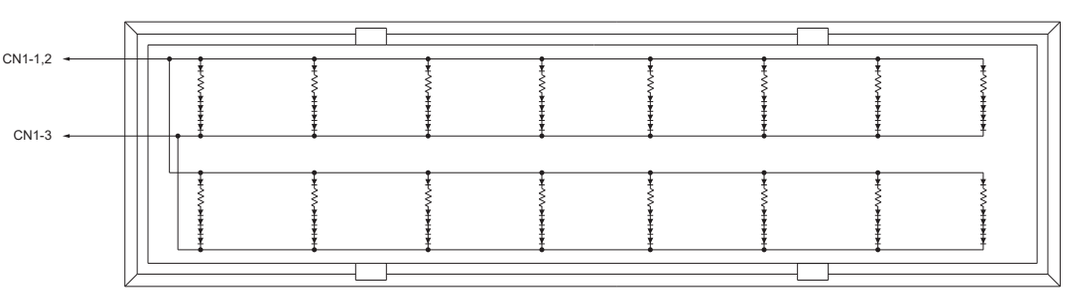
DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

	Voltage	LED（7・8・9） LED（14・16・18）
VL6	DC5V	
	DC12V	
	DC24V	





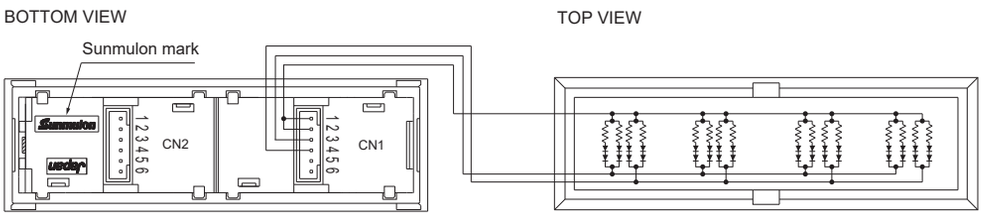
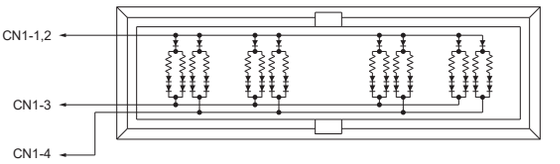
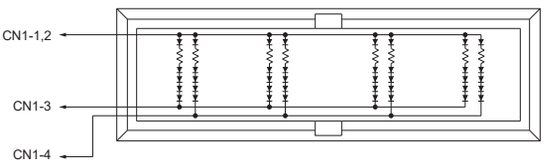
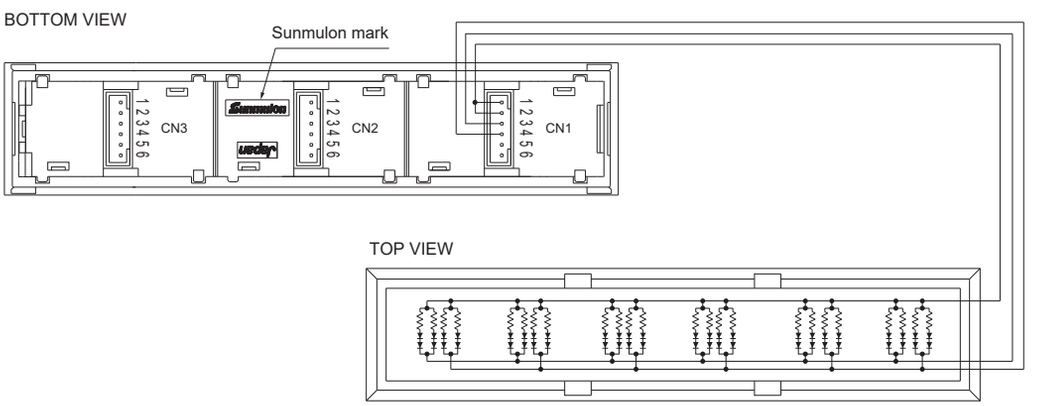
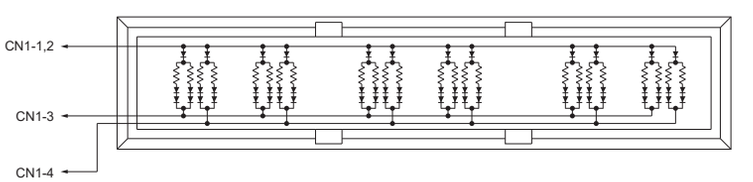
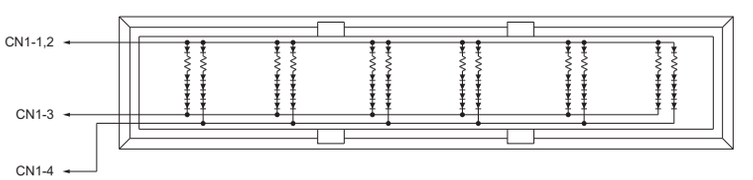




INTERNAL CONNECTION ARRANGEMENTS

● Dual-Color

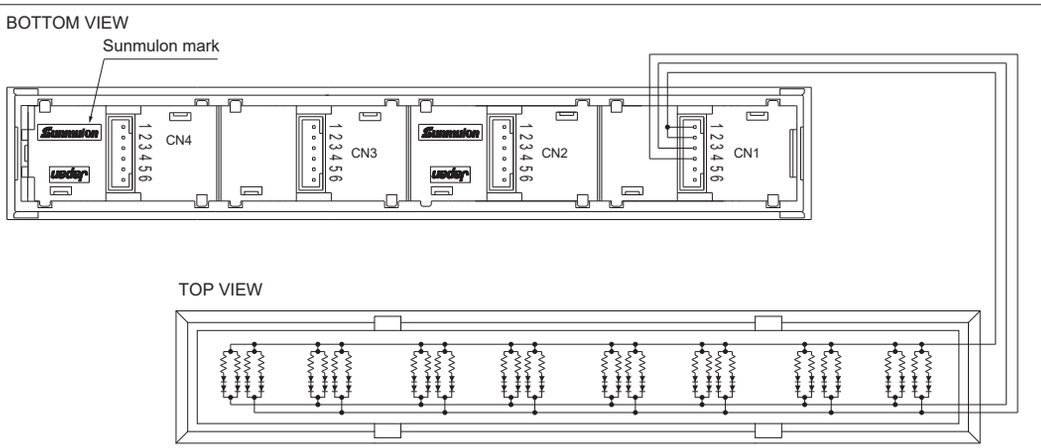
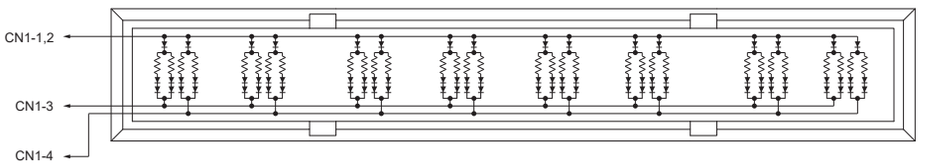
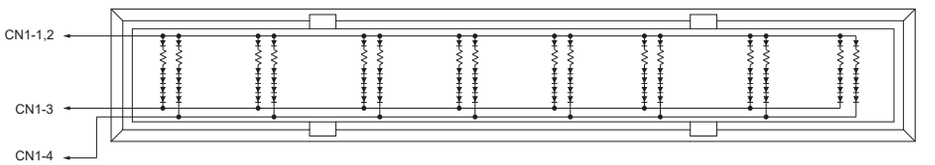
DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

	Voltage	LED（78・79・714・716・718・914・916・918・1416・1418・1616・1618）
VL1	DC5V	
	DC12V	
	DC24V	
VL2	DC5V	
	DC12V	
	DC24V	

INTERNAL CONNECTION ARRANGEMENTS

● Dual-Color

DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

	Voltage	LED（78・79・714・716・718・914・916・918・1416・1418・1616・1618）
VL3	DC5V	
	DC12V	
	DC24V	

● VL1～VL3 Dual-Color combintion (DC5V)

Terminals		LED Color	
CN1	1, 2－3	Red	Red
	1, 2－4	Green	Yellow
	1, 2－3・4	Simultaneous lighting	

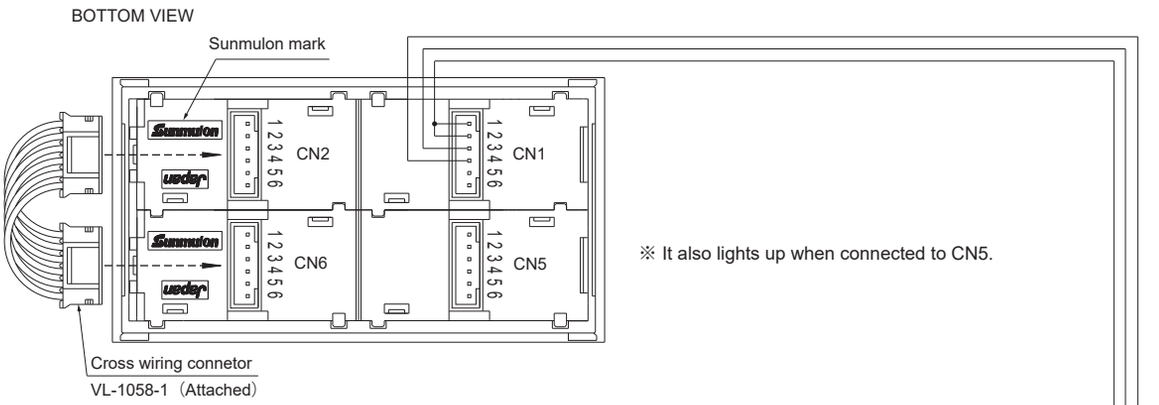
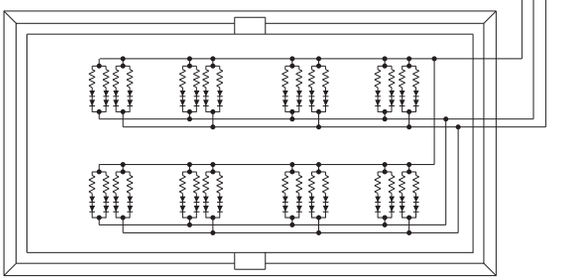
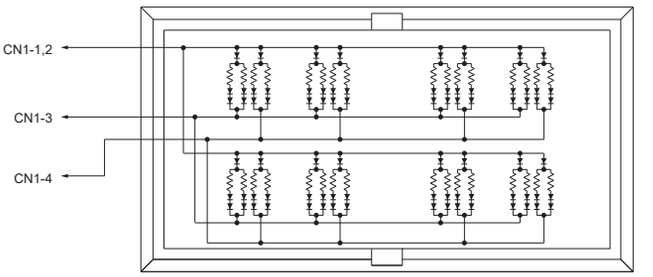
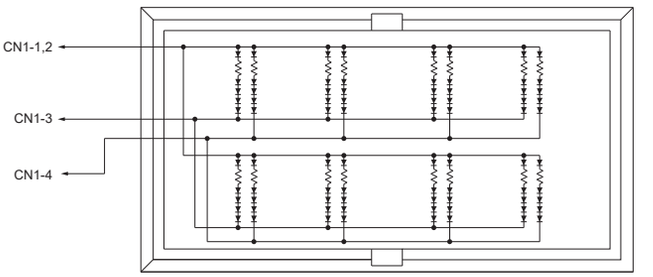
● VL1～VL3 Dual-Color combintion (DC12V・DC24V)

Terminals		LED Color											
CN1	1, 2－3	Red	Red	Red	Red	Red	Yellow	Yellow	Yellow	Super Blue	Super Blue	Super White	Super White
	1, 2－4	Green	Yellow	Super Blue	Super White	Super Green	Super Blue	Super White	Super Green	Super White	Super Green	Super White	Super Green
	1, 2－3・4	Simultaneous lighting											

INTERNAL CONNECTION ARRANGEMENTS

● Dual-Color

DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

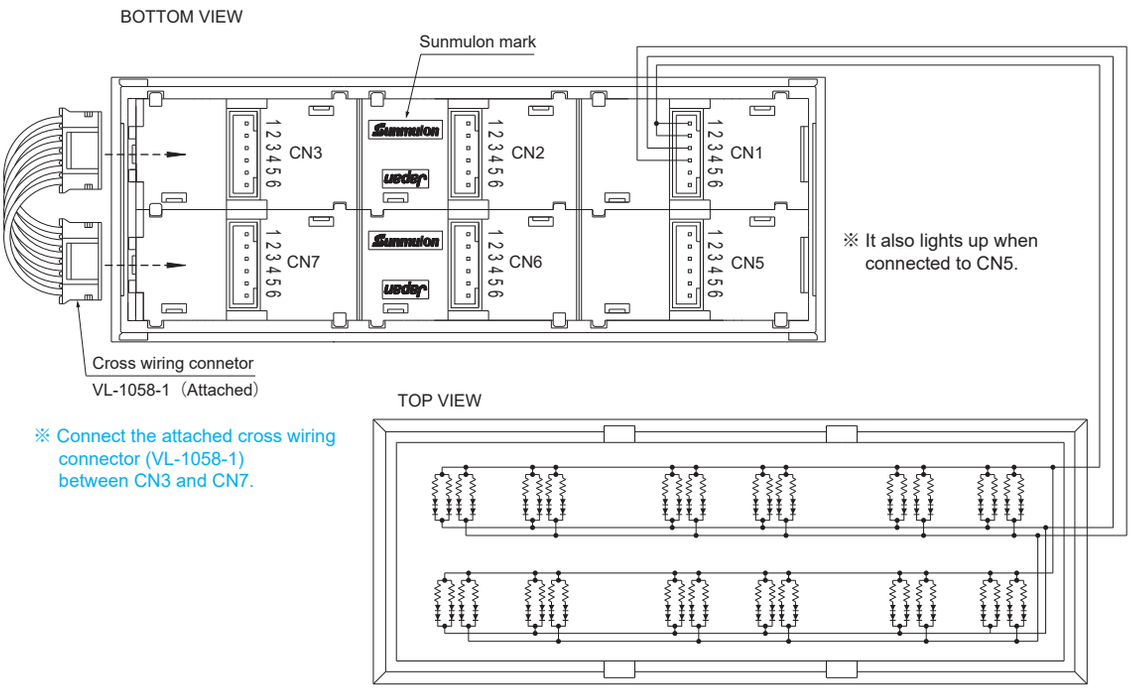
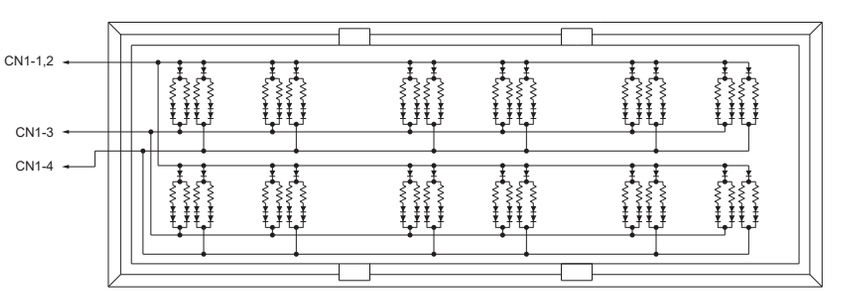
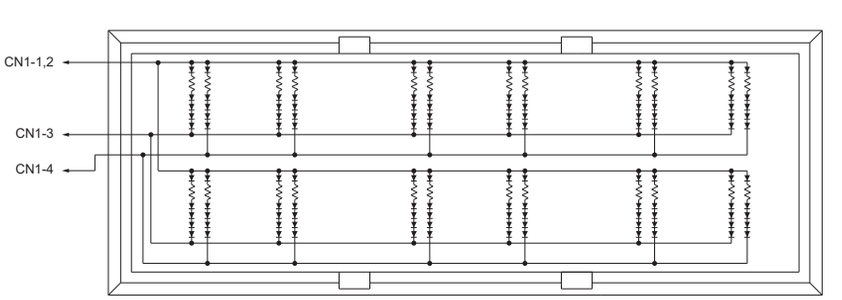
	Voltage	LED（78・79・714・716・718・914・916・918・1416・1418・1616・1618）
VL4	DC5V	BOTTOM VIEW  ※ It also lights up when connected to CN5. ※ Connect the attached cross wiring connector (VL-1058-1) between CN2 and CN6. TOP VIEW 
	DC12V	
	DC24V	

INTERNAL CONNECTION ARRANGEMENTS

● Dual-Color

DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

VL5

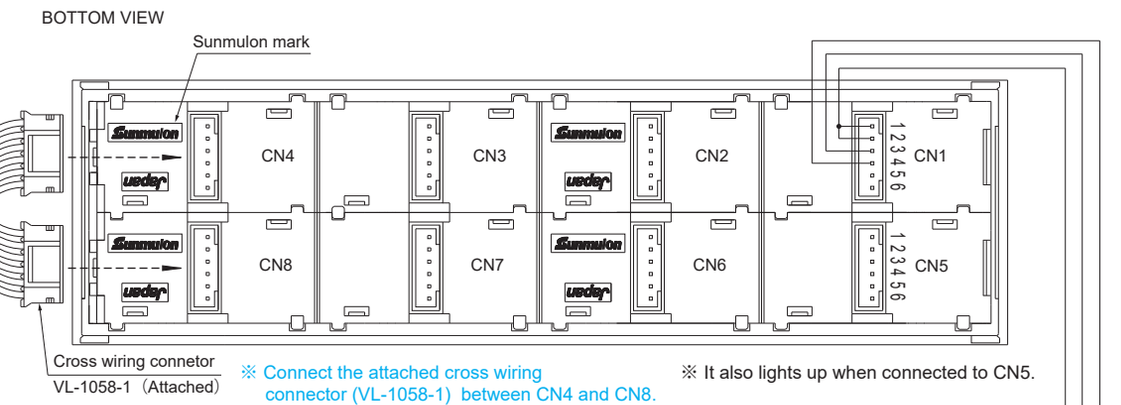
Voltage	LED（78・79・714・716・718・914・916・918・1416・1418・1616・1618）
DC5V	
DC12V	
DC24V	

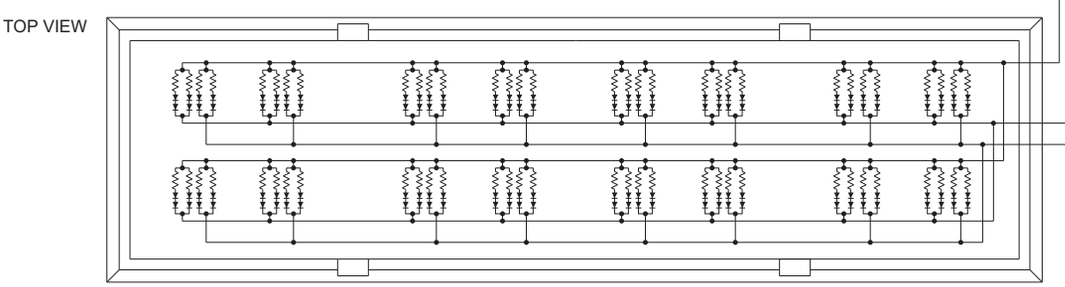
INTERNAL CONNECTION ARRANGEMENTS

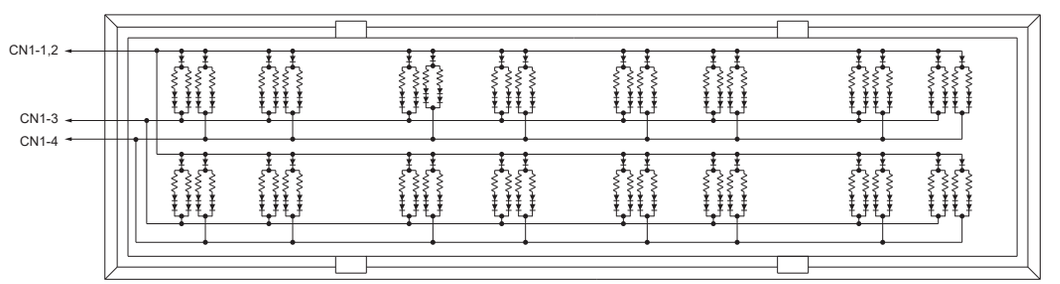
● Dual-Color

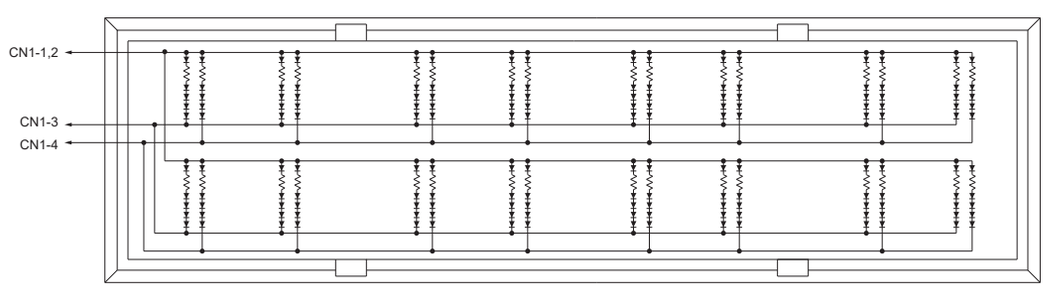
DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

	Voltage	LED（78・79・714・716・718・914・916・918・1416・1418・1616・1618）
VL6	DC5V	
	DC12V	
	DC24V	









● VL4～VL6 Dual-Color combintion (DC5V)

Terminals		LED Color	
CN1	1, 2－3	Red	Red
	1, 2－4	Green	Yellow
	1, 2－3・4	Simultaneous lighting	

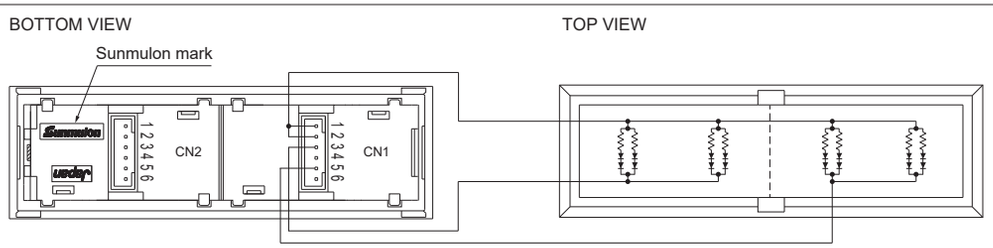
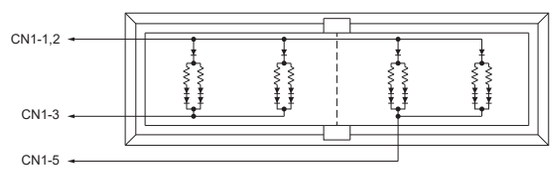
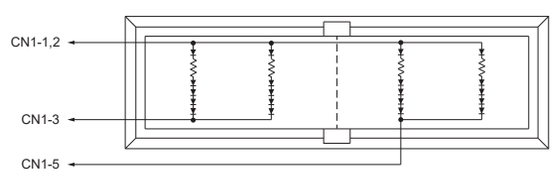
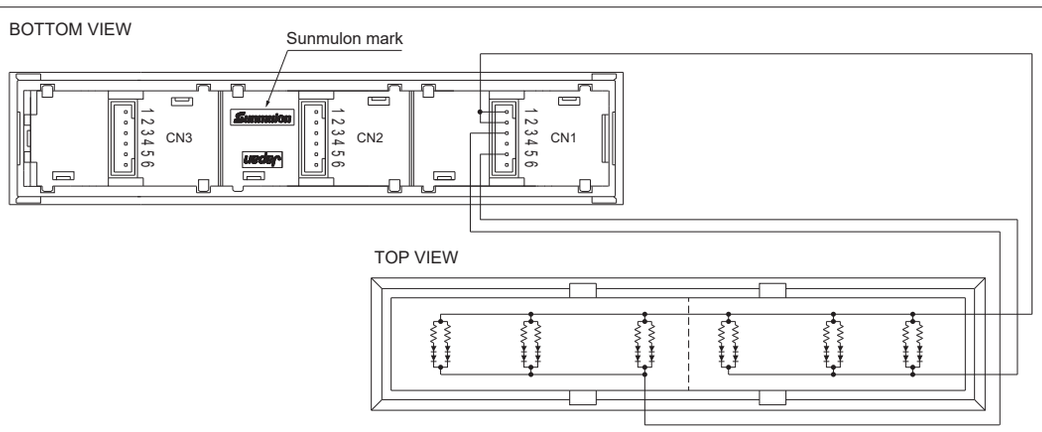
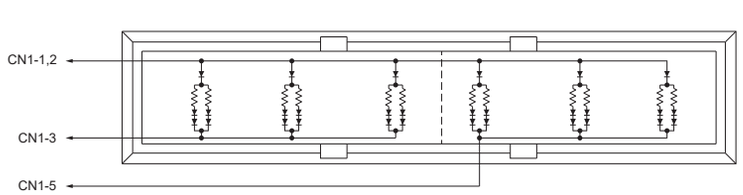
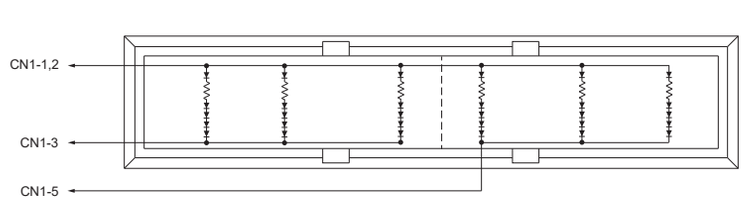
● VL4～VL6 Dual-Color combintion (DC12V・DC24V)

Terminals		LED Color											
CN1	1, 2－3	Red	Red	Red	Red	Red	Yellow	Yellow	Yellow	Super Blue	Super Blue	Super White	Super White
	1, 2－4	Green	Yellow	Super Blue	Super White	Super Green	Super Blue	Super White	Super Green	Super White	Super Green	Super White	Super Green
	1, 2－3・4	Simultaneous lighting											

INTERNAL CONNECTION ARRANGEMENTS

● 2-Split-Face

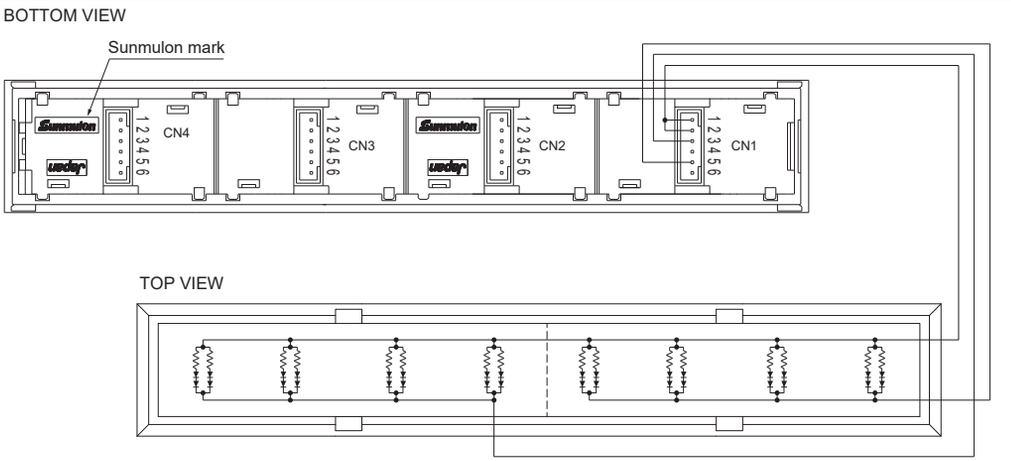
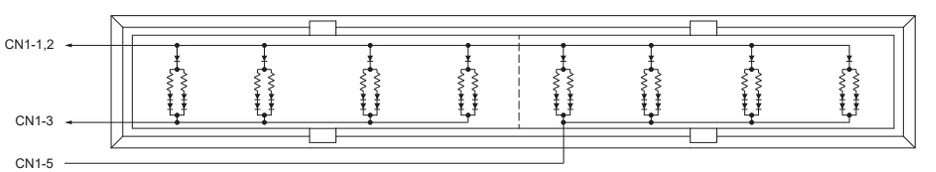
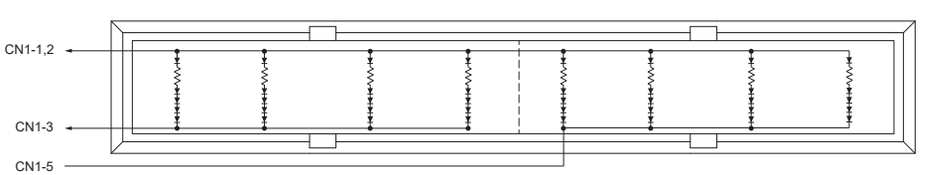
DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

	Voltage	2-Split-Face (Vertical)
		LED（7・8・9） LED（14・16・18）
VL1	DC5V	
	DC12V	
	DC24V	
VL2	DC5V	
	DC12V	
	DC24V	

INTERNAL CONNECTION ARRANGEMENTS

● 2-Split-Face

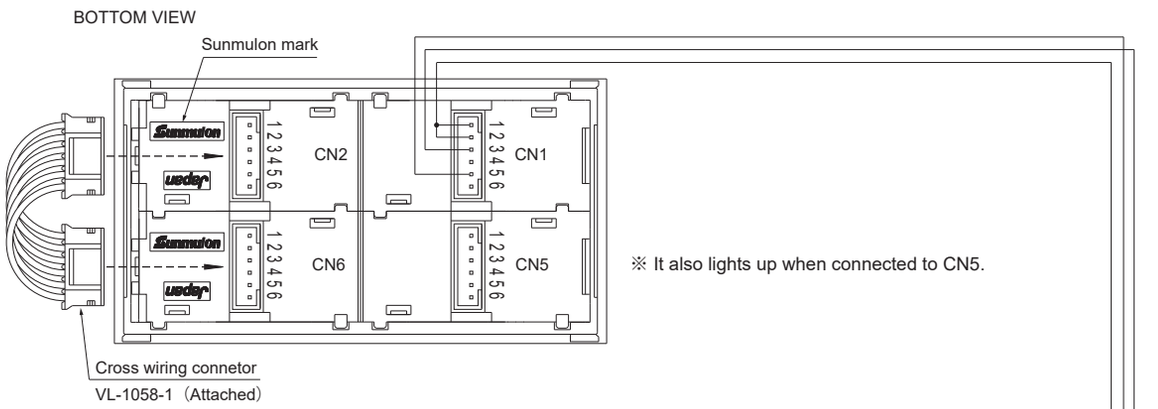
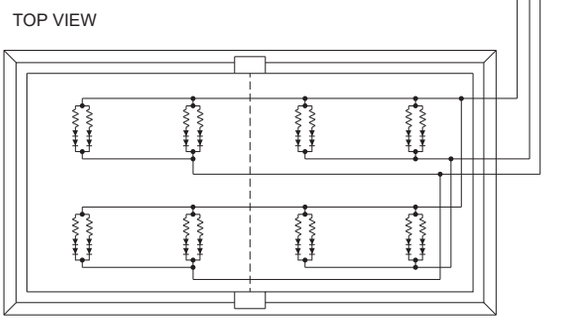
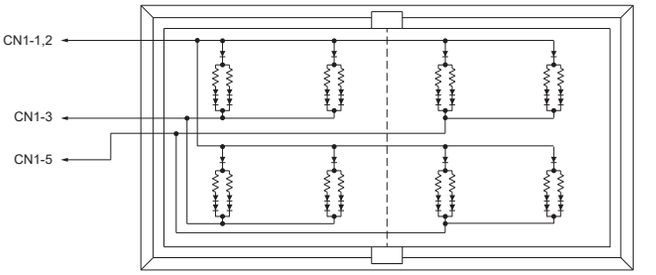
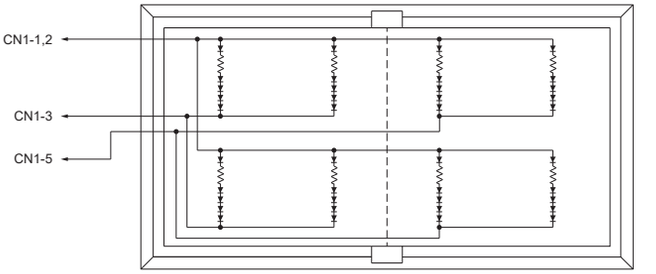
DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

	Voltage	2-Split-Face (Vertical)
		LED（7・8・9） LED（14・16・18）
VL3	DC5V	
	DC12V	
	DC24V	

INTERNAL CONNECTION ARRANGEMENTS

● 2-Split-Face

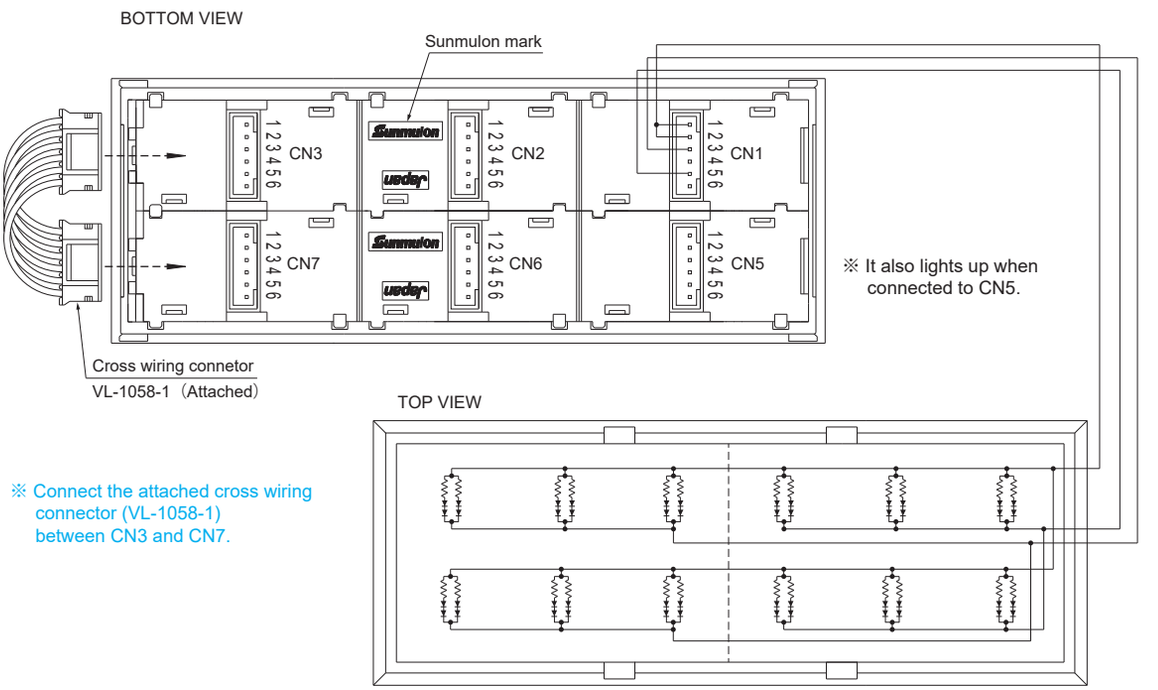
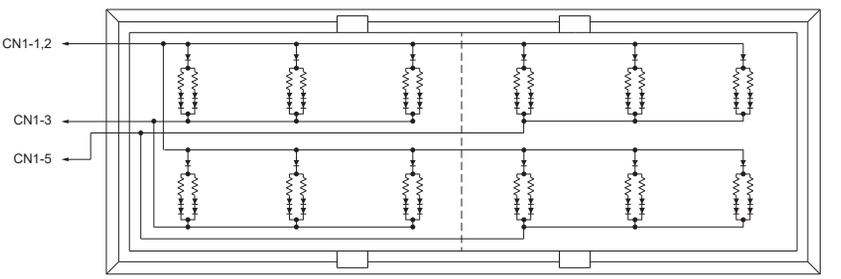
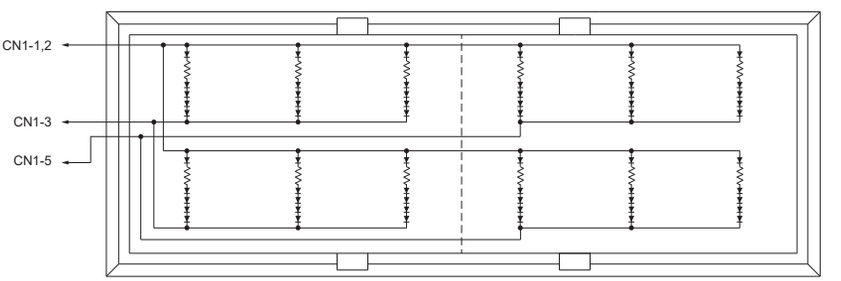
DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

	Voltage	2-Split-Face (Vertical)
		LED（7・8・9） LED（14・16・18）
VL4	DC5V	 ※ Connect the attached cross wiring connector (VL-1058-1) between CN2 and CN6. 
	DC12V	
	DC24V	

INTERNAL CONNECTION ARRANGEMENTS

● 2-Split-Face

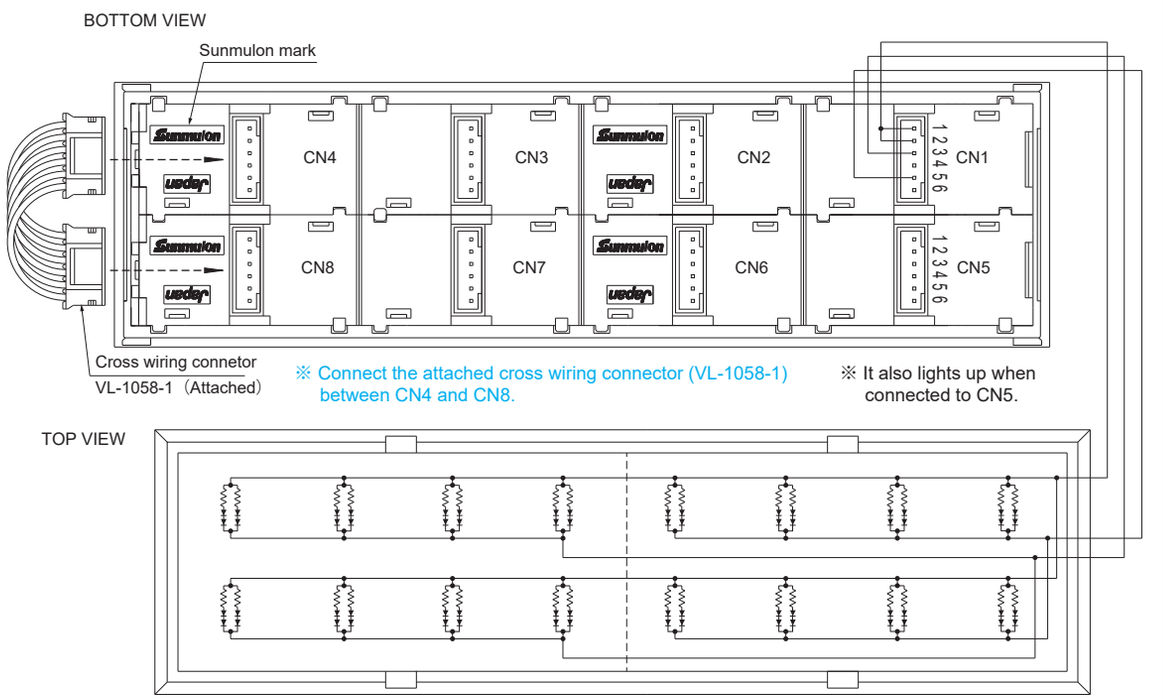
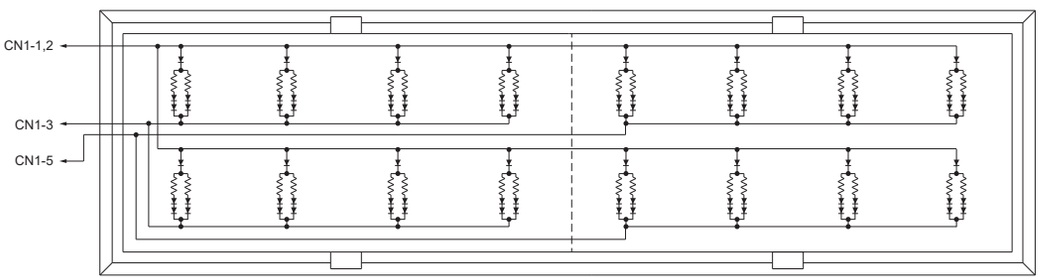
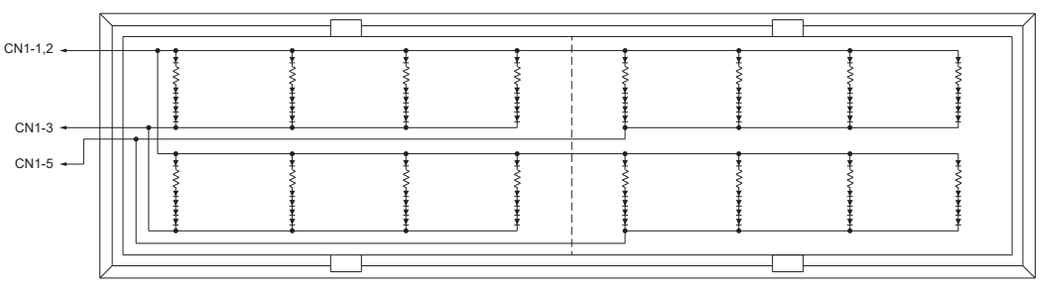
DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

	Voltage	2-Split-Face (Vertical) LED（7・8・9） LED（14・16・18）
VL5	DC5V	
	DC12V	
	DC24V	

INTERNAL CONNECTION ARRANGEMENTS

● 2-Split-Face

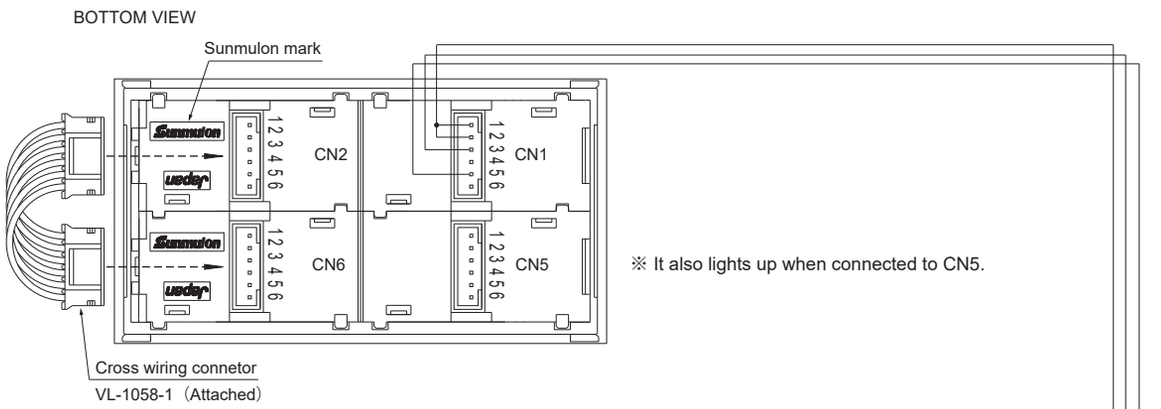
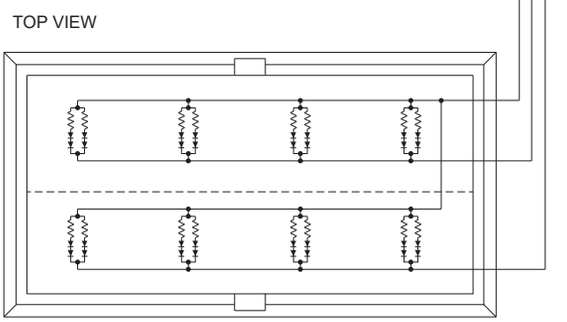
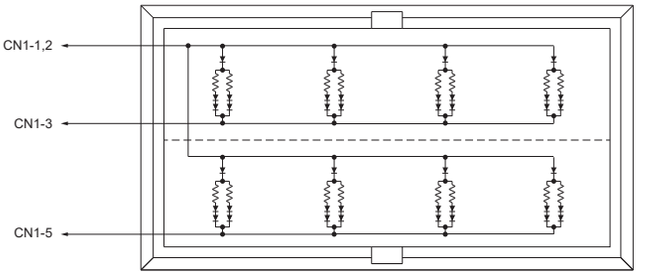
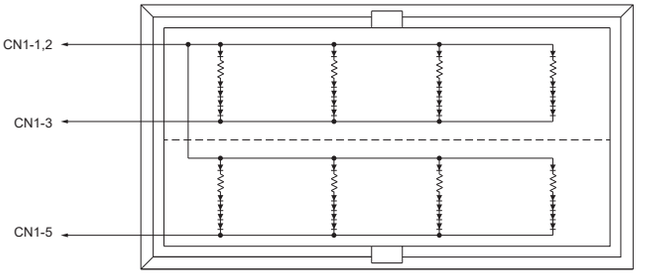
DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

	Voltage	2-Split-Face (Vertical) LED（7・8・9） LED（14・16・18）
VL6	DC5V	
	DC12V	
	DC24V	

INTERNAL CONNECTION ARRANGEMENTS

● 2-Split-Face

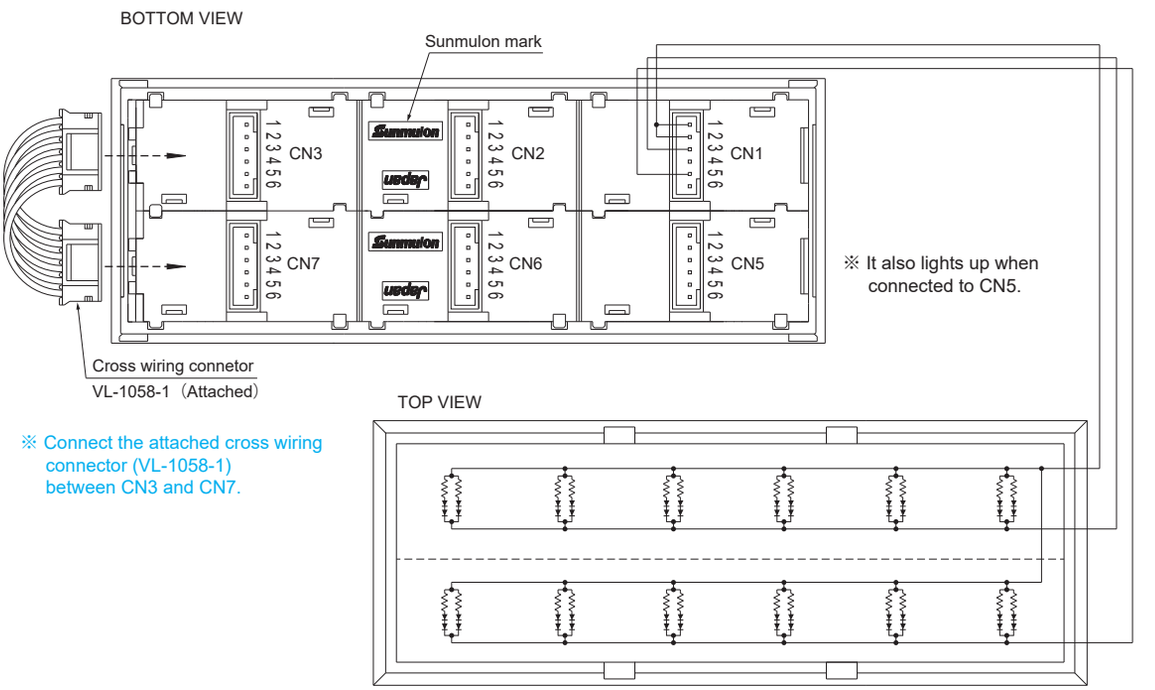
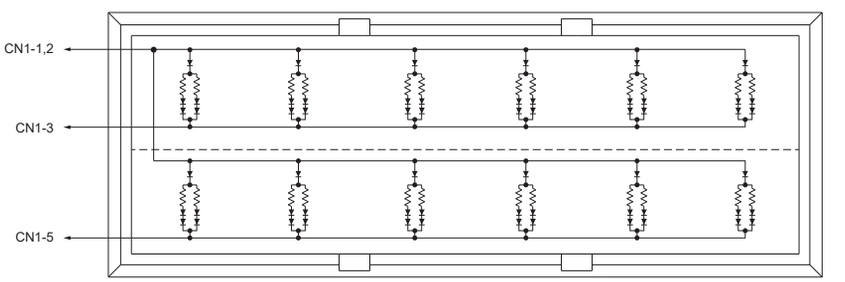
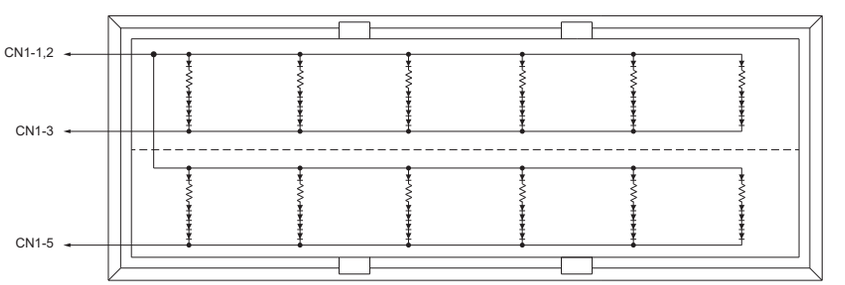
DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

	Voltage	2-Split-Face (Horizontal)
		LED（7・8・9） LED（14・16・18）
VL4	DC5V	 ※ Connect the attached cross wiring connector (VL-1058-1) between CN2 and CN6. 
	DC12V	
	DC24V	

INTERNAL CONNECTION ARRANGEMENTS

● 2-Split-Face

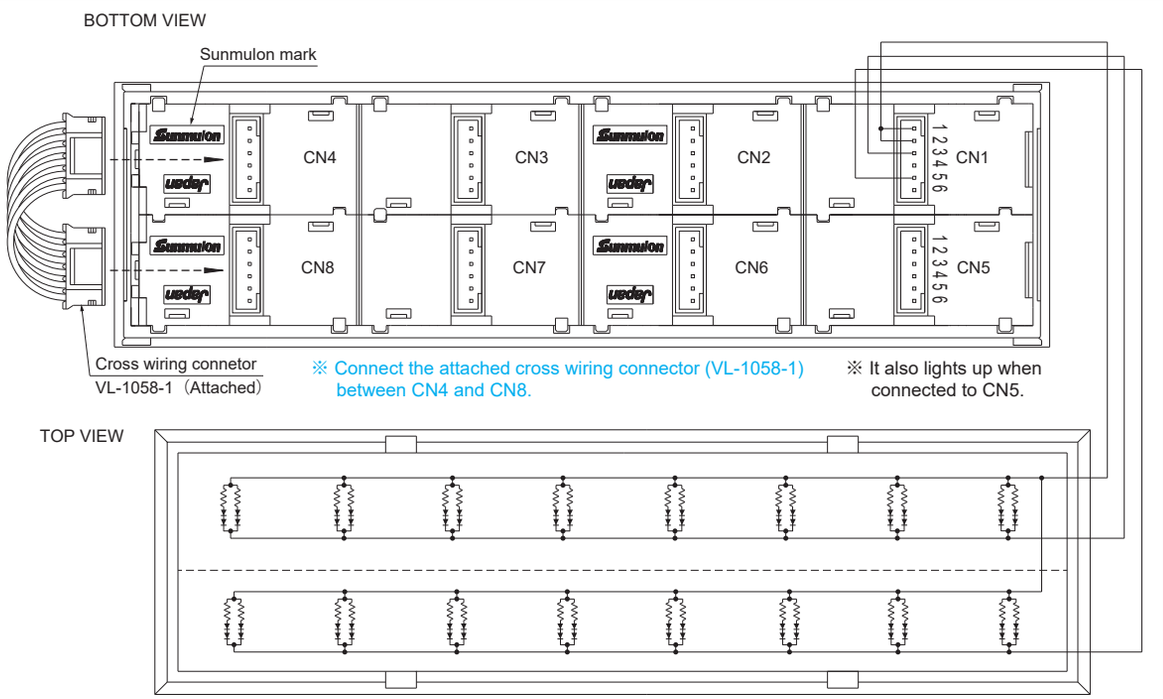
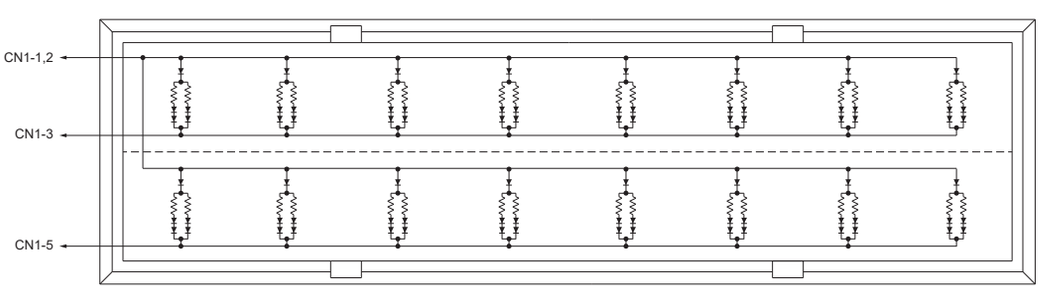
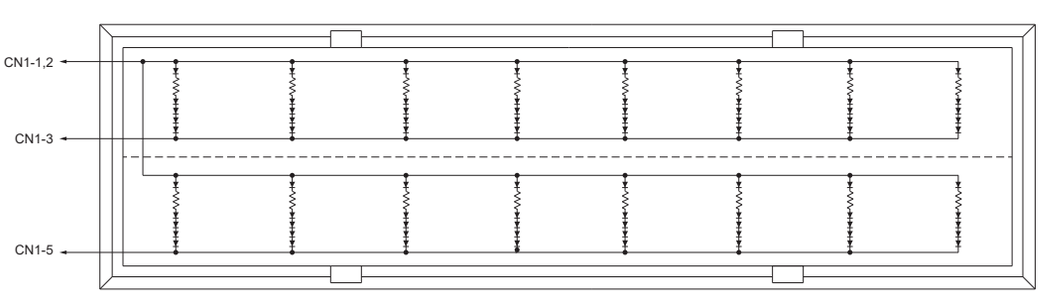
DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

	Voltage	2-Split-Face (Horizontal) LED（7・8・9） LED（14・16・18）
VL5	DC5V	
	DC12V	
	DC24V	

INTERNAL CONNECTION ARRANGEMENTS

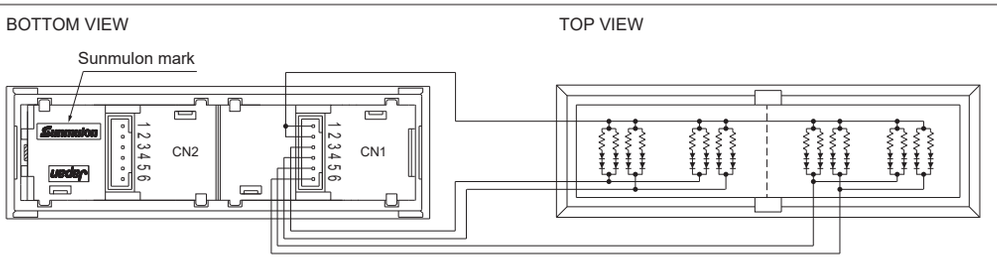
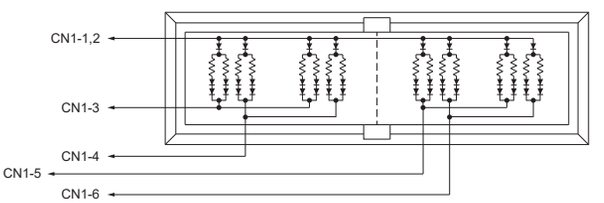
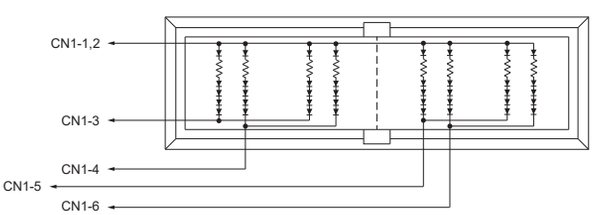
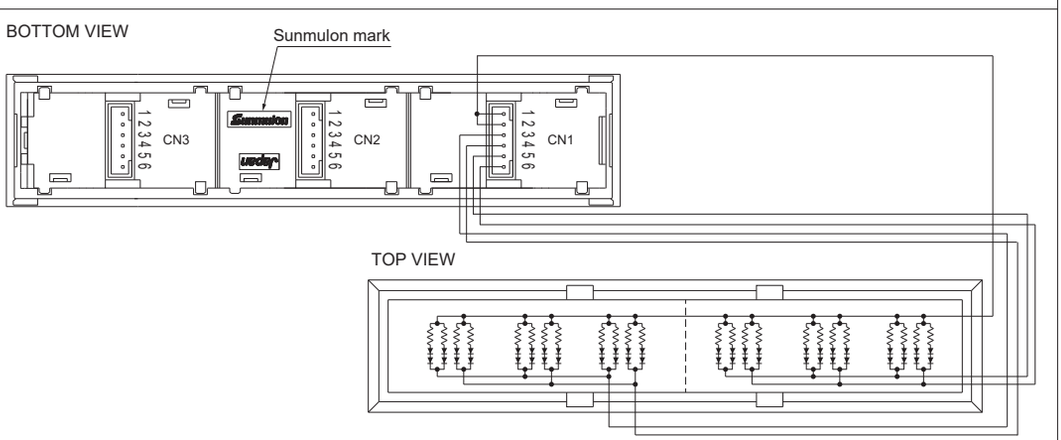
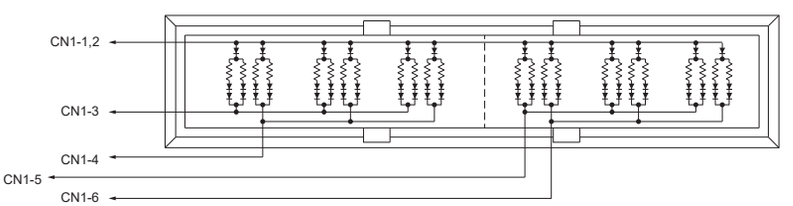
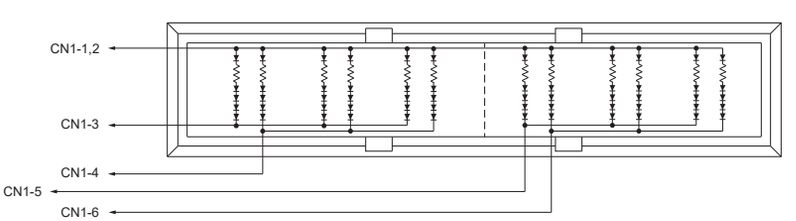
● 2-Split-Face

DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

	Voltage	2-Split-Face (Horizontal) LED（7・8・9） LED（14・16・18）
VL6	DC5V	
	DC12V	
	DC24V	

INTERNAL CONNECTION ARRANGEMENTS

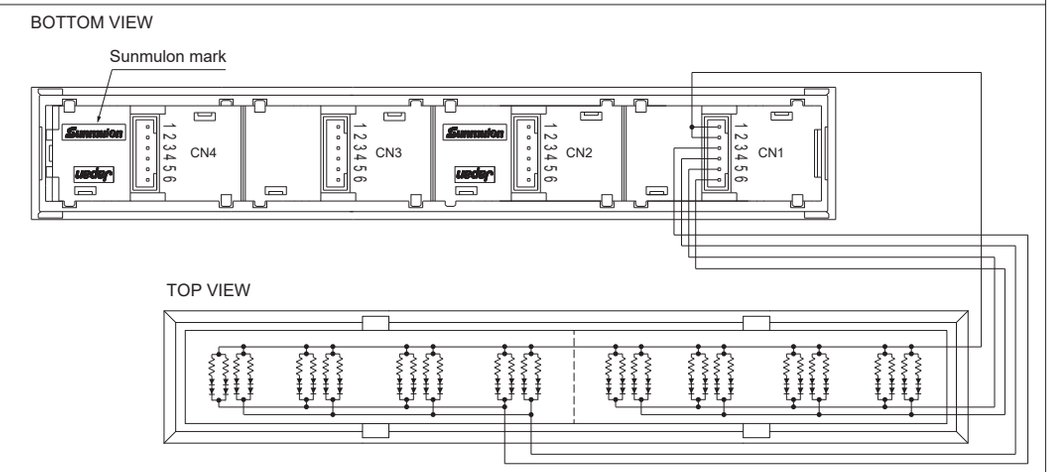
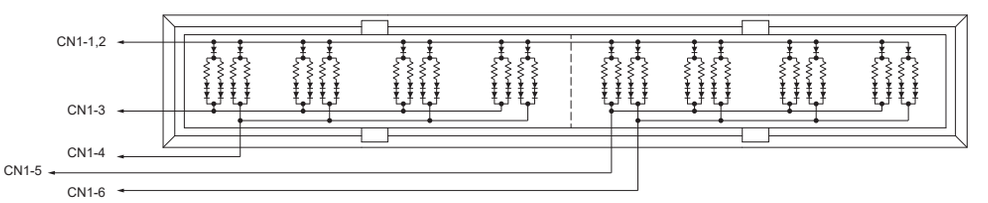
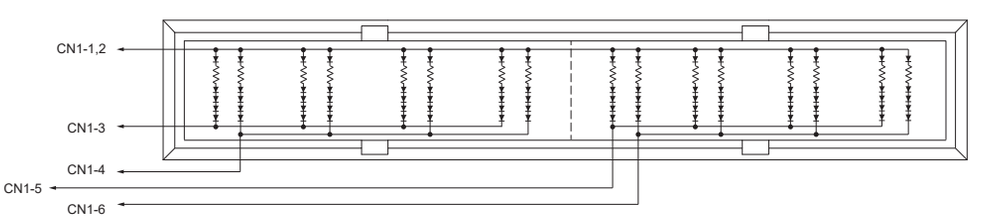
● 2-Split-Dual-Color　DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

	Voltage	2-Split-Dual-Color (Vertical) LED（7・8・9）　LED（14・16・18）
VL1	DC5V	
	DC12V	
	DC24V	
VL2	DC5V	
	DC12V	
	DC24V	

INTERNAL CONNECTION ARRANGEMENTS

● 2-Split-Dual-Color

DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

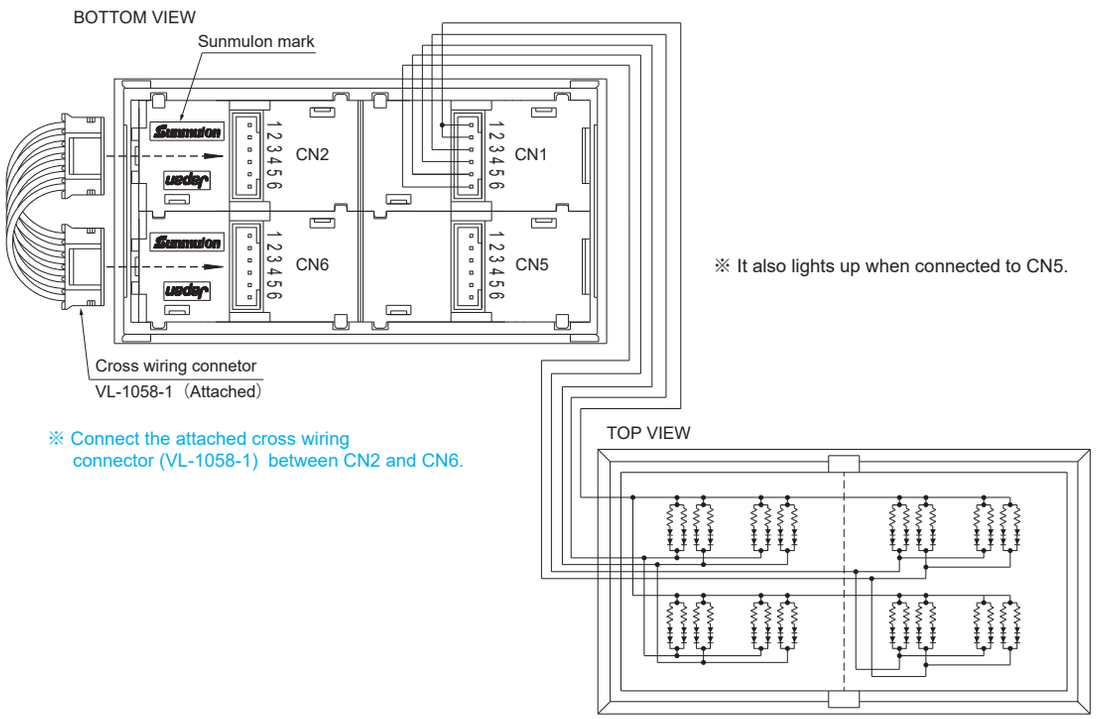
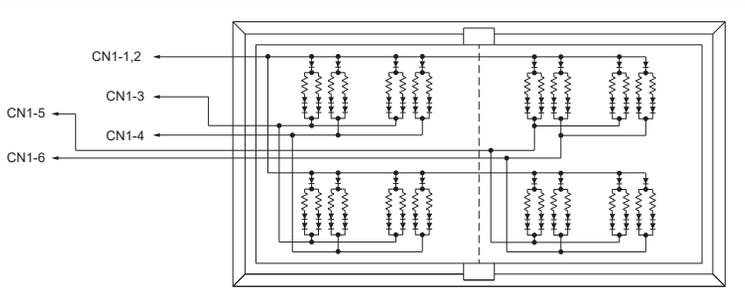
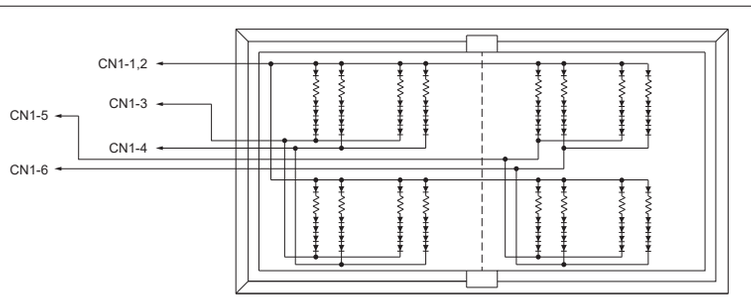
	Voltage	2-Split-Dual-Color (Vertical) LED（7・8・9） LED（14・16・18）
VL3	DC5V	
	DC12V	
	DC24V	

● VL1～VL3 Dual-Color combintion (Common for each voltage)

Terminals		LED Color
CN1	1, 2－3	Ordering code LED color 1
	1, 2－4	Ordering code LED color 2
	1, 2－5	Ordering code LED color 3
	1, 2－6	Ordering code LED color 4
	1, 2－3・4	Ordering code LED color 1 2 Simultaneous lighting color
	1, 2－5・6	Ordering code LED color 1 3 Simultaneous lighting color
	1, 2－3・4・5・6	Ordering code LED color 1 2 3 4 Simultaneous lighting color

INTERNAL CONNECTION ARRANGEMENTS

● 2-Split-Dual-Color　DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

	Voltage	2-Split-Dual-Color (Vertical)
		LED（7・8・9） LED（14・16・18）
VL4	DC5V	
	DC12V	
	DC24V	

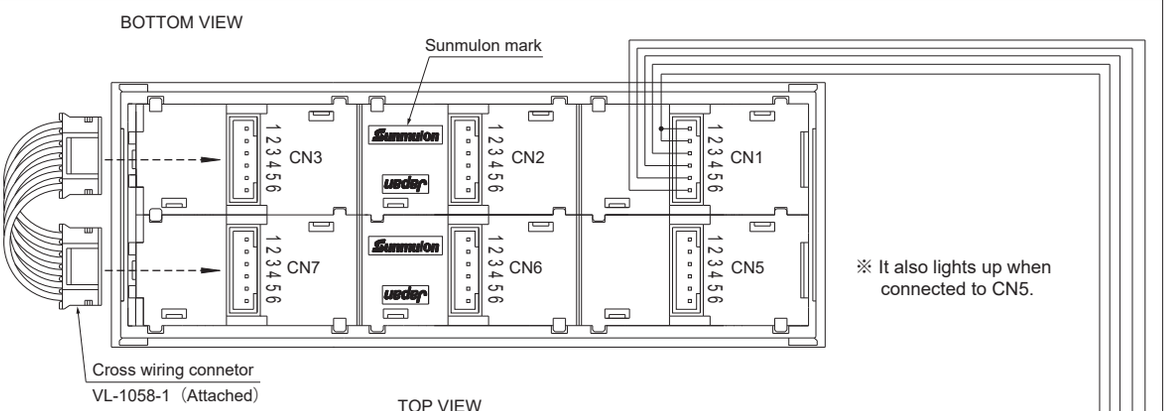
INTERNAL CONNECTION ARRANGEMENTS

● 2-Split-Dual-Color　DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

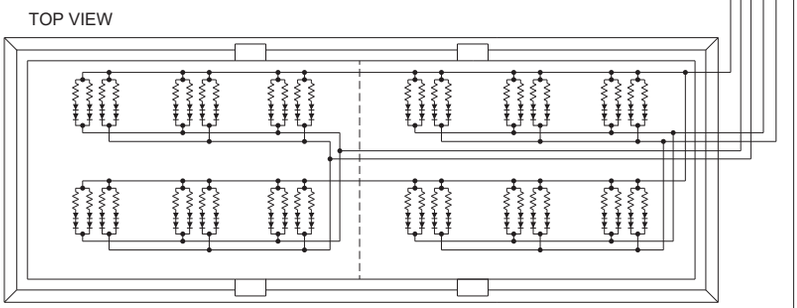
VL5

Voltage	2-Split-Dual-Color (Vertical)
	LED（7・8・9） LED（14・16・18）

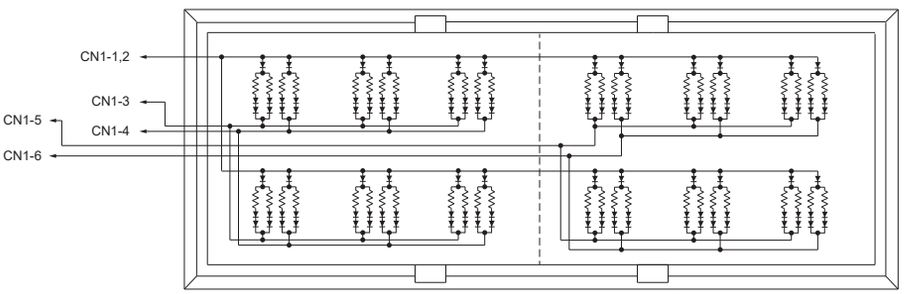
DC5V



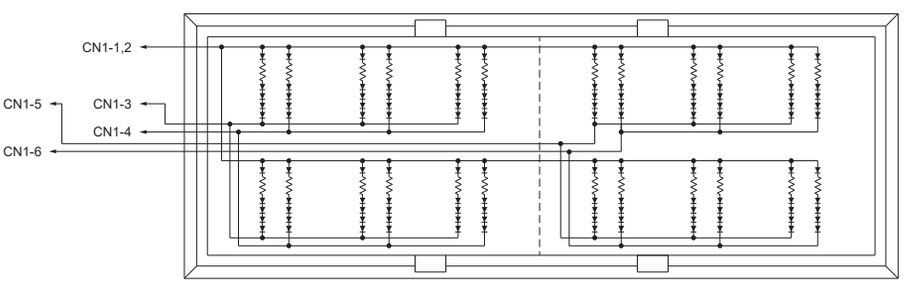
※ Connect the attached cross wiring connector (VL-1058-1) between CN3 and CN7.



DC12V



DC24V

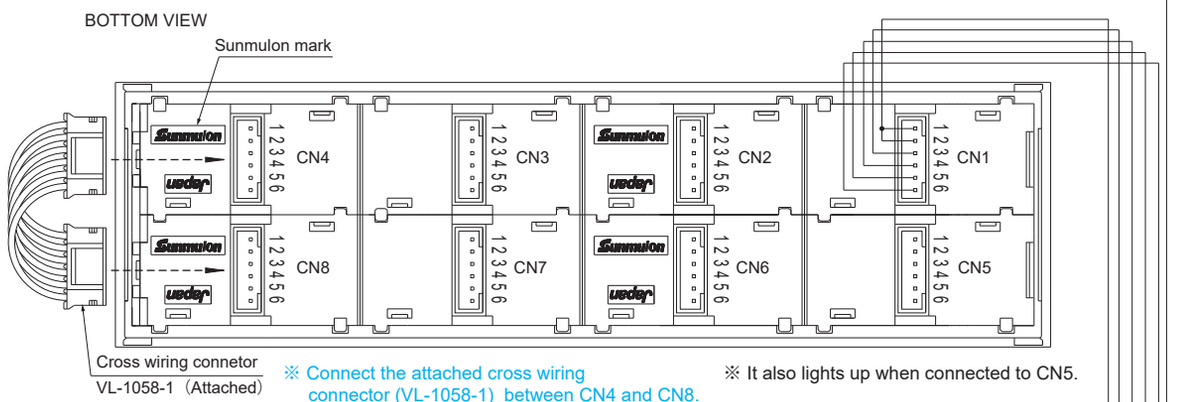


INTERNAL CONNECTION ARRANGEMENTS

● 2-Split-Dual-Color　DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

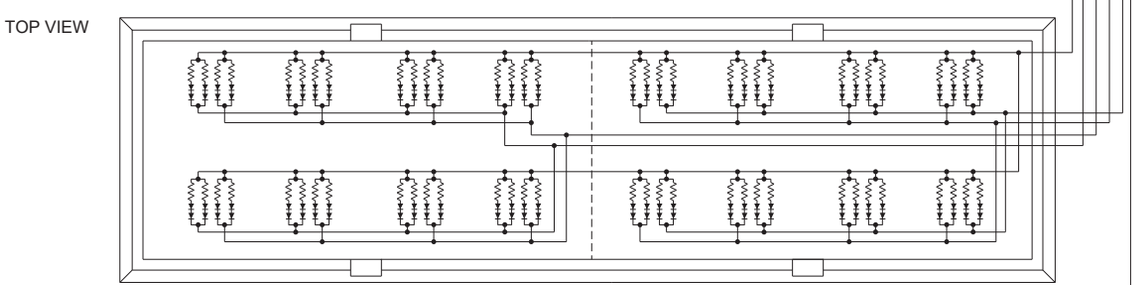
VL6

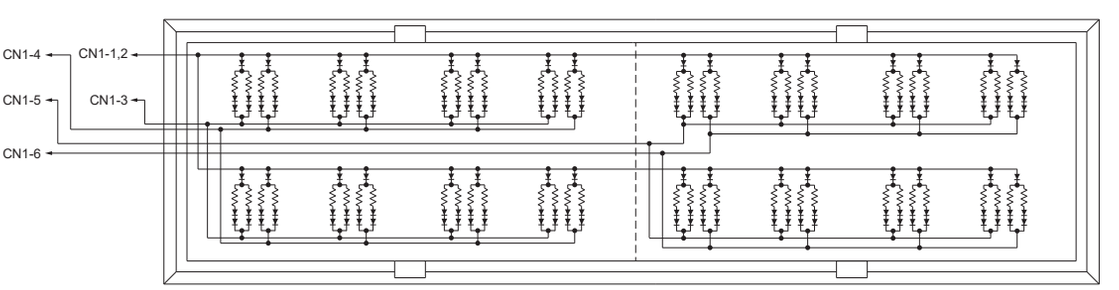
Voltage	2-Split-Dual-Color (Vertical)
	LED（7・8・9） LED（14・16・18）
DC5V	
DC12V	
DC24V	

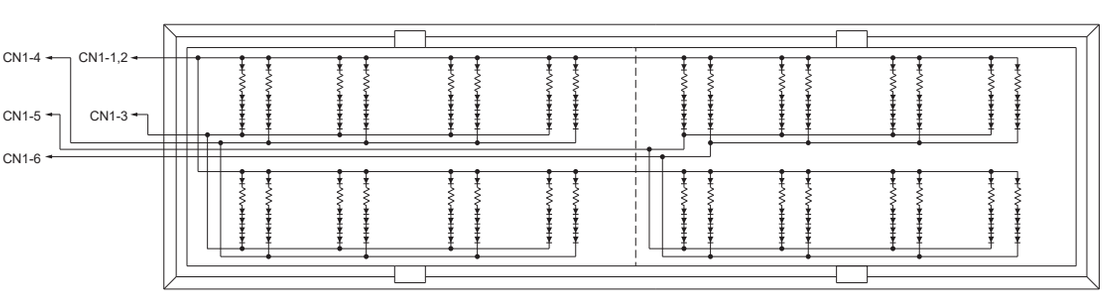


※ Connect the attached cross wiring connector (VL-1058-1) between CN4 and CN8.

※ It also lights up when connected to CN5.

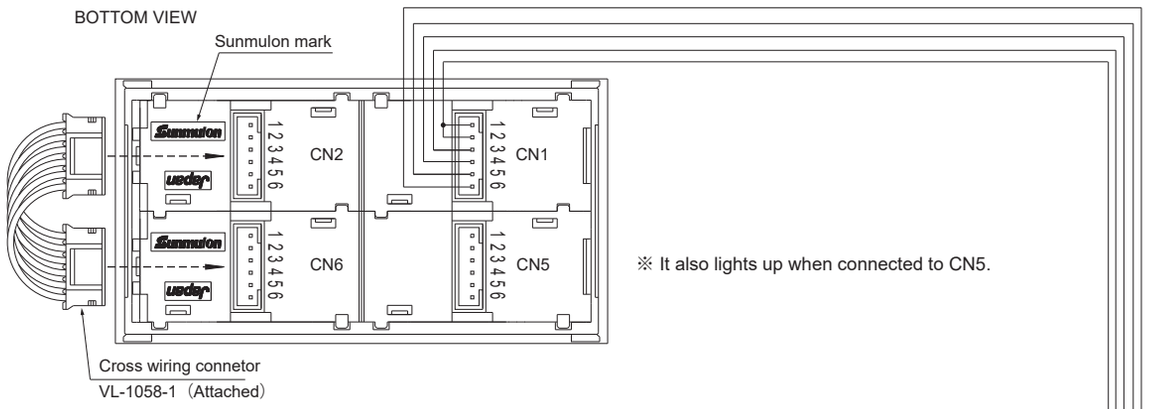
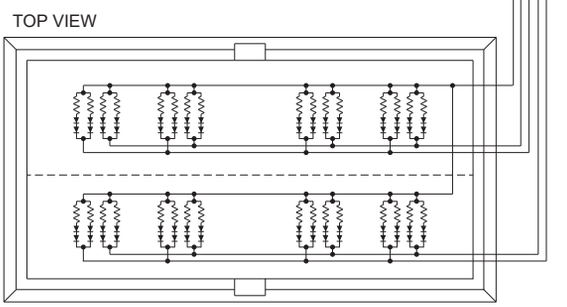
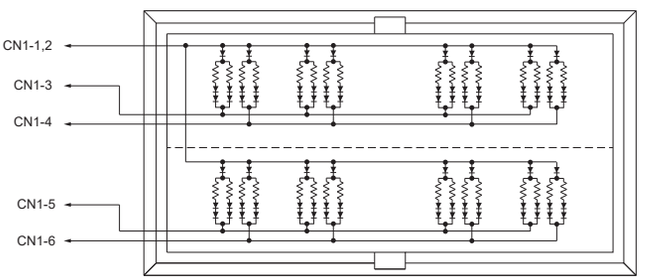
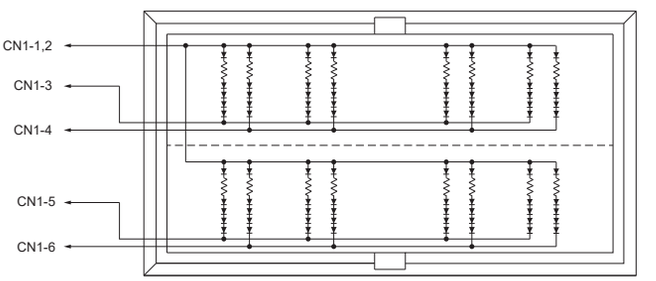






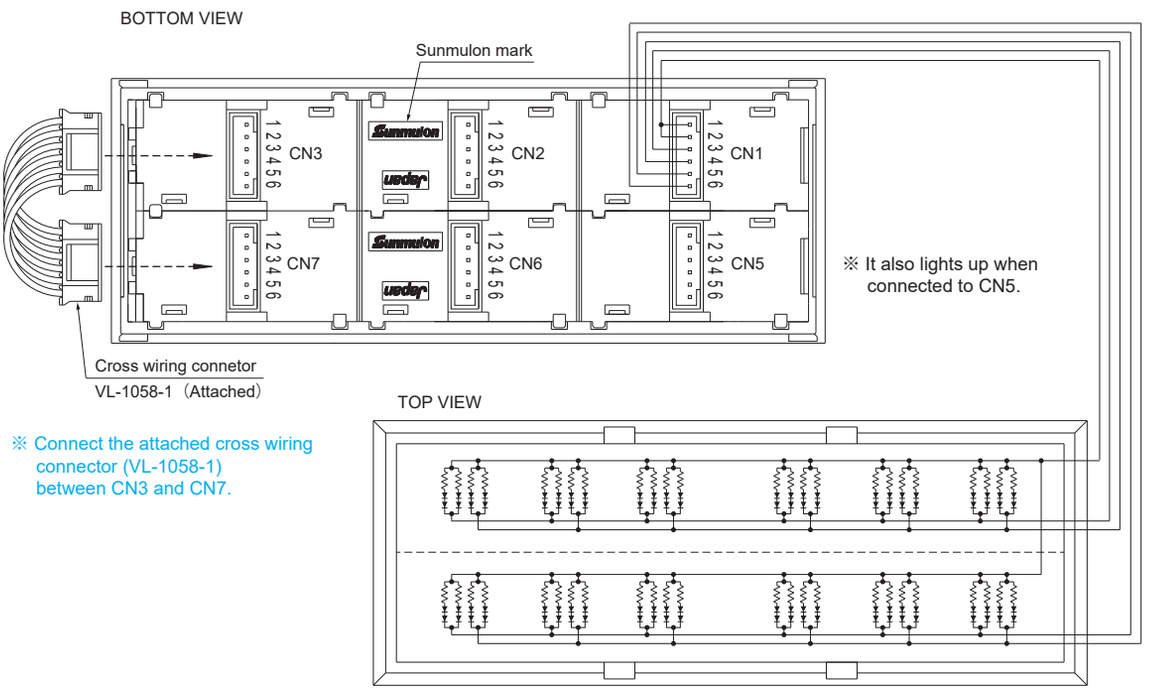
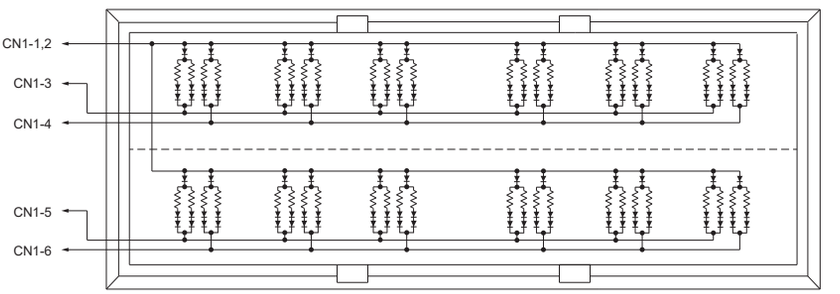
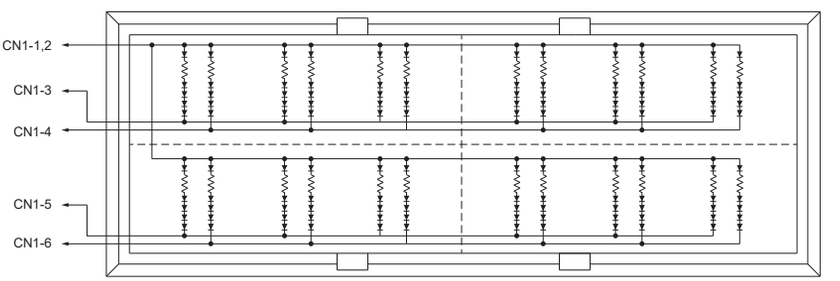
INTERNAL CONNECTION ARRANGEMENTS

● 2-Split-Dual-Color　DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

	Voltage	2-Split-Dual-Color (Horizontal)
		LED（7・8・9） LED（14・16・18）
VL4	DC5V	 ※ Connect the attached cross wiring connector (VL-1058-1) between CN2 and CN6. 
	DC12V	
	DC24V	

INTERNAL CONNECTION ARRANGEMENTS

● 2-Split-Dual-Color　DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

	Voltage	2-Split-Dual-Color (Horizontal)
		LED（7・8・9） LED（14・16・18）
VL5	DC5V	
	DC12V	
	DC24V	

INTERNAL CONNECTION ARRANGEMENTS

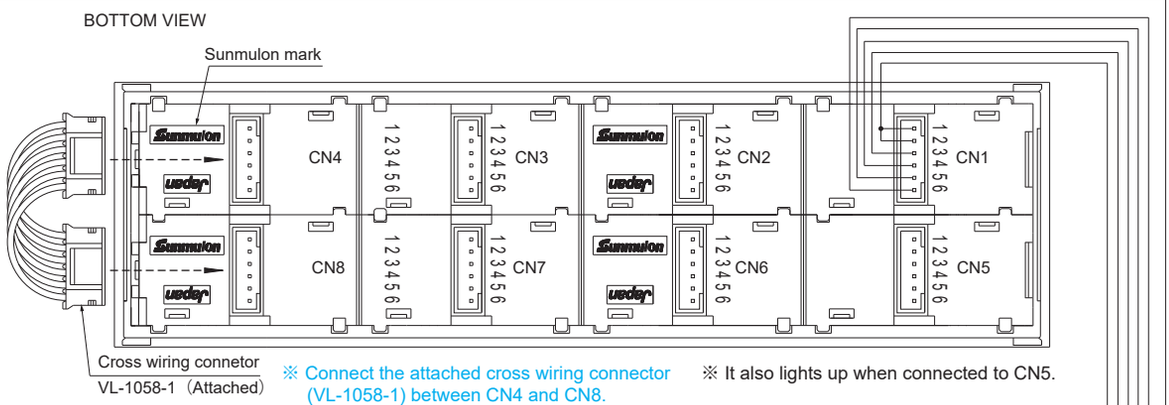
● 2-Split-Dual-Color

DC5V cannot be specified the color of LED Super-Blue (14), Super-White (16), Super-Green (18).

VL6

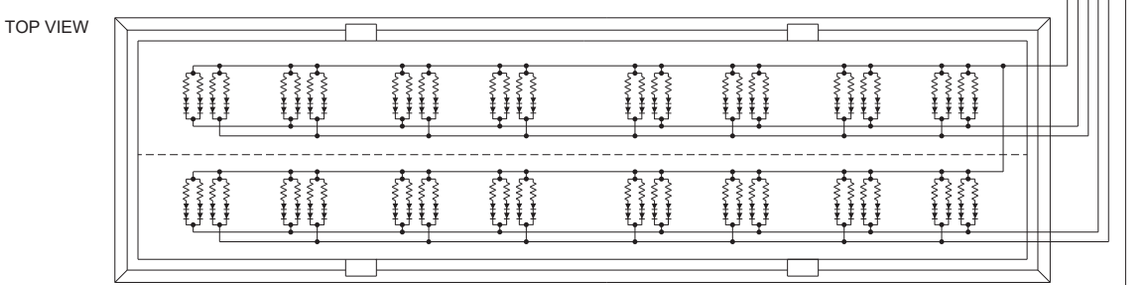
Voltage	2-Split-Dual-Color (Horizontal)
	LED（7・8・9） LED（14・16・18）

DC5V

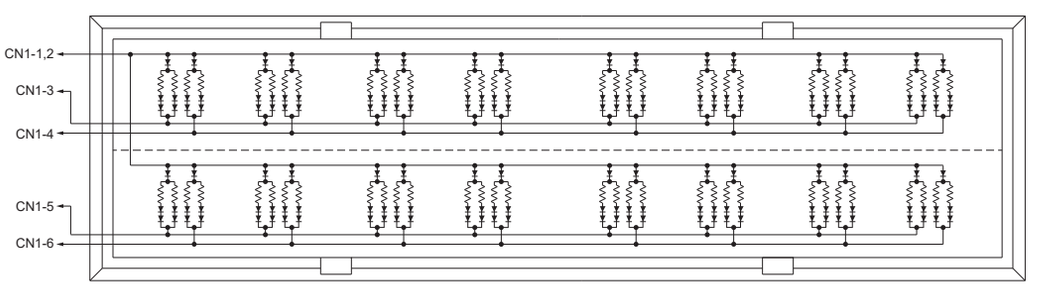


※ Connect the attached cross wiring connector (VL-1058-1) between CN4 and CN8.

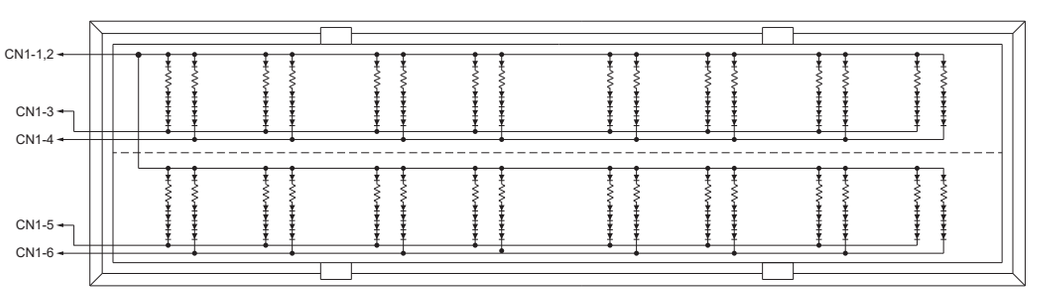
※ It also lights up when connected to CN5.



DC12V



DC24V



● VL4～VL6 Dual-Color combintion (Common for each voltage)

Terminals		LED Color
CN1, CN5	1, 2－3	Ordering code LED color 1
	1, 2－4	Ordering code LED color 2
	1, 2－5	Ordering code LED color 3
	1, 2－6	Ordering code LED color 4
	1, 2－3・4	Ordering code LED color 1 2 Simultaneous lighting color
	1, 2－5・6	Ordering code LED color 1 3 Simultaneous lighting color
	1, 2－3・4・5・6	Ordering code LED color 1 2 3 4 Simultaneous lighting color

LED SPECIFICATIONS【Full-Face・Dual-Color】

● Full-Face・Dual-Color

t＝25℃

	Voltage	Rated Current（mA）					
		Red	Yellow	Green	Super-Blue	Super-White	Super-Green
VL1	DC5V ±5%	22	45	52			
	DC12V ±5%	23	46	52	35	17	17
	DC24V ±5%	12	23	27	18	9	9

	Voltage	Rated Current（mA）					
		Red	Yellow	Green	Super-Blue	Super-White	Super-Green
VL2	DC5V ±5%	33	68	78			
	DC12V ±5%	35	69	78	53	26	26
	DC24V ±5%	18	35	41	27	14	14

	Voltage	Rated Current（mA）					
		Red	Yellow	Green	Super-Blue	Super-White	Super-Green
VL3	DC5V ±5%	44	90	104			
	DC12V ±5%	46	92	104	70	34	34
	DC24V ±5%	24	46	54	36	18	18

	Voltage	Rated Current（mA）					
		Red	Yellow	Green	Super-Blue	Super-White	Super-Green
VL4	DC5V ±5%	44	90	104			
	DC12V ±5%	46	92	104	70	34	34
	DC24V ±5%	24	46	54	36	18	18

	Voltage	Rated Current（mA）					
		Red	Yellow	Green	Super-Blue	Super-White	Super-Green
VL5	DC5V ±5%	66	135	156			
	DC12V ±5%	69	138	156	105	51	51
	DC24V ±5%	36	69	81	54	27	27

	Voltage	Rated Current（mA）					
		Red	Yellow	Green	Super-Blue	Super-White	Super-Green
VL6	DC5V ±5%	88	180	208			
	DC12V ±5%	92	184	208	140	68	68
	DC24V ±5%	48	92	108	72	36	36

LED SPECIFICATIONS【2-Split-Face・2-Split-Dual-Color】

● 2-Split-Face・2-Split-Dual-Color

t＝25℃

	Voltage	Rated Current（mA）（per 1-Screen）					
		Red	Yellow	Green	Super-Blue	Super-White	Super-Green
VL1	DC5V ±5%	12	24	26			
	DC12V ±5%	12	24	26	18	10	10
	DC24V ±5%	6	12	14	10	6	6

	Voltage	Rated Current（mA）（per 1-Screen）					
		Red	Yellow	Green	Super-Blue	Super-White	Super-Green
VL2	DC5V ±5%	18	36	39			
	DC12V ±5%	18	36	39	27	15	15
	DC24V ±5%	9	18	21	15	9	9

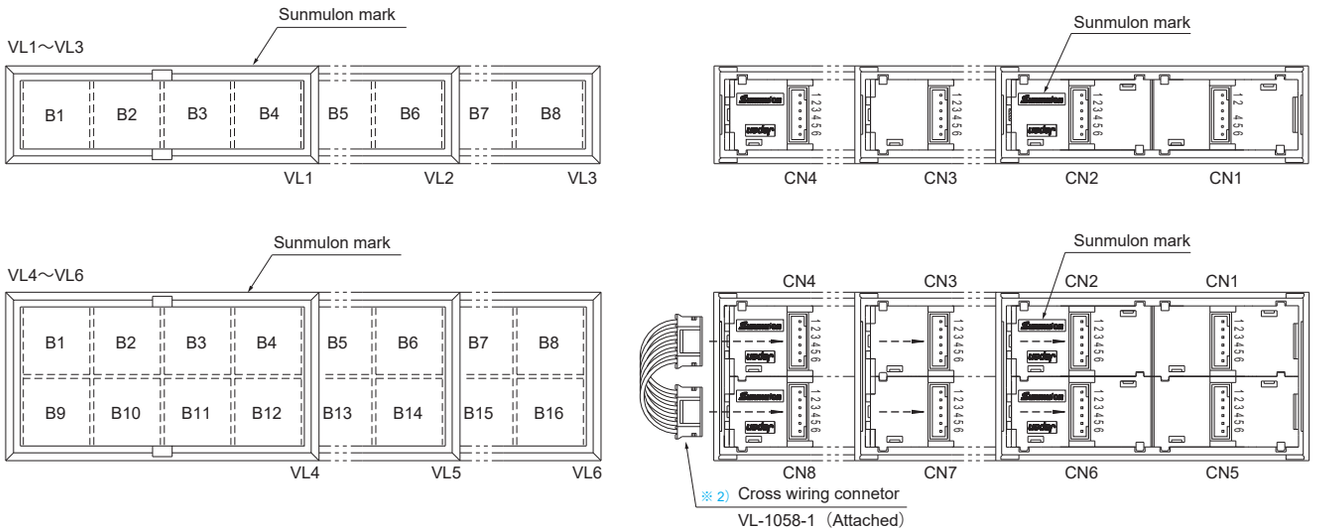
	Voltage	Rated Current（mA）（per 1-Screen）					
		Red	Yellow	Green	Super-Blue	Super-White	Super-Green
VL3	DC5V ±5%	44	90	104			
	DC12V ±5%	46	92	104	70	34	34
	DC24V ±5%	24	46	54	36	18	18

	Voltage	Rated Current（mA）（per 1-Screen）					
		Red	Yellow	Green	Super-Blue	Super-White	Super-Green
VL4	DC5V ±5%	24	48	52			
	DC12V ±5%	24	48	52	36	20	20
	DC24V ±5%	12	24	28	20	12	12

	Voltage	Rated Current（mA）（per 1-Screen）					
		Red	Yellow	Green	Super-Blue	Super-White	Super-Green
VL5	DC5V ±5%	36	72	78			
	DC12V ±5%	36	72	78	54	30	30
	DC24V ±5%	18	36	42	30	18	18

	Voltage	Rated Current（mA）（per 1-Screen）					
		Red	Yellow	Green	Super-Blue	Super-White	Super-Green
VL6	DC5V ±5%	48	96	104			
	DC12V ±5%	48	96	104	72	40	40
	DC24V ±5%	24	48	56	40	24	24

● TERMINALS LAYOUT (BOTTOM VIEW)



● Full-Face・2-Split-Face (Monocolor・Dual-Color)

※1) Pin No.	VL1～VL6 Full-Face		VL1～VL6 2-Split-Face (Vertial)		VL4～VL6 2-Split-Face (Horizontal)	
	Monocolor	Dual-Color (LED 1,2)	Monocolor	Dual-Color (LED 1,2,3,4)	Monocolor	Dual-Color (LED 1,2,3,4)
1	Anode (+)	Anode (+)	Anode (+)	Anode (+)	Anode (+)	Anode (+)
2						
3	Cathode (−)	1 Cathode (−)	Cathode (−) L	1 Cathode (−) L	Cathode (−) Up	1 Cathode (−) Up
4	—	2 Cathode (−)	—	2 Cathode (−) L	—	2 Cathode (−) Up
5	—	—	Cathode (−) R	3 Cathode (−) R	Cathode (−) Down	3 Cathode (−) Down
6	—	—	—	4 Cathode (−) R	—	4 Cathode (−) Down
Screen positions (TOP VIEW)	Sunmulon mark VL1～VL3 / Sunmulon mark VL4～VL6		Sunmulon mark L R VL1～VL3 / Sunmulon mark L R VL4～VL6		Sunmulon mark Up Down VL4～VL6	

※2) Attched (VL4～6) Cross wiring connector (VL-1058-1)	
Connection point between connectors	
VL4	CN2-CN6
VL5	CN3-CN7
VL6	CN4-CN8

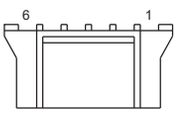
※1) Connectors to be wired to VL1～VL3 connect to CN1, VL4～VL6 are connected to eigher CN1 or CN5 to light up.

※2) For VL-4 connect the attached cross wiring connector (VL-1058-1) between CN2 and CN6, for VL-5 connect between CN3 and CN7, for VL-6 connect between CN4 and CN8.

※ The table above shows the Anode common arrangement. In case of Cathode common, the polarity is opposite for all anodes and cathodes.

※ (LED 1, 2, 3, 4) in the table are ordering code symbols for LED colors, respectively, and the specified color is emitted.

● Connector



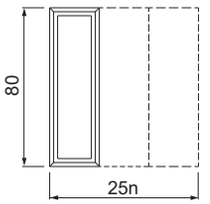
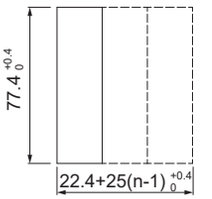
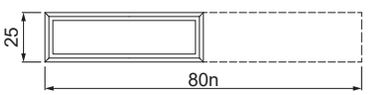
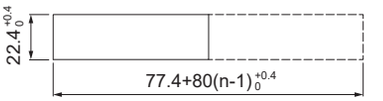
● Applicable wire

Wire size	Coating outer diameter
AWG # 24-30	0.9－1.5 mm

MOUNTING DESIGN／PANEL CUTOUT

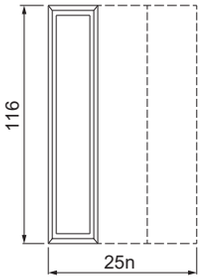
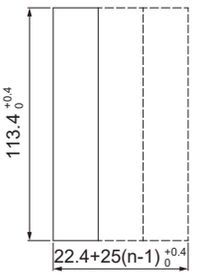
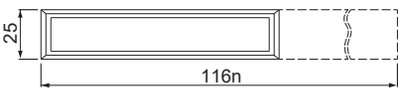
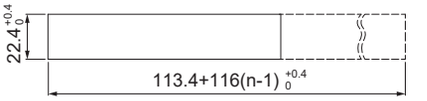
● VL1

Recommended panel thickness : 1 to 4 mm

Mounting design	Panel cutout
Vertical 	
Horizontal 	

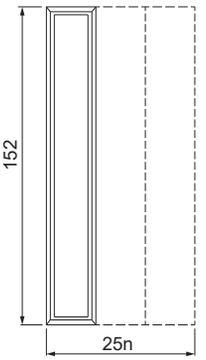
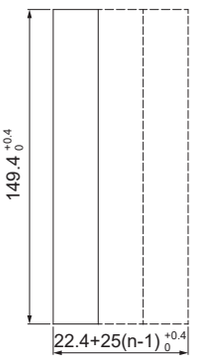
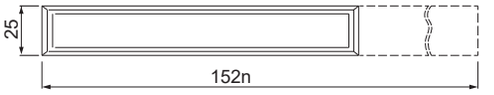
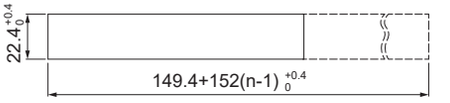
n : Number of Units

● VL2

Mounting design	Panel cutout
Vertical 	
Horizontal 	

n : Number of Units

● VL3

Mounting design	Panel cutout
Vertical 	
Horizontal 	

n : Number of Units

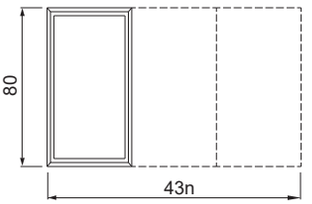
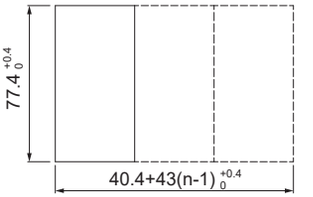
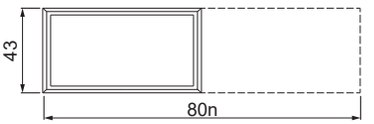
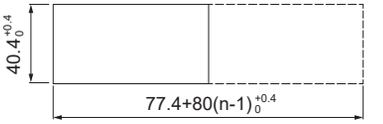
※ If the panel is to be finished (e.g. coated), make sure that the panel meets the specified dimensions after the coating.
※ After the panel-cutting process, make sure to remove burrs on the surface.

Tolerance : ± 0.4 mm

MOUNTING DESIGN／PANEL CUTOUT

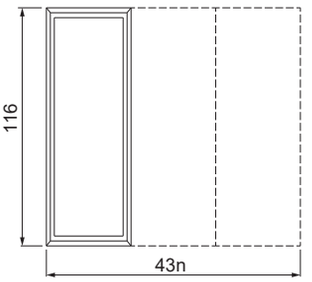
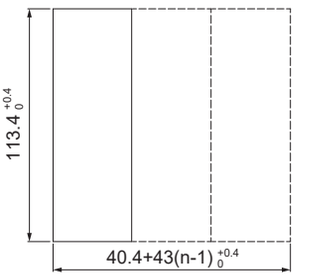
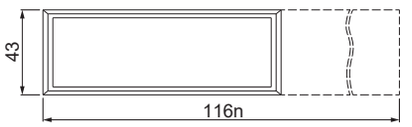
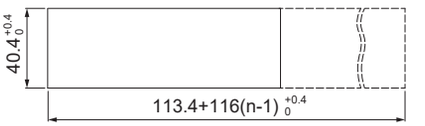
● VL4

Recommended panel thickness : 1 to 4 mm

Mounting design	Panel cutout
Vertical 	
Horizontal 	

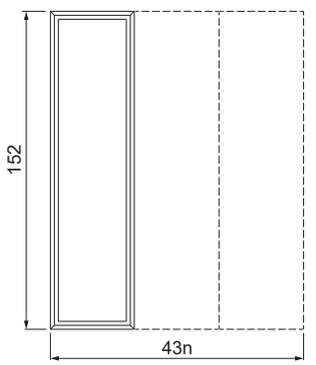
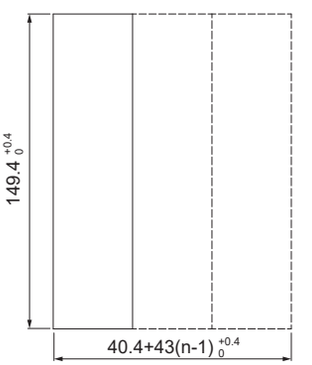
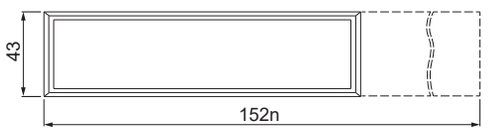
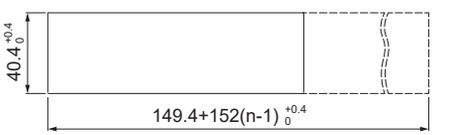
n : Number of Units

● VL5

Mounting design	Panel cutout
Vertical 	
Horizontal 	

n : Number of Units

● VL6

Mounting design	Panel cutout
Vertical 	
Horizontal 	

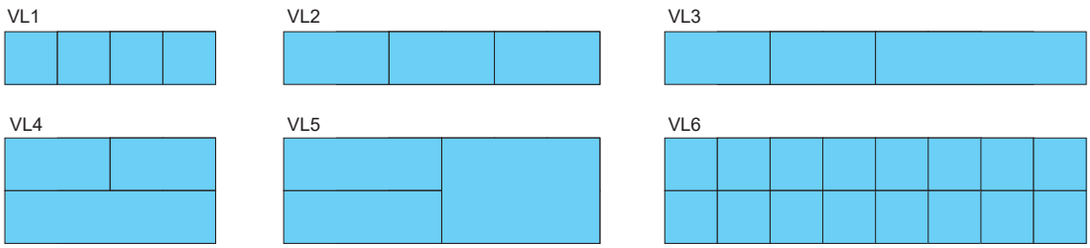
n : Number of Units

※ If the panel is to be finished (e.g. coated), make sure that the panel meets the specified dimensions after the coating.
※ After the panel-cutting process, make sure to remove burrs on the surface.

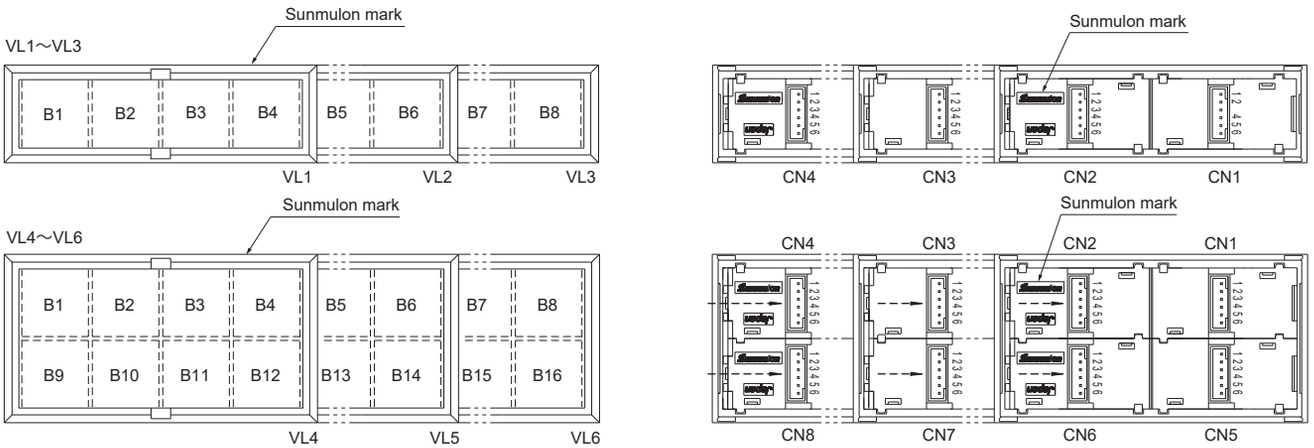
Tolerance : ± 0.4 mm

Division combinations othre than 2-Split-Face

Division combinations other than 2-Split-Face as shown below are also available. (Up to 16 divisions in VL6)
However, it cannot be divided as covex and concave. Please contact us for details.



● TERMINALS LAYOUT (BOTTOM VIEW)



● Full-Face・2-Split-Face (Monocolor・Dual-Color)

Pin No.			VL1		VL2		VL3	
			Monocolor	Dual-Color (LED 1,2)	Monocolor	Dual-Color (LED 1,2)	Monocolor	Dual-Color (LED 1,2)
CN1	1	(Common)	Anode (+)		Anode (+)		Anode (+)	
	2							
	3	B1	Cathode (−)	1 Cathode (−)	Cathode (−)	1 Cathode (−)	Cathode (−)	1 Cathode (−)
	4		—	2 Cathode (−)	—	2 Cathode (−)	—	2 Cathode (−)
	5	B2	Cathode (−)	1 Cathode (−)	Cathode (−)	1 Cathode (−)	Cathode (−)	1 Cathode (−)
	6		—	2 Cathode (−)	—	2 Cathode (−)	—	2 Cathode (−)
CN2	1	(Common)	Anode (+)		Anode (+)		Anode (+)	
	2							
	3	B3	Cathode (−)	1 Cathode (−)	Cathode (−)	1 Cathode (−)	Cathode (−)	1 Cathode (−)
	4		—	2 Cathode (−)	—	2 Cathode (−)	—	2 Cathode (−)
	5	B4	Cathode (−)	1 Cathode (−)	Cathode (−)	1 Cathode (−)	Cathode (−)	1 Cathode (−)
	6		—	2 Cathode (−)	—	2 Cathode (−)	—	2 Cathode (−)
CN3	1	(Common)			Anode (+)		Anode (+)	
	2							
	3	B5	———		Cathode (−)	1 Cathode (−)	Cathode (−)	1 Cathode (−)
	4				—	2 Cathode (−)	—	2 Cathode (−)
	5	B6			Cathode (−)	1 Cathode (−)	Cathode (−)	1 Cathode (−)
	6				—	2 Cathode (−)	—	2 Cathode (−)
CN4	1	(Common)					Anode (+)	
	2							
	3	B7	———		———		Cathode (−)	1 Cathode (−)
	4						—	2 Cathode (−)
	5	B8					Cathode (−)	1 Cathode (−)
	6						—	2 Cathode (−)

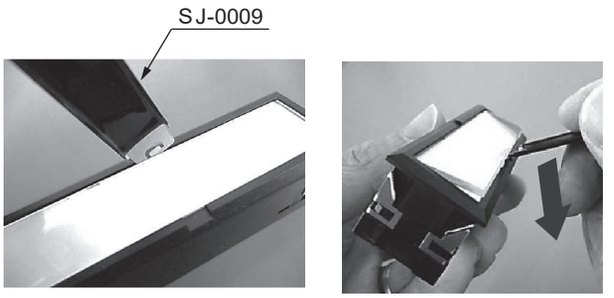
Pin No.			VL4		VL5		VL6	
			Monocolor	Dual-Color (LED 1,2)	Monocolor	Dual-Color (LED 1,2)	Monocolor	Dual-Color (LED 1,2)
CN1 (B1, B2) CN5 (B9, B10)	1	(Common)	Anode (+)		Anode (+)		Anode (+)	
	2							
	3	B1 / B9	Cathode (−)	1 Cathode (−)	Cathode (−)	1 Cathode (−)	Cathode (−)	1 Cathode (−)
	4		—	2 Cathode (−)	—	2 Cathode (−)	—	2 Cathode (−)
	5	B2 / B10	Cathode (−)	1 Cathode (−)	Cathode (−)	1 Cathode (−)	Cathode (−)	1 Cathode (−)
	6		—	2 Cathode (−)	—	2 Cathode (−)	—	2 Cathode (−)
CN2 (B3, B4) CN6 (B11, B12)	1	(Common)	Anode (+)		Anode (+)		Anode (+)	
	2							
	3	B3 / B11	Cathode (−)	1 Cathode (−)	Cathode (−)	1 Cathode (−)	Cathode (−)	1 Cathode (−)
	4		—	2 Cathode (−)	—	2 Cathode (−)	—	2 Cathode (−)
	5	B4 / B12	Cathode (−)	1 Cathode (−)	Cathode (−)	1 Cathode (−)	Cathode (−)	1 Cathode (−)
	6		—	2 Cathode (−)	—	2 Cathode (−)	—	2 Cathode (−)
CN3 (B5, B6) CN7 (B13, B14)	1	(Common)			Anode (+)		Anode (+)	
	2							
	3	B5 / B13	———		Cathode (−)	1 Cathode (−)	Cathode (−)	1 Cathode (−)
	4				—	2 Cathode (−)	—	2 Cathode (−)
	5	B6 / B14			Cathode (−)	1 Cathode (−)	Cathode (−)	1 Cathode (−)
	6				—	2 Cathode (−)	—	2 Cathode (−)
CN4 (B7, B8) CN8 (B15, B16)	1	(Common)					Anode (+)	
	2							
	3	B7 / B15	———		———		Cathode (−)	1 Cathode (−)
	4						—	2 Cathode (−)
	5	B8 / B16					Cathode (−)	1 Cathode (−)
	6						—	2 Cathode (−)

※ Connect the blocks with illuminated positions that match the size of the division so that they light up simultaneously.
※ B1 to B16 are the smallest division units. However, it cannot be divided as convex and concave.

ASSEMBLY & DISASSEMBLY

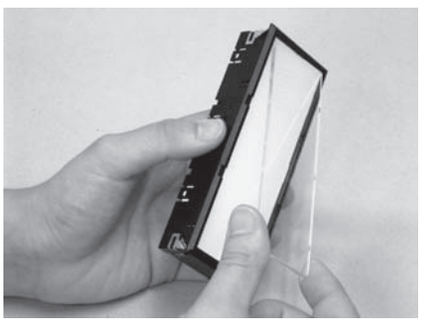
1. Removing cover

Insert the removing tool (SJ-0009) into the gap near the recess between cover and housing, and tilt it outward while pressing the removing tool against the cover.



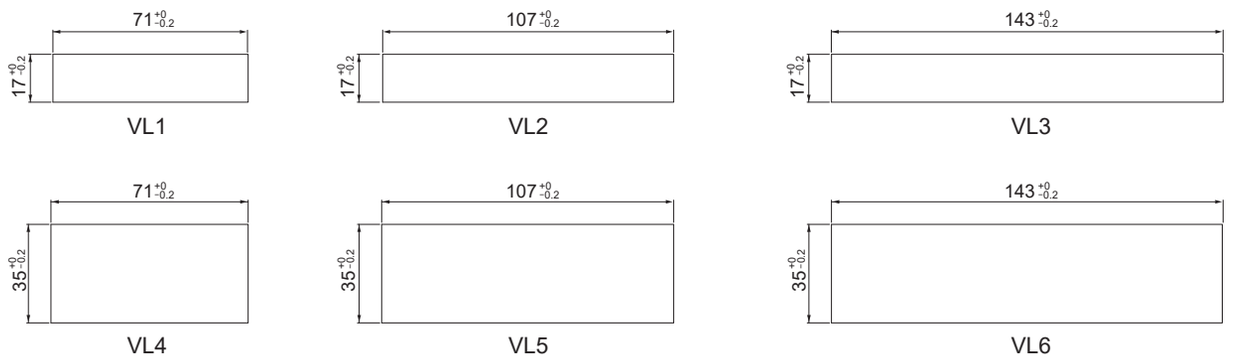
2. Fitting cover and filter

Insert the filterm glossy side up, into the stepped portions of the divider on the four sides.
Push the cover into the housing with the tabs on both sides facing the filter.



PRECAUTIONS FOR CORRECT USE

If preparing the character film separately, use a heat-resistant film with a thickness of 0.1 mm.
For dimensions, please refer to the figure below.



※ For handling instructions and precautions other than the above, please refer to “Safety Precautions for All Indicators”.

Tolerance : ± 0.4 mm

As of February 2024

Safety Precautions for All Indicators

1. Notes on contents of Catalogs

(1) Rated values, performance values, and specification values of Sumulon products listed in this catalog are values acquired under respective conditions in independent testing, and do not guarantee values gained in combined conditions.

(2) The ambient operating temperature(humidity) is guaranteed by evaluation based on characteristics, and does not guarantee continuous use for a long period of time near the upper or lower limit of the ambient operating temperature(humidity) or permanent use at that temperature(humidity).

(3) Reference data and reference values listed in catalogs are for reference purposes only, and do not guarantee that the product will always operate appropriately in that range.

(4) The specifications / appearance and accessories of Sunmulon products listed in catalogs are subject to change or termination of sales without notice, for improvemnet or other reasons.

(5) The content of catalogs is subject to change without notice.

2. Note on applications

(1) If using Sunmulon products in combination with other products, confirm the following suitability by yourself. Sunmulon shall provide no guarantees regarding the combination suitability.
(a) Regulations, satndards, or laws to which your machinery, equipment, ect. must conform
(b) Functionality and safety of your machinery and equipment

(2) Wiring and installation that ensures the Sunmulon product used in your system, machine, device, or the like can perform and function according to its specifications.

(3) When using Sunmulon products, be cautious when implementing the following.
(a) Use of Sunmulon products with sufficient allowance for rating and performance.
(b) Safety design, including redundant design and malfunction prevention design that prevents other danger and damage even in the event that Sumulon product fails.

(4) Sunmulon products are designed and manufactured as general-purpose products for general industrial products. They are not intended for use in the following applications, and in the event that you use Sunmulon product for these applications, unless otherwise agreed upon between you and Sunmulon, Sunmulon shall provide no guarantees whatsoever regarding Sunmulon products.
(a) Safety devices intended for human body protection
(b) Direct control of transport equipmnt (railroads / airplanes / ships / vehicles / vehicle instruments, etc.)
(c) Space equipment, submarine equipment
(d) Nuclear power control equipment, radiation related equipment
(e) Combustion equipment, electric heat equipment
(f) Disaster prevention and security equipment
(g) Elevating equipment
(h) Amusement facilities
(i) Facilities subject to government or industry regulations
(j) Use in applications that require a high degree of safety, any other equipment, instruments, or the like that could endanger life or human health

3. Warranty

(1) The warranty period for Sunmulon products shall be 1 year after purchase or delivery to the specified location.

(2) Warranty scope should a failure occur in Sunmulon product during the above warranty period for reasons attributable to Sunmulon, then Sunmulon shall provide that product, free of charge, the same quantity. Further, in no event shall liability of Sunmulon exceed the individual price of the product on which liability is asserted.

(3) Failures cause by the following reasons shall be deemed outside the scope of this warranty.
(a) The product was handled or used deviating from conditions / environment listed in the catalogs
(b) The failure was caused by reasons other than Sunmulon product
(c) Modification or repair was performed by a party other than Sunmulon
(d) Replacement of maintenance parts, installation of accessories, or the like was not performed properly in accordance with the user's manual and catalogs
(e) The failure could not have been predicted with the scientific and technical standards at the time when the product was shipped from Sunmulon
(f) The failure was due to other causes not attributable to Sunmulon (including cases of force majeure such as natural disasters and other disasters)

(4) The warranty listed in this Safety Precautions is the full and complete warranty for Sunmulon products, and Sunmulon shall bear no liability whatsoever regarding special damages, indirect damages, incidental damages, or passive damages that occurred due to Sunmulon product.

4. Handling precautions for indicator

(1) Wire the terminals with correct polarity. Connecting connectors backwards may cause a power short, resulting in burnout.

(2) Turn off the power to the product before starting installation, removal, wiring, maintenance, or inspection. Failure to turn power off may cause electrical shock or fire.

(3) Be careful of electrostatic breakdown when handling.

(4) Do not drop or otherwise apply strong force to the indicator.

(5) Do not place heavy objects on the indicator.

(6) Do not operate or use the housing by itself. Use the indicator with assembled the cover.

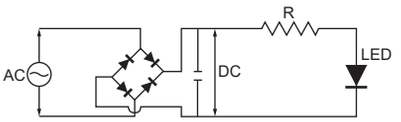
(7) When removing the cover and filter, using a sharp object (screwdrivers, tweezers, etc.), hard object (metal, etc.), or with a large or sudden force, may cause deform or damage the indicator.

(8) Do not use the indicator under loads that exceed the rated capacity or other ratings. Doing so may result in burnout accidents.

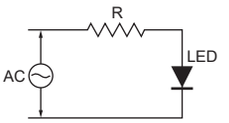
(9) Assemble correctly according to the handing instructions. Do not assemble or disassemble the product other than as described in the catalog, as this may cause defects or accidents.

(10) Illumination
(a) Do not apply a voltage between the LED terminal that is greater than the rated voltage. Doing so may damage the LED, cause lighting failure.
(b) LEDs cannot be lit directly by AC circuit should be provided rectifier smoothing circuit for products other than AC input type.

Correct



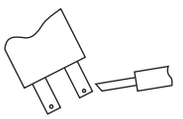
Incorrect



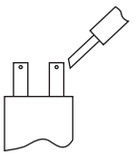
(c) When wiring, pay attention to the polarity of the terminals.
(d) Simultaneous lighting may not be possible with Dual-Color, 3-Color illumination or Split-Face illumination, check the catalog.
(e) Apply voltage directly to LEDs of Non-built-in resistor type will damage the LEDs, so connect an appropriate external resistor.

(11) Wiring
(a) When tightening terminals or connecting connectors, do not apply more force than necessary from the back side.
Support the indicator with one hand as it may slip out of the front of the panel.
(b) Use the applicable connectors listed in the catalog for each model.
(c) Do not apply a soldering iron to the indicator housing. Doing so may deform the terminals and cause defects.
(d) Hand solder with the terminals facing down to prevent flux from penetrating into the indicator.

Correct



Incorrect



(e) Use the appropriate wire size for the applied voltage and current, and solder properly. Use of the product with incomplete soldering may cause abnormal heat generation, resulting in a fire hazard.

(12) Usage environment
(a) Do not use in the presence of flammable or explosive gases such as gasoline, thinner, LPG, etc.
(b) Avoid using the product in places where corrosive or silicon gas is generated, high temperature, high humidity, sea breeze or direct sunlight.
(c) Provide appropriate protection when using the product in places where it is exposed to water, oil, metal powder, or dust.
(d) Do not use the product in a place subject to vibration or shock. It may cause malfunction or damage.
(e) When installed in a close grouping or continuously lit, the ambient temperature may exceed the specified value due to heat generation.
Take measures such as ventilation and lowering the operating voltage.
(f) When checking the actual equipment, load conditions and operating environment should be the same as the actual operating conditions.
(g) The ambient temperature for storage is −25°C to 65 °C (No freeze, no condensation).

(13) When wiping off dirt on the indicator, wipe lightly with a soft, dry cloth. Organic solvents such as thinner, benzene, alcohol, or other acidic chemicals may cause deformation, discoloration, or malfunction.

(14) Store the product away from malignant gases, dust, high temperature and high humidity, and keep it in our packing condition.

(15) Periodic inspection and replacement
(a) Although mechanical and electrical durability are listed in the specifications column, deterioration of various parts (deterioration of resins and corrosion of metal parts) is possible due to the operating environment and method of use. We ask that you implement inspections for Sunmulon products to prevent accidents from occurring by conducting periodic inspections and replacements.

(16) Service scope
The price of Sunmulon products do not include the cost of services, such as dispatching technicians.