Sunmulon

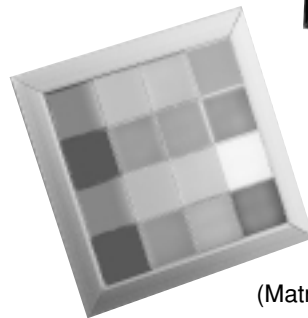# TL LED Indicator

Free Size LED Indicator

- **Arrange 25 mm square size light cartridge as matrix, and make large size Indicator as you like.**
- **It is also used as LED backlight. (PCB mounting type available)**

(Unit)
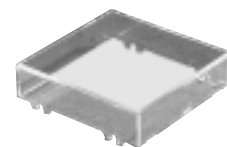
(Matrix Indicator)

(Free Size Indicator)

SPECIFICATIONS

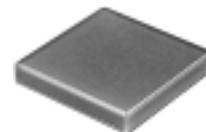| Insulation Resistance	More than 100MΩ at 500V DC
Dielectric Strength	1500V AC RMS between terminals and ground (50/60Hz for 60sec. at normal ambient temperature and humidity)
Reverse Dielectric Strength	150V
Ambient Temperature	−10°C～+40°C
Ambient Humidity	45～80% RH

STRUCTURE

(Unit)

—Cover

—Filter

—Light Cartridge (LED mounted)

LED DATA

DC Supply Voltage (V)	Current Rating (mA)											Mono, Super LED		
	Mono-Color			3-Color										
				Red/Green			Green/Yellow			Yellow/Red					
	Red	Green	Yellow	Red	Green	Red/Green	Green	Yellow	Green/Yellow	Yellow	Red	Yellow/Red	Super Blue	Super Green	Super White
DC12V (±5%)	12	21	17	12	21	18	21	17	19	17	12	18	21	14	12
DC24V (±5%)	7	11	10	7	11	11	11	10	11	10	7	11	11	8	8

DIMENSIONS

Unit		□25 / 15 / 5.74 / 5.08 / 10.16		Sunmulon mark / Top View
Free Size Indicator		Row Sunmulon mark / Column / 25m / 25n	$25n+20.2{}^{+1}_{0}$ / $25m+20.2{}^{+1}_{0}$ / Panel Cut Dimension	※ Panel Thickness 1mm~6mm / ※ n : Row m : Column / (Face size : times of 25mm)
		25n+26.8 / 25n+19.2	3 / 34.5 / 28.6 / 25n+26.8 / 25n+19.2	
Matrix Indicator		Row Sunmulon mark / Column	$25n+20.2{}^{+1}_{0}$ / $25m+20.2{}^{+1}_{0}$ / Panel Cut Dimension	※ Panel Thickness 1mm~6mm / ※ n : Row m : Column
		25n+26.8 / 25n+19.2	3 / 28.6 / 25n+26.8 / 25n+19.2	

Tolerance : ±0.4mm

INTERNAL CONNECTION ARRANGEMENTS

Mono-color		**Red/Green/Yellow**		
	12V	No.1, 2 — No.3	**24V**	No.1, 2 — No.3
3-Color		**Red/Green/Yellow combination**		
	12V	No.1, 2 — No.3 / No.5 / No.4	**24V**	No.1, 2 — No.3 / No.5 / No.4
Mono-color, Bright		**Blue/Green/White**		
	12V	No.1, 2 — No.3	**24V**	No.1, 2 — No.3

Sunmulon

TL

TERMINAL

● TERMINAL LAYOUT

(Unit)

Sunmulon Mark

5 4 3 2 1

(Matrix, Free size)

5 4 3 2 1

● TERMINAL SHAPE

5.74

□0.635
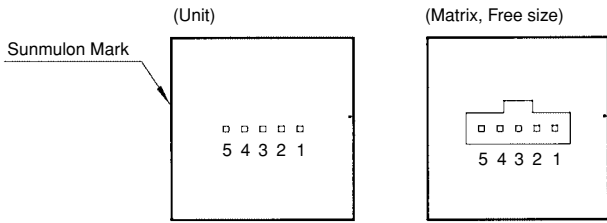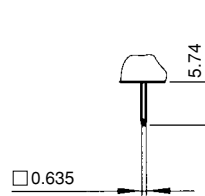
● PCB HOLE DIMENSIONS (UNIT)

Min.25.1

Min.25.1

5-φ0.9 hole

5.08±0.1

10.16±0.1

● CONNECTOR

Projection

5 4 3 2 1
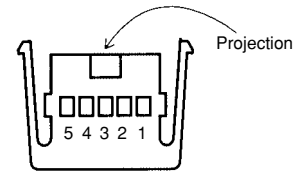
● Suitable wire

Wire size	Diameter
AWG #24-28	φ1.0~1.5mm

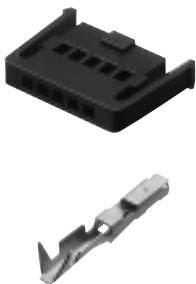| Terminal No.	Mono Color	Mono Color Bright	3-Color (G/R)	3-Color (Y/R)	3-Color (G/Y)
1	Anode (+)	Anode (+)	Anode (+)	Anode (+)	Anode (+)
2	Cathode (−)	Anode (+)	Anode (+)	Anode (+)	Anode (+)
3	Cathode (−)	Cathode (−)	Cathode (−) Green	Cathode (−) Yellow	Cathode (−) Yellow
4			Cathode (−) Red	Cathode (−) Red	Cathode (−) Green
5			Cathode (−) G/R	Cathode (−) Y/R	Cathode (−) G/Y

ACCESSORIES

● CONNECTOR
(to be appended to Free Size/ Matrix Indicator)

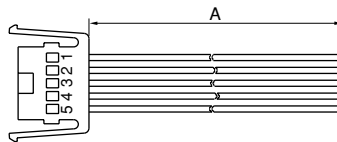| Part No.	BL-0077

Housing

Contact Pin
Honda Tsushin Kogyo
made (HKP-F403)

Connector
(1 Housing & 5 Contact Pins)
to be appended.

● Wire Hearness

Wire : UL1061, AWG26

A

5 4 3 2 1

Pin no.	5	4	3	2	1
Color	Red	Green	Yellow	Blue	Grey

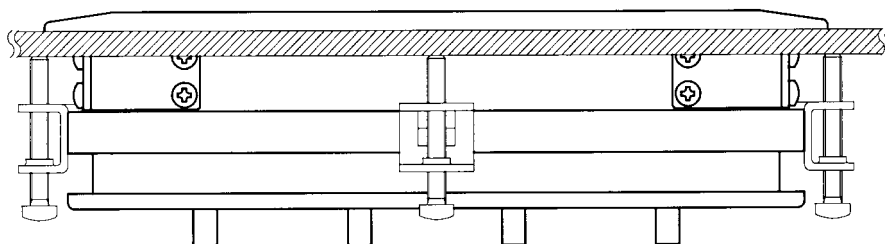| A Length	Part No.
50cm	CL-0230
100cm	CL-0231

● Contact Pin press Tool

Honda Tsushin Kogyo made
(KP-309)

MOUNTING

● Mounting method for Free size/Matrix Indicators.

Fix with mounting screws(appended) from back side.

ORDERING CODE

UNIT

TL − ☐ 1 2 ☐ ☐ C ☐

● **ILLUMINATION**

S0	Mono-color
S3	3-color	※1)
S4	Mono-color, super LED

● **LED COLOR**

7	Red	Mono-color : Put color no. into the frame 1
8	Green	3-Color : Put color no. into the frame 1, 2
◆ 9	Yellow	(color combination : 87, 89, 97)　※2)
18	Super Green	
14	Super Blue	Mono-color, super LED : Put color no. into
16	Super White	the frame 1(3-color type is not provided)

※1) In case of 3-color type, filter to be selected 4 (Milk White).
　　Simultaneous lighting while no.3 & 4 terminal is impossible.
※2) 87　Green, Red, G/R
　　89　Green, Yellow, G/Y
　　97　Yellow, Red, Y/R

● **COVER**

| C | Transparent |
| × | Without cover |

● **SUPPLY VOLTAGE**

| 2 | 12V |
| 3 | 24V |

● **TERMINAL**

| C | PCB terminal |

● **FILTER COLOR**

1	Red
2	Green
◆ 3	Yellow
4	Milk White
6	Blue
◇ 8	Lemon Yellow
×	Without Filter

◆ "Yellow" color for LED/Filter is actually "Orange Yellow".
◇ Lemon Yellow Filter to be used with Green LED(8).

FREE SIZE INDICATOR

TL − ☐☐ × ☐☐ ☐ 1 2 C ☐ K ☐ ☐

● **COLUMN**

01	1
⋮	⋮
10	10

● **ROW**

01	1
⋮	⋮
10	10

● **ILLUMINATION**

S0	Mono-color
S3	3-color	※1)
S4	Mono-color, super LED	※3)

● **LED COLOR**

7	Red	Mono-color : Put color no. into the frame 1
8	Green	3-Color : Put color no. into the frame 1, 2
◆ 9	Yellow	(color combination : 87, 89, 97)　※2)
18	Super Green	
14	Super Blue	Mono-color, super LED : Put color no. into
16	Super White	the frame 1(3-color type is not provided)

● Face size : times of 25mm
● 01(column) × 01(row) not available.
● Free Size Indicator is full order made.

● **COVER**

| C | Transparent |

● **MATRIX FRAME**

| K | Black |
| S | Silver |

● **SUPPLY VOLTAGE**

| 2 | 12V |
| 3 | 24V |

● **TERMINAL**

| K | Connector |

● **FILTER COLOR**

1	Red
2	Green
◆ 3	Yellow
4	Milk White
6	Blue
◇ 8	Lemon Yellow

◆ "Yellow" color for LED/Filter is actually "Orange Yellow".
◇ Lemon Yellow Filter to be used with Green LED(8).

MATRIX INDICATOR

TL − ☐☐ × ☐☐ K ☐ ☐☐☐☐

● **COLUMN**

01	1
⋮	⋮
10	10

● **ROW**

01	1
⋮	⋮
10	10

● In case of Matrix Indicator, please inquiry us how to order.

According to user's specification, suffix no. will be given.

● **MATRIX FRAME**

| K | Black |
| S | Silver |

● **TERMINAL**

| K | Connector |