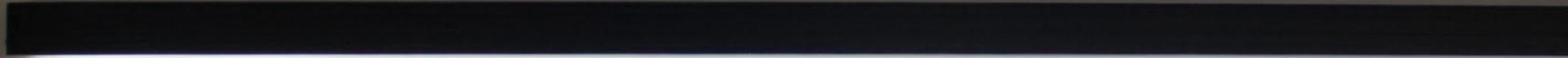




MATRIX

LED Light Bar

SONARAY[®]



MATRIX LED LIGHT BAR



Modularity

Cleverly designed to allow for a variety of flexible combinations and installations. Using brackets allows for diverse options and easy installation.



Excellent Heat Dissipation

Stringently selected materials provide for a steady dissipation of heat throughout the whole system, in turn allowing a longer lifetime for the luminaire.



Quality Core Component

Excellent luminaire design to the core: starting with the LED packages themselves. These luminaires only use high quality SMD packages – chipsets that have great quality and long life as backed by LM-80 report. Quality inside the luminaires that shines from the outside.



Desirable CRI

With a CRI of 80 SONARAY's Light Bar brings out the colors you want where ever and however you decide to install it.



Energy Saving

The combination of high-efficacy LED components with excellent whole system design has SONARAY LED lighting achieving energy savings of 40% - 80% compared with traditional lighting sources.

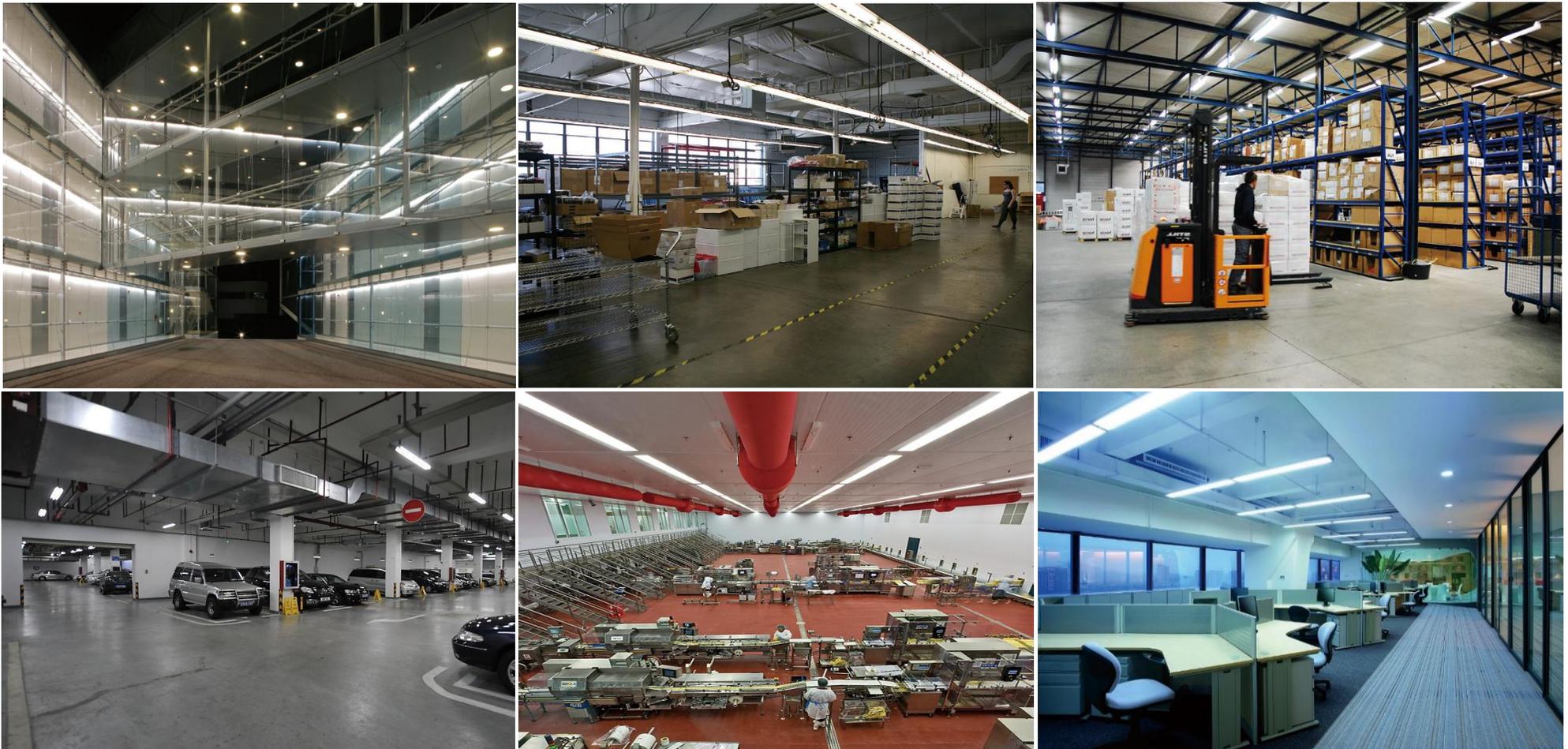


Attractive Appearance

In addition to being a versatile, well functioning luminaire, SONARAY's Light Bar is as aesthetically appealing. Recessed or exposed, single or combined, the Light Bar looks good and works well. Here, form and function come together.

Multiple Applications

Simply constructed, with enhanced specifications; the MATRIX LED Light Bars are designed to meet your lighting requirements in multiple applications. Performing perfectly well even in harsh environments/conditions like boiler rooms, food processing facilities and Animal husbandry farms; as well as in normal conditions, such as offices and underground parking lots, MATRIX LED Light Bar is your best choice.

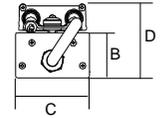
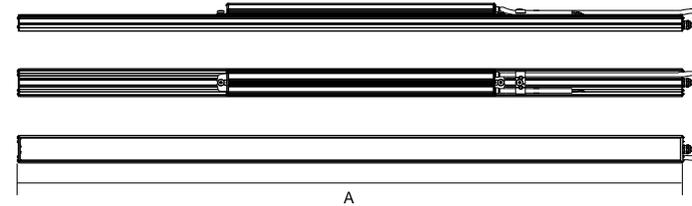


MATRIX LED Light Bar



Specifications

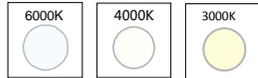
Material: Aluminum
 Driver: Built-in
 Input Voltage (Driver): AC 100-277V~ 50/60Hz
 Power Factor: > 0.95
 Operating Temperature: -20°C~+40°C, -4°F~+104°F
 Lifetime: ≥ 40,000hrs



A: 600mm/1200mm
 B: 30mm
 C: 50mm
 D: 50mm

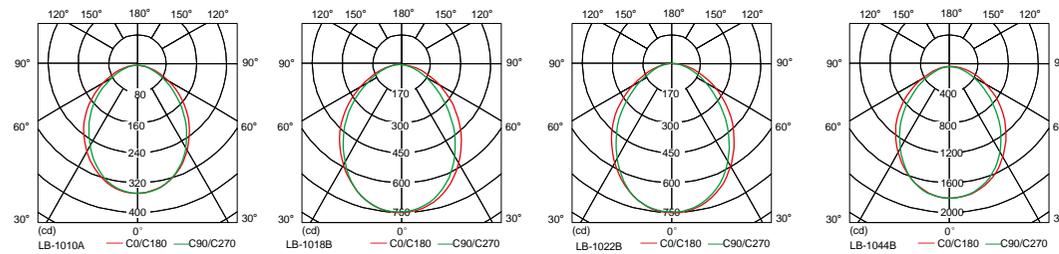


Color Temperature



Model No.	Length	Power	Luminous Flux	Luminous Efficacy	CCT	CRI	Beam Angle	Weight	Order No.
W	(m)	(W)	(lm)	(lm/W)	(K)	(Ra)	(°)	(kg / lb)	
LB-1010A	0.6	10	900	90	6000	≥80	93	1/2.2	LB-1010A-111
LB-1018A	0.6	18	1728	96	6000	≥80	93	1/2.2	LB-1018A-111
LB-1018B	1.2	18	1728	96	6000	≥80	93	1.74/3.84	LB-1018B-111
LB-1022B	1.2	22	1980	90	6000	≥80	93	1.74/3.84	LB-1022B-111
LB-1044B	1.2	44	4040	92	6000	≥80	93	1.74/3.84	LB-1044B-111

Light Distribution Curve



Illuminance Distribution

H(m)	E(lx)	D(cm)
1	399	212
2	100	424
3	44	637
4	24	849
5	16	1061

LB-1010A

H(m)	E(lx)	D(cm)
1	732	217
2	183	433
3	81	650
4	46	867
5	29	1084

LB-1018B

H(m)	E(lx)	D(cm)
1	842	214
2	211	428
3	94	642
4	53	856
5	34	1070

LB-1022B

H(m)	E(lx)	D(cm)
1	1769	215
2	442	430
3	197	646
4	111	861
5	71	1076

LB-1044B

MATRIX LED Light Bar Usage (1) — Retrofitting Formula for Tri-proof Luminaire

Original Luminaire

Retrofitting Formula

Benefit

	Tri-proof luminaire for T8 FL 1.2m 36W x 1 pc, Ballast, x 1 pc	Total Power Consumption 45W			SONARAY MATRIX LED Light Bar 0.6m 10W, 1 pc	Total Power Consumption 10W		Energy saving 78%; Remain the same brightness
	Tri-proof luminaire for T8 FL 1.2m 36W x 2 pcs, Ballast x 2 pcs	Total Power Consumption 72.5W			SONARAY MATRIX LED Light Bar 1.2m 22W, 1 pc	Total Power Consumption 22W		Energy saving 75%; Remain the same brightness
	Tri-proof luminaire for T8 FL 1.5m 58W x 1 pc, Ballast x 1 pc	Total Power Consumption 90W			SONARAY MATRIX LED Light Bar 1.2m 22W, 1 pc	Total Power Consumption 22W		Energy saving 70%; Brightness increase
	Tri-proof luminaire for T8 FL 1.5m 58W x 2 pcs, Ballast x 2 pcs	Total Power Consumption 145W			SONARAY MATRIX LED Light Bar 1.2m 44W, 1 pc	Total Power Consumption 44W		Energy saving 70%; Brightness increase

Remark: The calculation of total power consumption is based on ballast efficiency 0.8.



Energy saving up to
70% at least.



Remain or increase
the brightness.



Quick ROI, low risk for
investment.

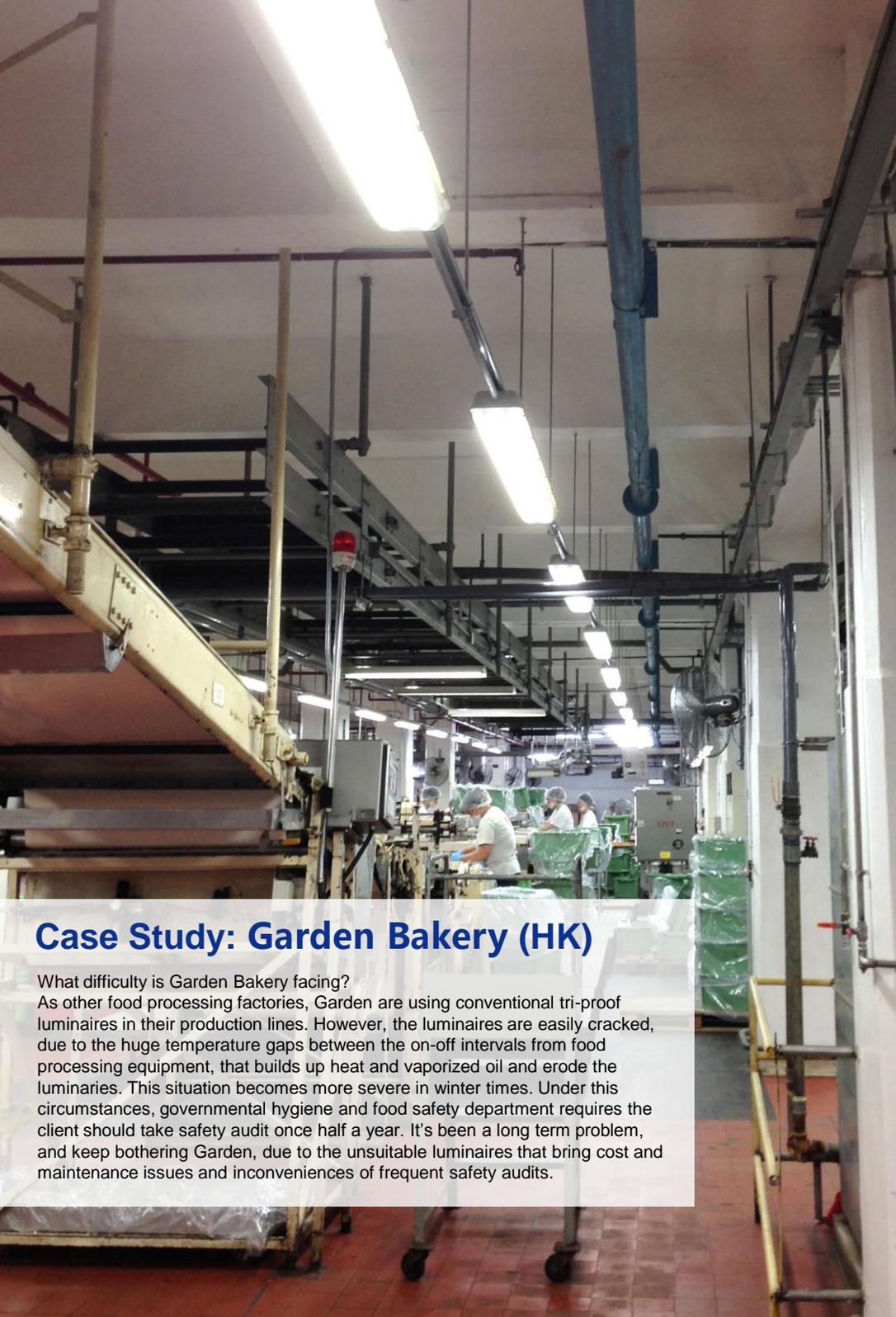
Application Industry: Food Processing Factory

Food processing factories are regulated by related codes of food processing safety control. The factories should make sure no pollution sources appearing on production lines during processing. Therefore, factories have to follow very restrict regulations on processing equipment about food safety and no-corrosion materials.

Under the safety codes, food processing factories have correspondingly high requirements on lighting equipment in production lines.

- The luminaires should have design of oil-fume (dust) -proof, steam (water)-proof, and anti-erosion (low level);
- The luminaires should have sealed design, and shatter resistant;
- The luminaires should be with high temperature resistance;
- The luminaires should contain no any hazard materials





Case Study: Garden Bakery (HK)

What difficulty is Garden Bakery facing?

As other food processing factories, Garden are using conventional tri-proof luminaires in their production lines. However, the luminaires are easily cracked, due to the huge temperature gaps between the on-off intervals from food processing equipment, that builds up heat and vaporized oil and erode the luminaries. This situation becomes more severe in winter times. Under this circumstances, governmental hygiene and food safety department requires the client should take safety audit once half a year. It's been a long term problem, and keep bothering Garden, due to the unsuitable luminaires that bring cost and maintenance issues and inconveniences of frequent safety audits.

SONARAY's Solution



Whole new tri-proof luminaire



After 1,5 years, the luminaire cracked seriously.



Retrofitting Choice :
SONARAY Matrix Light Bar 44W, 1 pc

Original Luminaire :
Tri-proof luminaire 1.5m, 1 pc
T8 FL 1.5m 58W, 2 pcs
Ballast, 2 pcs

Benefits for Garden Bakery with SONARAY's Solution



Safety Audit
100% pass official audit and comply with regulations.

ROI

Quick ROI
ROI within warranty years.



High Energy Saving
Save energy up to 70%, and increase brightness significantly.



Long Life Time
4 times longer than fluorescent lamp.

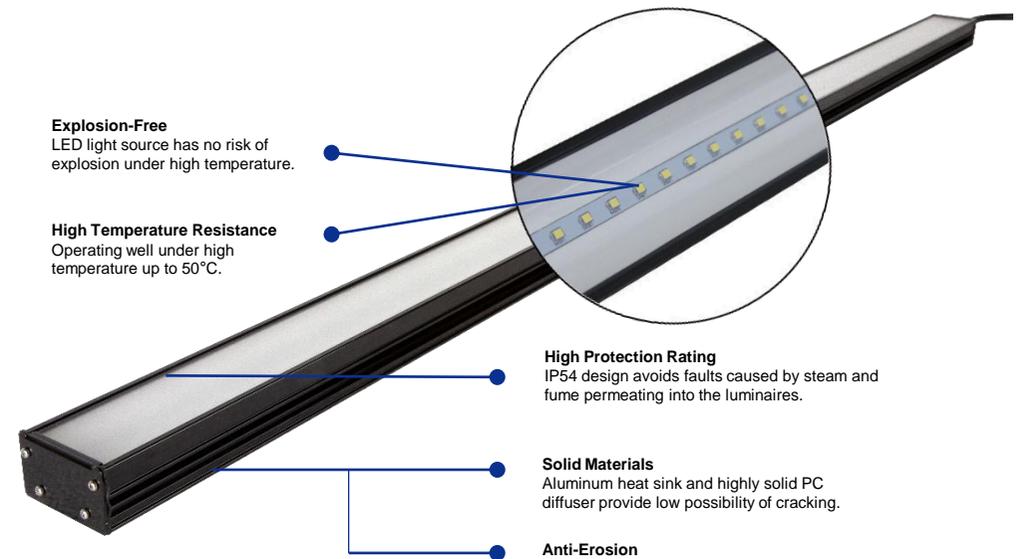
Explosion-Free
LED light source has no risk of explosion under high temperature.

High Temperature Resistance
Operating well under high temperature up to 50°C.

High Protection Rating
IP54 design avoids faults caused by steam and fume permeating into the luminaires.

Solid Materials
Aluminum heat sink and highly solid PC diffuser provide low possibility of cracking.

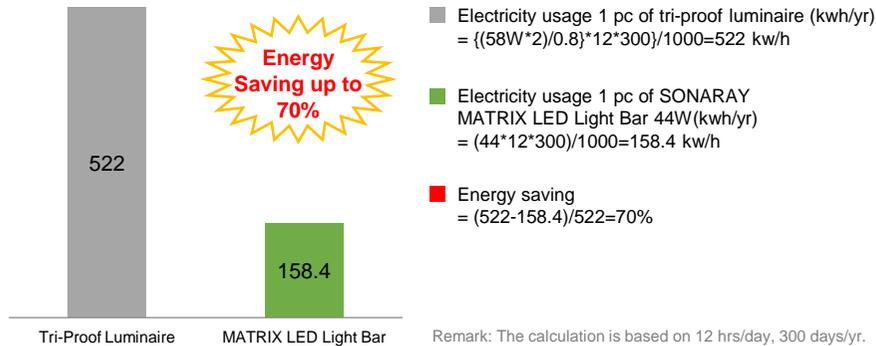
Anti-Erosion
Anti-erosion coating on surface
(Anti-erosion coating on surface is optional.)



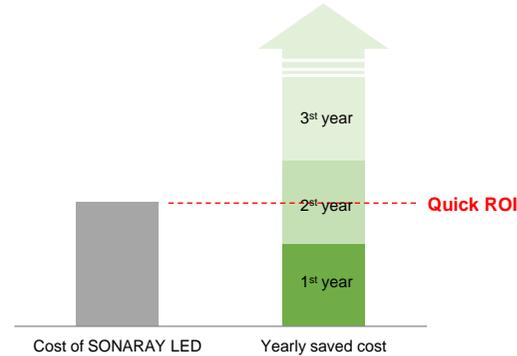
Case Study: Garden Bakery (Hong Kong)

Energy Saving up to 70%

Electricity usage of 1 pc (kwh/yr)



Quick ROI (< 1.5 warranty years)



Lux Level Increase up to 30%



280lx
Tri-Proof Luminaire
145W



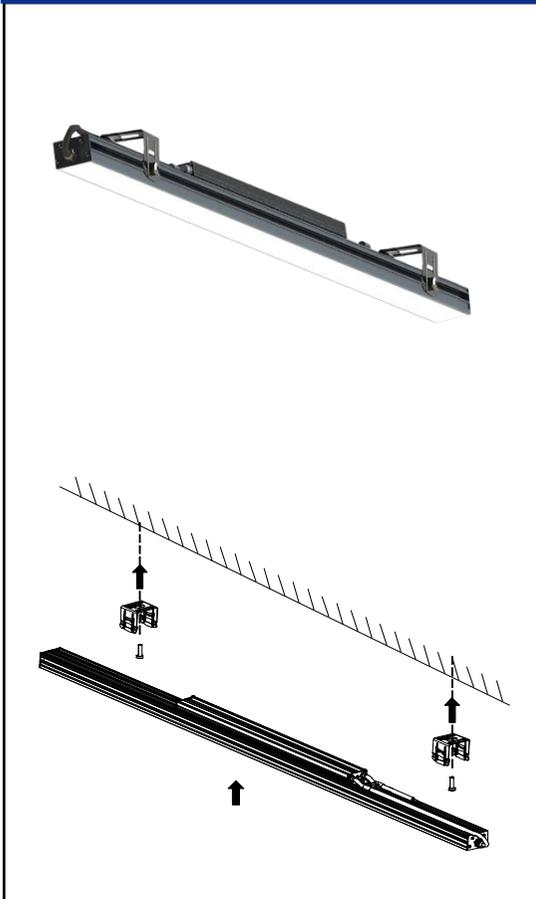
402lx
MATRIX LED Light Bar
44W



	Original luminaire	Tri-proof luminaire
	Original lamp	T8 FL 1.2m 58W
Retrofitting Solution	Lamp (Light Source) Qty for each luminaire	2
	SONARAY LED retrofitting luminaire	MATRIX LED Light Bar 44W
	Qty of retrofitting luminaire for each original luminaire	1
Energy Saving Calculation	Wattage of original lamp (W)	58*2=116
	Power efficiency of original ballast	0.8
	Power consumption of original tri-proof luminaire (W)	145
	Power consumption of LED retrofitting luminaire (W)	44
	Saved energy (W)	101
	Saved energy (%)	70%
	Daily working hours	12
	Yearly working days	300
	Yearly saved energy (kwh)	364
	Electricity cost (HKD/Kwh)	0.8
	Yearly saved electricity cost (HKD)	290
Investment Calculation	Cost of original tri-proof luminaire (HKD/pc)	190
	Cost of original lamp (HKD/pc)	36
	Cost of original ballast (HKD/pc)	18
	Frequency of replacing luminaires (times/yr)	0.3
	Frequency of replacing lamps (times/yr)	1
	Frequency of replacing ballasts (times/yr)	0.3
	Replacing (maintenance) cost (HKD/yr)	111

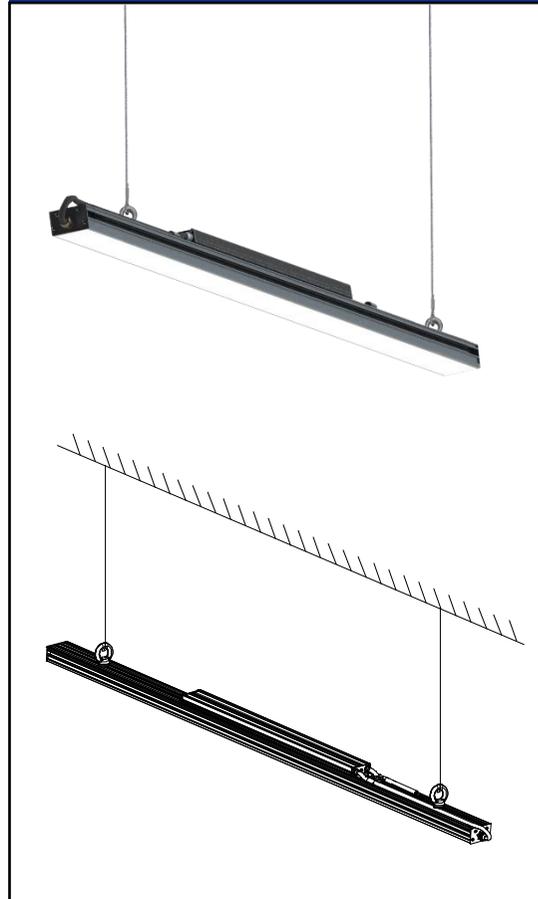
MATRIX LED Light Bar / Installation Guide and Accessories for Single Unit

Ceiling Mounted Type



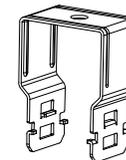
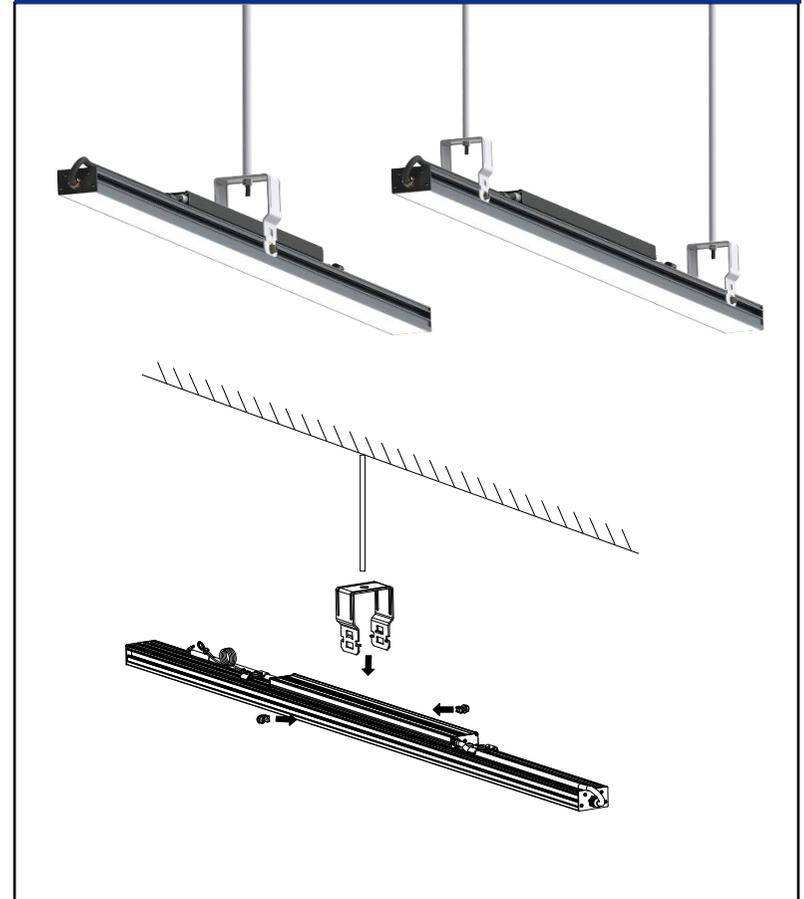
Bracket set
Order No: LB-1000A-A
(For external driver version)
Order No: LB-1000A-J
(For built-in driver version)

Pendant Installed Type



O-ring set
Order No: LB-1000A-E

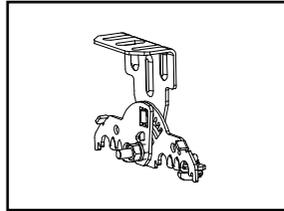
Pendant Installed Type with Pole



Bracket set
Order No: LB-1000A-A

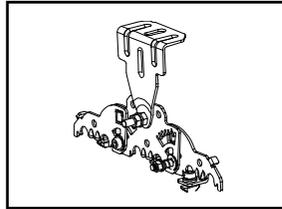
MATRIX LED Light Bar / Installation Guide and Accessories for Multiple Units

2 Units



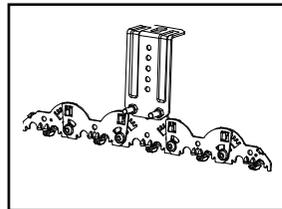
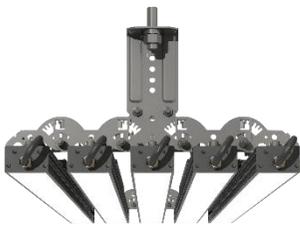
Bracket set
Order No: LB-1000A-B

3 Units



Bracket set
Order No: LB-1000A-C

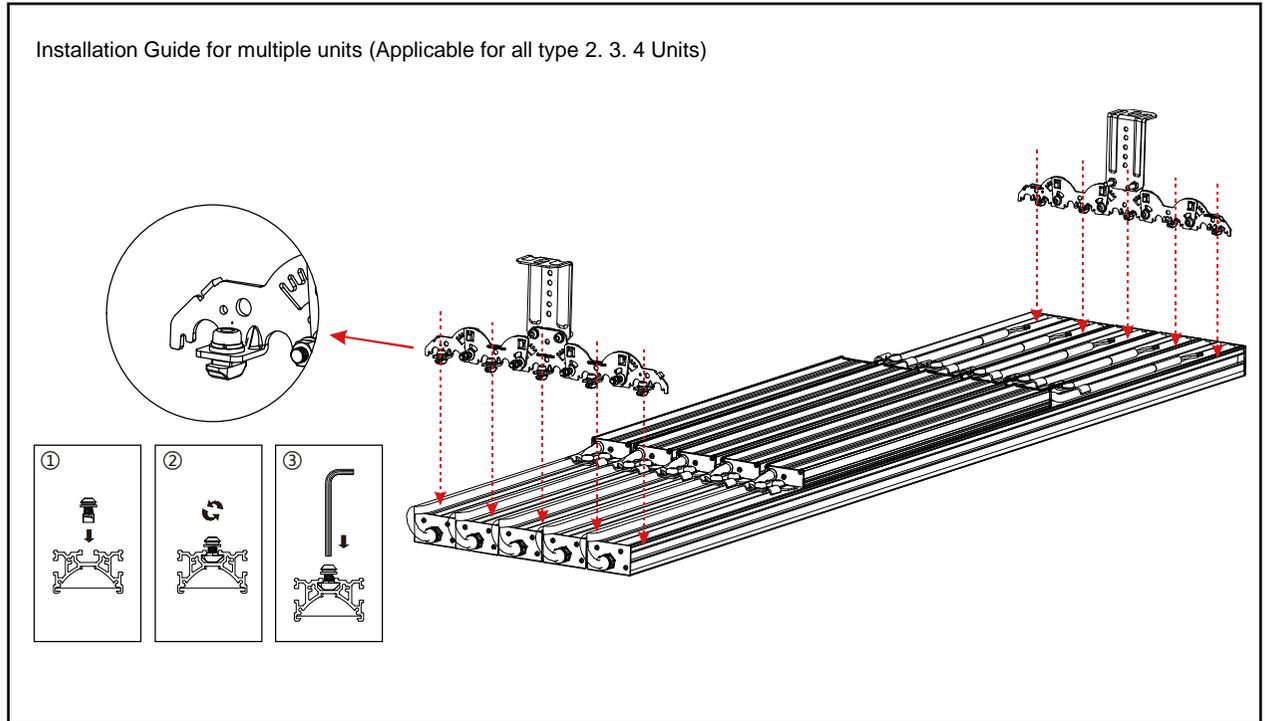
5 Units



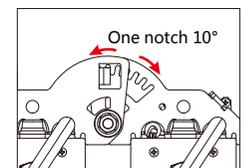
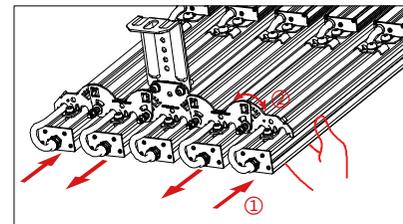
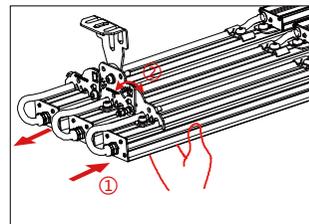
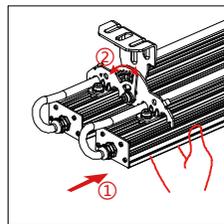
Bracket set
Order No: LB-1000A-D

Installation Guide

Installation Guide for multiple units (Applicable for all type 2. 3. 4 Units)



Description for angle adjustment of light bar



Downward maximum adjustable 10°
Upward maximum adjustable 50°