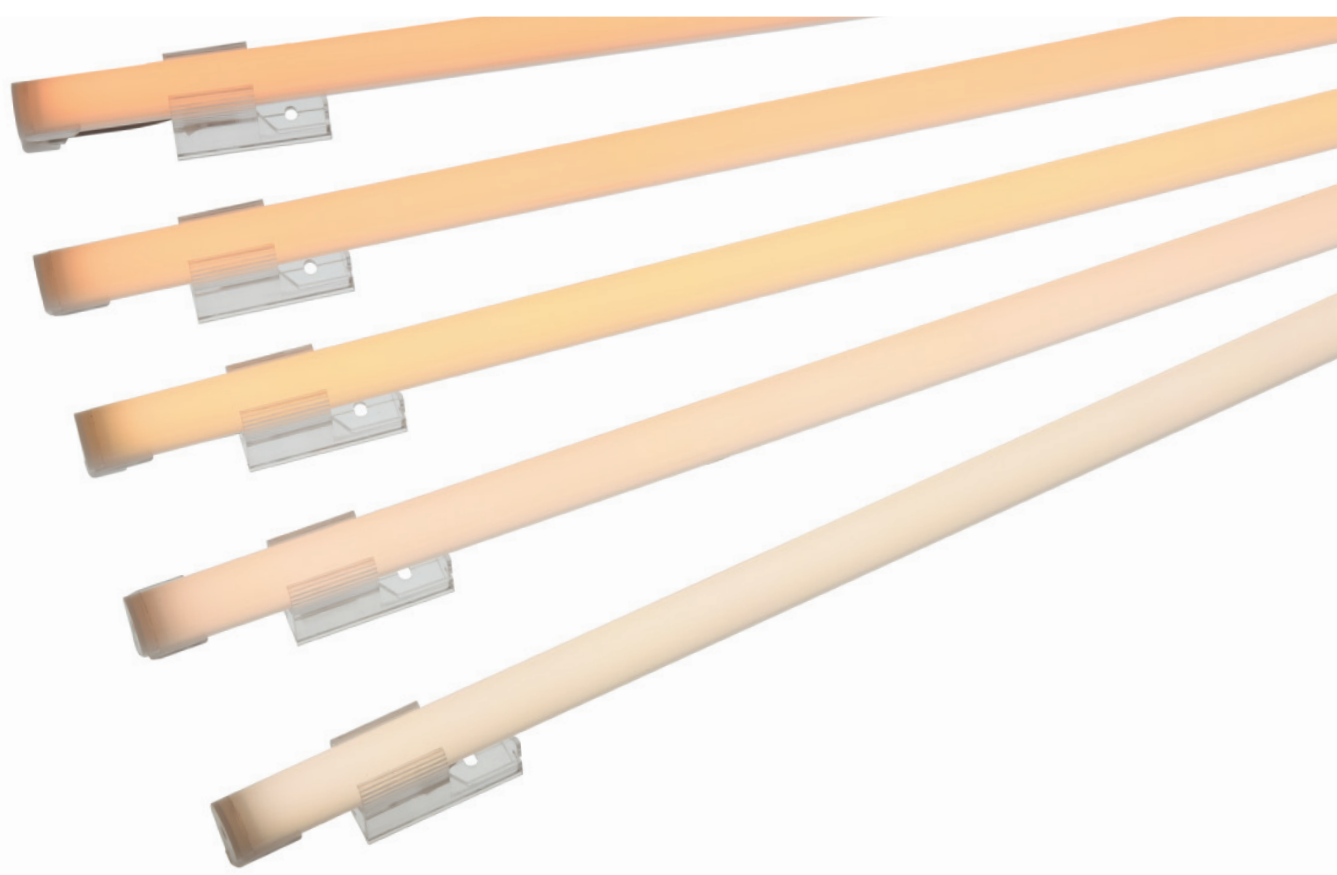


Outdoor
Rigid light

LRO
Luci EFRO_{IP65}



Luci EFRO IP65

LRO



MEGALOS Koiwa
Location: Japan
Lighting design: DAIKO ELECTRIC CO., LTD.
Photo: Nomura Real Estate Life & Sports Co., Ltd.



Mia Saigon, Luxury Collection Hotel
Location: Vietnam
Lighting design: LUMINO DESIGN

Luci EFRO IP65

Double waterproof and moisture-proof structure,
suitable for shower rooms and landscapes.

Round shape with high efficiency 8.4W/m 600lm/m with adjustable clip for
cove light and aluminum channel for surface wall mount

Specifications

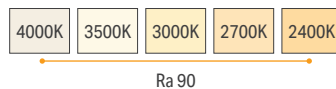
Dimensions

Cross section W 25 x H 36 mm including clip

Standard length 5 types of fixed length

1142	862
582	302
162	

Color temperature



Electrical & Output

Power Consumption (W/m)	8.4
Luminous flux @ 3000K (lm/m)	601

Features

- Gasket between the end cap and tube
- Fuse on circuit board against unexpected over current
- Sealed by special glue at the end cap and tube
- IP67 screw fixing connector
- Coated circuit board for prevention against humidity

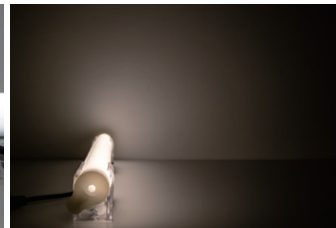


Accessories

Mounting clip for EFRO

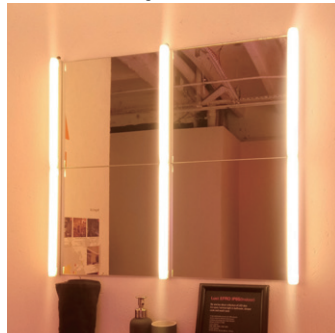


Connectors can be put under LED fixture



Adjustable angle for cove light

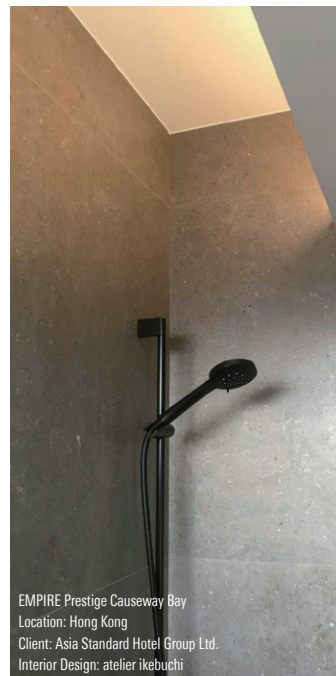
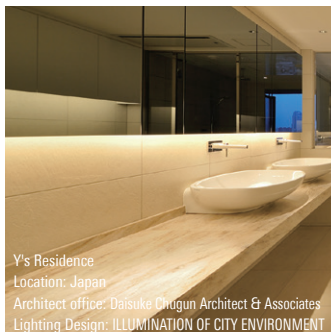
Aluminium mounting rail for EFRO



Optional aluminum channel for surface wall mounting



Project reference



LRO

Color management
MacAdam 3 step



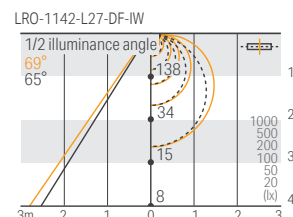
- Steam-proof which passed Japanese humidity test
- For bathroom or Spa usage
- Aluminium mounting rail for surface mount



Model No.

LRO	-		-		-	DF	-	IW
Product Name	-	Length	-	Light source color	-	Cover type	-	Environment
LRO	-	0162 0302 0582 0862 1142	-	W : White WW : Warm white 3500K L30 : Warm white 3000K L27 : Warm white 2700K L24 : Warm white 2400K	-	DF: Diffuser	-	IW : IP65 (Indoor / Semi-outdoor)

Light Intensity Refer to P.220



Specification

Length	0162	0302	0582	0862	1142
Model No.	LRO-0162-□-DF-IW	LRO-0302-□-DF-IW	LRO-0582-□-DF-IW	LRO-0862-□-DF-IW	LRO-1142-□-DF-IW
Power consumption	1.2W	2.4W	4.8W	7.2W	9.6W
Fitting length(L)	162mm	302mm	582mm	862mm	1142mm
Weight	62g	100g	172g	234g	310g
Luminaire efficacy(2700K)	90.3 lm/W	90.3 lm/W	90.3 lm/W	90.3 lm/W	90.3 lm/W
Light source color	○ = Device inventory * = Equivalent				
D 7100K	-	-	-	-	-
N 5000K	-	-	-	-	-
W 4000K Ra94	○ 100 lm*	○ 201 lm*	○ 401 lm*	○ 602 lm	○ 802 lm*
WW 3500K Ra94	○ 95 lm*	○ 191 lm*	○ 381 lm*	○ 572 lm	○ 862 lm*
L30 3000K Ra93	○ 86 lm*	○ 172 lm*	○ 344 lm*	○ 516 lm	○ 688 lm*
L27 2700K Ra93	○ 87 lm*	○ 174 lm*	○ 349 lm*	○ 523 lm	○ 697 lm*
L24 2400K Ra94	○ 83 lm*	○ 166 lm*	○ 331 lm*	○ 497 lm	○ 662 lm*
L21 2100K	-	-	-	-	-

Spec may be subject to change without announcement.

The optical data provided on the each product pages are for reference only; the data values are not guaranteed. Please use as reference materials for your planning.

General Specification

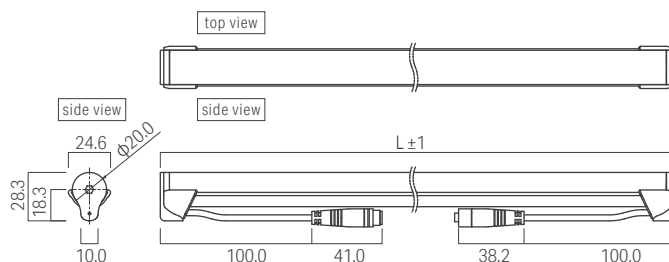
Input voltage	DC24V
Environment	Bathroom, semi-outdoor, Moistureproof (IP65) ^{*1}
Max. length per circuit	4.5m
Material (body)	Polycarbonate, PVC cable, IP65 connector
Material (cover, clip)	Polycarbonate
Material (mounting rail)	Aluminum
Attachments	① Mounting clip 2pcs for 582mm or shorter 3pcs for 862mm or longer
Option parts	① Mounting clip ② Mounting rail ③ Power supply cable
Certification	CE, Complied with JIS0920, IP65
Operating temperature	0°C ~ +35°C (No Condensation)
Dimmable	Yes (0-10V/1-10V, DMX, DALI, PWM)
Power Supplies	Required

*1 Installing in a sauna, bathroom/shower room operated 24 hours a day is not allowed.

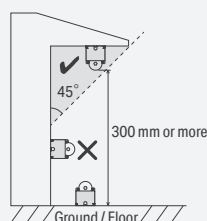
Max. connectable length per power supply

Length of LED fixture (70% loading factor) *: split into multiple circuits	Power supply
~4.1m	50W power supply
~8.3m*	100W power supply
~12.5m*	150W power supply

External dimensions



Prohibited installation places:



When using EFRO in semi-outdoor, it must be installed with the aluminum rail for EFRO. Please installed the LED fixture and the cable within the range of 45° eaves of the roof and 300 mm or more away from the ground or the floor. Please do not install the LED fixture and cables in the follow place:

- direct expose to water or pooling of water
- direct sunlight
- liquids including choline or chemicals
- high temperature and high humidity such as saunas and public bath
- coastal areas which are affected by sea spray

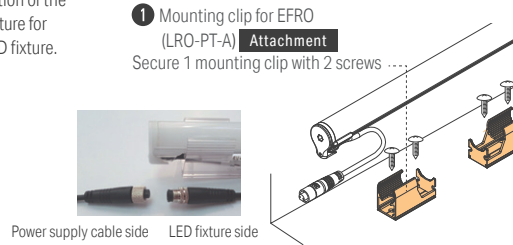
Caution
Do not cut the LED fixture and the lead wire of outdoor product at a job site. Please do appropriate treatment for the lead wire and connector of the terminal of outdoor LED fixture.

Installing the product

Straight installation

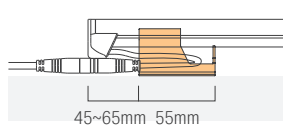
Installation with Mounting Clip

Attach Mounting clip for EFRO (LRO-PT-A) at below position with screws supplied by installer (Pan head screws M4 recommended), and insert the LED fixture with considering the direction of the connector of power supply cable side. See below picture for holding the cable and connector underneath the LED fixture. Downwards installation is available as well.

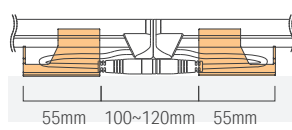


Recommended position of Monting clips

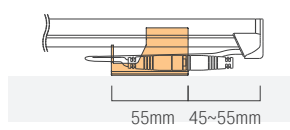
Power supply side of LED fixture



Between two LED fixtures



Terminal of LED fixture



1 Mounting clip for EFRO (LRO-PT-A) Attachment

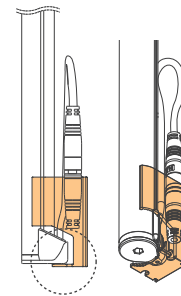
5 Connector cover for AH1 connector (CC-MJ-O) Attachment for 1

Vertical installation

Make sure the bottom of LED fixture hook on the edge of the Mounting clip in accordance with the diagram.

Caution: If the weight of the LED fixture is not supported by the edge of the Mounting clip, it may slide down and fall.

Terminal of LED fixture



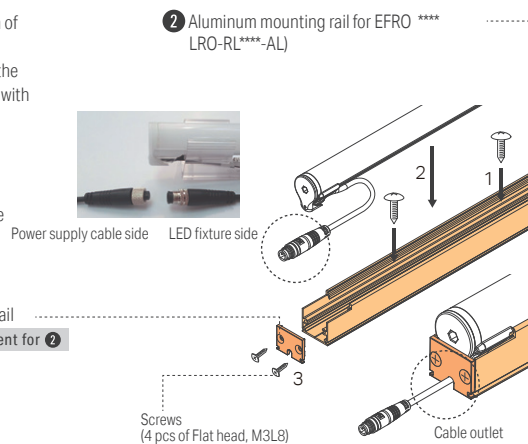
Connector cover for AH1 connector can be stored in the Mounting clip. Connecting the power supply cable at the top of LED fixture.

Installation with Mounting Rail

1. Attach Aluminum mounting rail for EFRO (LRO-RL****-AL) at below position with screws supplied by installer (Pan head screws M4 recommended)
2. Insert the LED fixture with considering the direction of the connector of power supply cable side.
3. After passing the cable through the cable outlet of the end cap, fix the end cap to the rail by screws attached with the products.

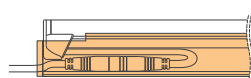
Note: The order of installation can be changed by the situation of the site.

Note: Please fix with the same number of screws as the number of screw holes.

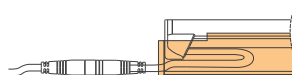


Position of connector

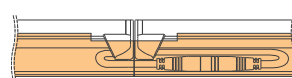
Power supply side of LED fixture



Outside of mounting rail

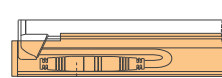


Between two LED fixture



To reduce the gap of two LED fixtures, end caps are not necessary to use.

Terminal of LED fixture

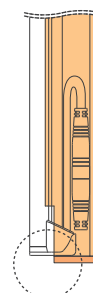


5 Connector cover for AH1 connector (CC-MJ-O) Attachment for 4

Make sure the bottom of LED fixture hook on the edge of the end cap for aluminum rail in accordance with the diagram.

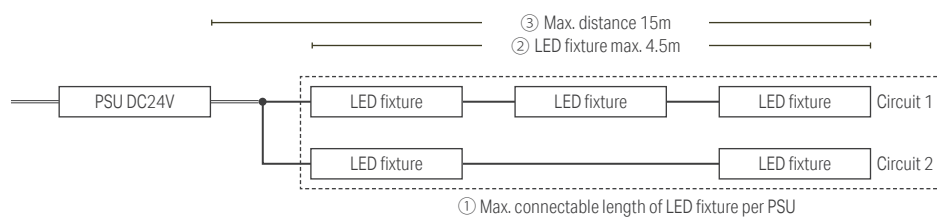
Caution: If the weight of the LED fixture is not supported by the end cap for aluminum mounting rail, it may slide down and fall.

Terminal of LED fixture



Connector cover for AH1 connector can be stored in the Mounting rail. Connecting the power supply cable at the top of LED fixture.

System configuration diagram



- ① Max. connectable total length of LED fixture per power supply depends on capacity of power supply. Recommended loading factor: 70% (without dimming) or 60% (with dimming)
- ② If connectable length of LED fixture per circuit exceeds the maximum, please split into multiple circuit.
- ③ To avoid voltage drop, please consider the max. distance from power supply to the end of LED fixture. (i.e. total cable length plus LED fixture length)

Luci EFRO IP65

Illuminance data



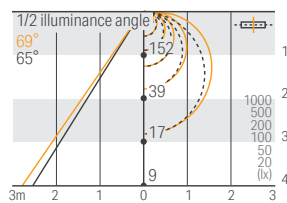
ERO EFRO IP65

Color temperature
4000K 3500K 3000K 2700K 2400K

Direct horizontal surface light intensity distribution chart

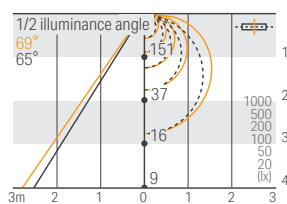
LRO-1142-W-DF-IW

Light source color 4000K
Brightness 152 cd
Luminous flux 802 lm
Color rendering index Ra 94



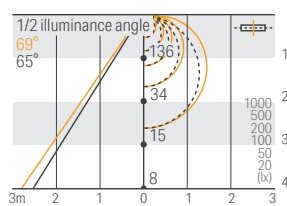
LRO-1142-WW-DF-IW

Light source color 3500K
Brightness 151 cd
Luminous flux 762 lm
Color rendering index Ra 94



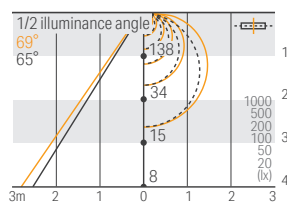
LRO-1142-L30-DF-IW

Light source color 3000K
Brightness 136 cd
Luminous flux 688 lm
Color rendering index Ra 93



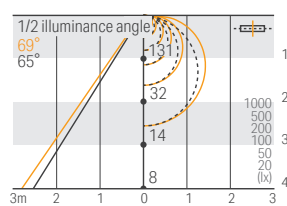
LRO-1142-L27-DF-IW

Light source color 2700K
Brightness 138 cd
Luminous flux 697 lm
Color rendering index Ra 93

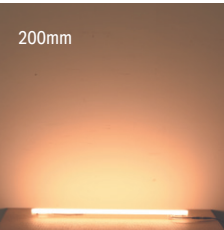
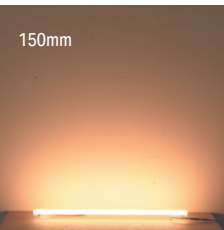
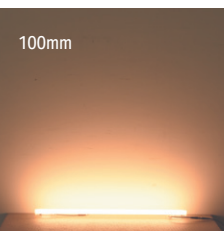
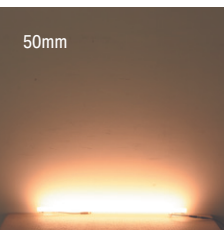
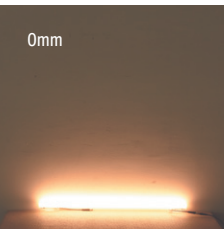


LRO-1142-L24-DF-IW

Light source color 2400K
Brightness 131 cd
Luminous flux 662 lm
Color rendering index Ra 93

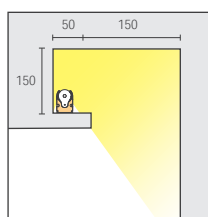
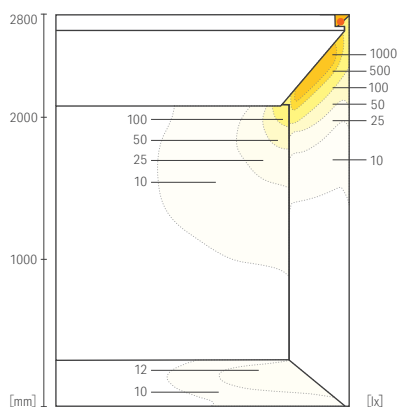


Distance from wall

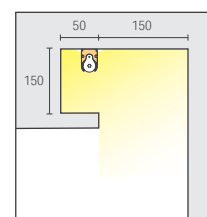
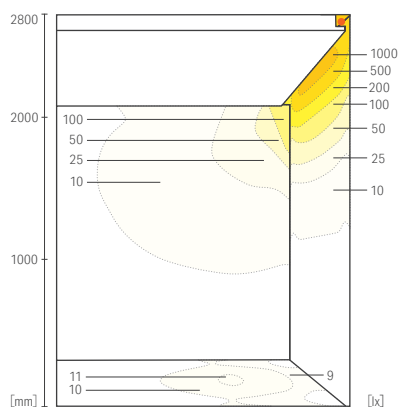


Recommend dimensions and illumination distributions

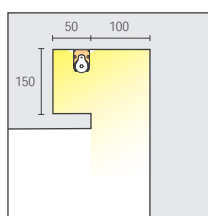
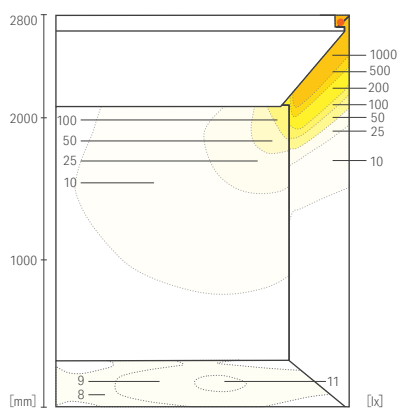
Cornice lighting-1 CH=2800



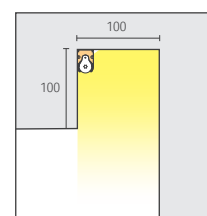
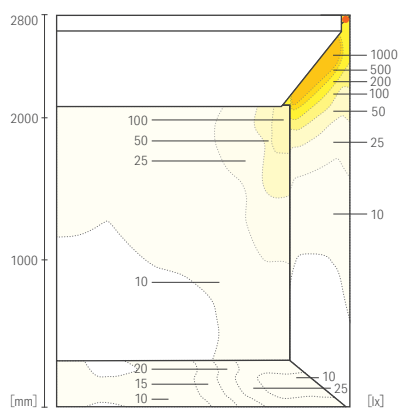
Cornice lighting-2 CH=2800



Cornice lighting-3 CH=2800



Cornice lighting-4 CH=2800



Cove lighting CH=2800

