

LDL-PF Series

Operation Guide for Optional Products

Thank you for purchasing a CCS product. To ensure proper use of the product, please read this operation guide before use and keep it for your future reference.

- These optional products are designed for use with the LDL-PF Series. Do not install these optional products on Light Units from any other series. Conform applicable models and use the Light Unit correctly.
- Two or more options of Diffusion Plates and Polarizing Plates cannot be used for a Light Unit at the same time.
- Periodically inspect optional products such as Polarizing and Diffusion Plates as all of these are consumables. Replace any products that show discoloration or deformation during inspection. CCS recommends maintaining extra optional products on-hand in order to be prepared for replacement.

Description of Model Names

I Diffusion Plates and Polarizing Plates

□□ - LDL - PF - ○○X○○ - △△

Option name

DF: Diffusion Plate
PL: Polarizing Plate

Model name of the applicable Light Unit

Polarizing direction (for Polarizing plate)

HO: Light is polarized parallel to the longer edge of the plate.
VE: Light is polarized parallel to the shorter edge of the plate.

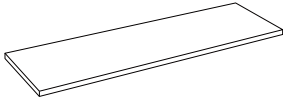
II Separate Brackets

BK - LDL - PF

1 Lineup

1 Diffusion Plate DF-LDL-PF Series

Diffuses direct light. This enables uniform lighting of inspection object.

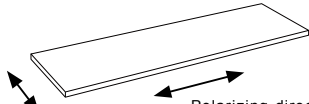


Note: The Diffusion Plate has a front side and a back side. Install it with the glossy, smooth side facing the LED base plate.

Model name	Allowable temperature limit
DF-LDL-PF-52X18	80°C
DF-LDL-PF-102X18	
DF-LDL-PF-152X18	
DF-LDL-PF-52X30	
DF-LDL-PF-102X30	
DF-LDL-PF-152X30	

2 Polarizing Plate PL-LDL-PF Series

Light is linearly polarized. Prevent light reflection by using the Polarizing Plate together with the Polarizing Filter (PL Series) mounted to the lens.



Polarizing direction of models with model names that end in "VE"

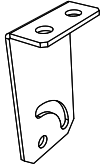
Polarizing direction of models with model names that end in "HO"

Model name	Allowable temperature limit
PL-LDL-PF-52X18-△△	80°C
PL-LDL-PF-102X18-△△	
PL-LDL-PF-152X18-△△	
PL-LDL-PF-52X30-△△	
PL-LDL-PF-102X30-△△	
PL-LDL-PF-152X30-△△	

△△ = "HO" or "VE"
Refer to the above article: *Description of Model Names*.

3 Brackets (Two brackets are included) BK-LDL-PF

The lighting angle can be adjusted as you desire when securing the Light Unit.



Model name	Allowable temperature limit
BK-LDL-PF	-

Accessories

M3 x 6 mm screws
(8 screws + 1 spare screw)

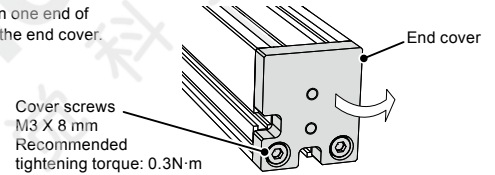
2 Installation

Diffusion Plate and Polarizing Plate

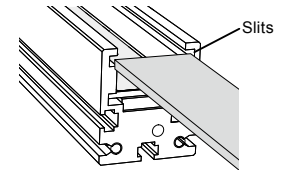


Make sure that the Light Unit is not connected to the Control Unit before you install the optional product.

- 1 Loosen the cover screws on one end of the Light Unit, and remove the end cover.



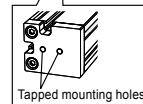
- 2 Insert a Diffusion Plate or Polarizing Plate into the slits inside the Light Unit. If you install a Diffusion Plate, install it with the glossy, smooth side facing the LED base plate (downward).



- 3 Attach the end cover and then retighten the screws.

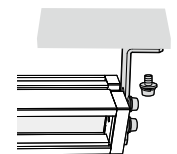
Brackets (BK-LDL-PF)

- 1 Place one bracket on either side of the Bar Light. Place the screws into the tapped mounting holes on the Bar Light and temporarily tighten them.



The cable outlet opening must not face the bracket installation surface.

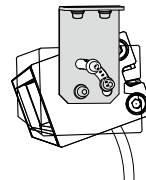
- 2 Secure the brackets to the installation location.



Required Parts

The M3 screws must be provided by the customer.

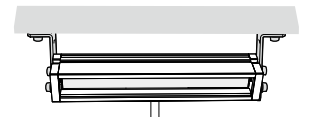
- 3 Adjust the lighting angle.



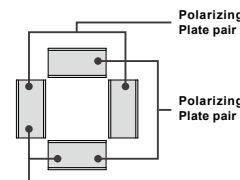
Range of movement



- 4 Tighten all of the M3 screws to secure the Bar Light to the bracket.

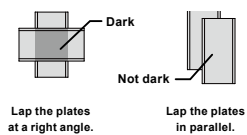


Method of Combination



There are two types of Polarizing Plates. When light is radiated from four directions, use a pair of the same type of Polarizing Plates on the left and right and a pair of the other type on the top and bottom.

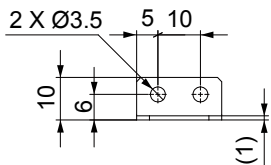
How to Recognize a Polarizing Plate Pair



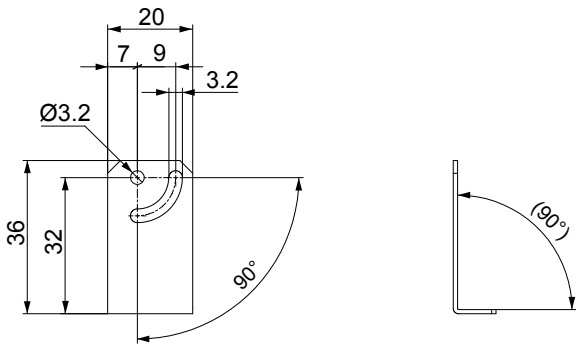
If you lay adjacent Polarizing Plates at a right angle to each other, the overlapping portion will not be dark. If you lay them in parallel, the overlapping portion will be dark.

A corresponding pair of Polarizing Plates will form a dark area when they are overlapped at a right angle. They will not form a dark area when overlapped in parallel.

BK-LDL-PF



Two brackets are included. These brackets are bilaterally symmetrical to each other.



Note: Refer to the dimensions of the Light Unit for the dimensions of the Diffusion Plate and Polarizing Plate.

EU RoHS Directive

The RoHS Directive is short for the "restriction of use of certain hazardous substances in electrical and electronic equipment." As a directive, it restricts the use of specific hazardous substances for new electrical and electronic equipment marketed in the EU on or after July 1, 2006, and restricts the use of six substances, which are (1) lead, (2) mercury, (3) cadmium, (4) hexavalent chromium, (5) polybrominated biphenyl (PBB), and (6) polybrominated diphenyl ether (PBDE).

*Standards for "RoHS Directive-Compliant Products"

Lead	Mercury	Cadmium	Hexavalent chromium	PBB	PBDE
1000ppm max.	1000ppm max.	100ppm max.	1000ppm max.	1000ppm max.	1000ppm max.

(Items that are exempted in the RoHS Directive are excluded from these standards.)

China RoHS Directive

China RoHS Directive is formally known as "Management Methods for Restricting Hazardous Substances Used in Electric and Electronic Products", which was implemented on July 1, 2016 in China. Same as EU RoHS Directive, this regulation restricts the usage of six substances such as lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyl (PBB), and polybrominated diphenyl ether (PBDE). This regulation requires electronic information products which are manufactured or imported, and sold in China, to clearly disclose contents of the 6 restricted substances listed below.

Names and contents of hazardous substances

Usage Deadline for Environmental Protection	Product name	Names and contents of hazardous substances					
		Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent chromium (Cr(VI))	PBB	PBDE
10	Optional products	×	○	×	○	○	○

(This table is made in compliance with SJ/T11364 regulations.)
 ○: Indicates that this toxic or hazardous substances contained in all the homogeneous materials for this part, according to GB/T26572 is within the limit requirement.
 ×: Indicates that this toxic or hazardous substance contained in all the homogeneous materials for this part, according to GB/T26572, is over the limit requirement.
 *Lead and cadmium are excluded in EU RoHS.

Usage deadline for environmental protection
 The number used in this logo is based on "Management Methods for Restricting Hazardous Substances Used in Electric and Electronic Products" and related regulations from People's Republic of China. It shows the product usage duration in years for environmental protection. After finishing a product usage, the product needs to be re-used or discarded appropriately following local law and regulations, complying with safety and usage caution.

产品中有毒物质的名称及含量

环保使用期限	产品	有害物质的名称及含量					
		铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
10	任选附件	×	○	×	○	○	○

(本表格依据 SJ/T11364 的规定编制。)
 ○: 表示该有毒有害物质在该部件所有均质材料中的含量均在 GB/T26572 标准规定的限量要求以下。
 ×: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 GB/T26572 标准规定的限量要求。
 (注) 铅和镉中的 "×", 因欧洲 RoHS 没限定, 故用 "○" 表示。

环保使用期限
 此标志的数字是根据中华人民共和国电器电子产品有害物质限制使用管理办法以及有关标准等, 表示该产品的环保使用期限的年限。遵守产品的安全和使用上的注意, 在产品使用后采取适当的方法根据各地法律, 规定, 回收再利用或进行废弃处理。

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 - IF THE DAMAGE RESULTS FROM CONNECTION TO ANY POWER SUPPLY OR TO ANY EQUIPMENT WHICH CCS Inc. DOES NOT MANUFACTURE OR DOES NOT SPECIFY FOR USE.
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