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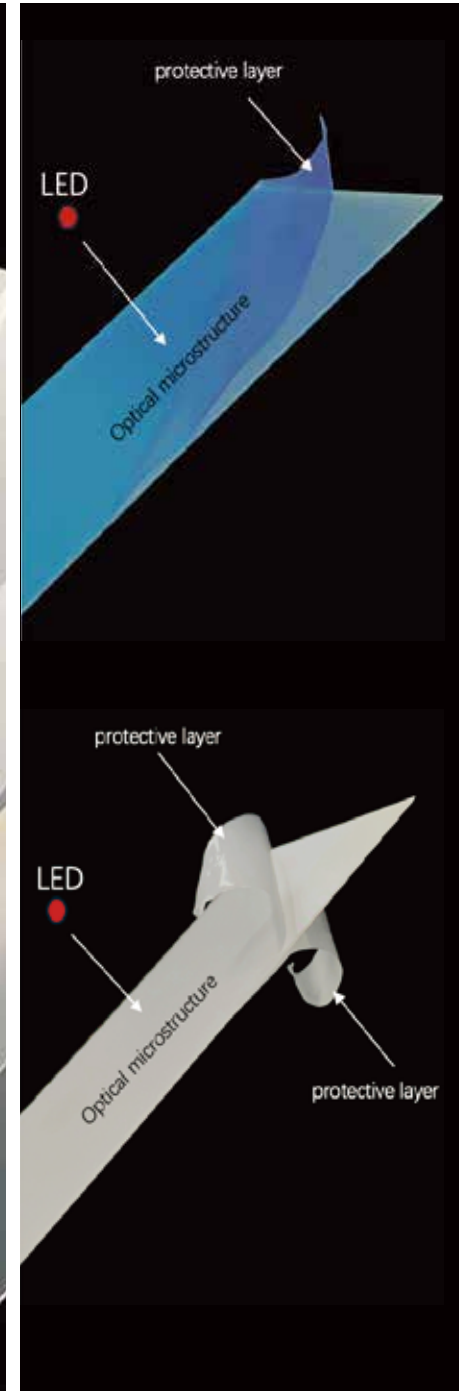
HERCULUX MOS OPTICAL PLATFORM

Nano Optical Film 2025Q3

Chengdu HERCULUX Photoelectric Technology Co., Ltd. is a national "little giant" high-tech enterprise committed to providing optical system solutions for LED lighting, UV LED curing, laser projection Film, AOI machine vision detection and other applications

PN	Material	Thickness	Efficiency	Specification
DF50	PET	0.3mm	90%	Diffuser, Diffuse level 50, uniform light, elimination of yellow edges, hiding of highlights, RGB mixed light
DF80	PET	0.3mm	88%	Diffuser, Diffuse level 80, uniform light, elimination of yellow edges, hiding of highlights, RGB mixed light
AG110	PET	0.3mm	82%	Anti-Glare, Suppressing light efficiency above 65 degrees
DF50@SA15	PET	0.35mm	82%	Single Asymmetric, Diffuser level 50 + Single Asymmetric 15°
DF80@SA15	PET	0.35mm	80%	Single Asymmetric, Diffuser level 80 + Single Asymmetric 15°
DA30	PET	0.3mm	93%	Double Asymmetric, Double Asymmetric 30°
DF80@DA30	PET	0.35mm	86%	Double Asymmetric, Diffuser level 80 + Double Asymmetric 30°
L40	PET	0.3mm	93%	Linear, Stretch to 40 degrees
L60	PET	0.3mm	93%	Linear, Stretch to 60 degrees
DF80@L40	PET	0.35mm	86%	Linear, Stretch to 40 degrees + Haze level 80
DF80@L60	PET	0.35mm	86%	Linear, Stretch to 60 degrees + Haze level 80

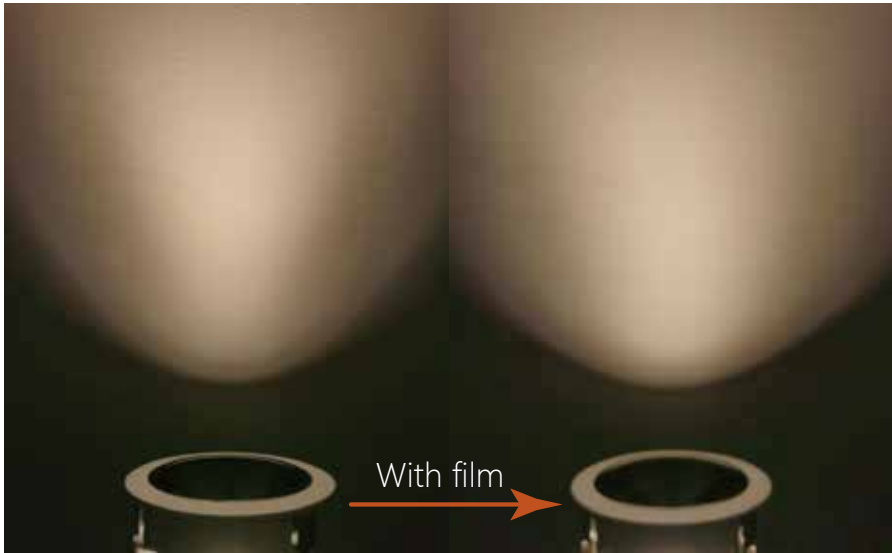
Installation:
The outermost surface of the lamp fixture (Considering factors such as the appearance and safety of the lamp, the installation also needs to take into account the actual situation of the lamp fixture).



Diffuser film

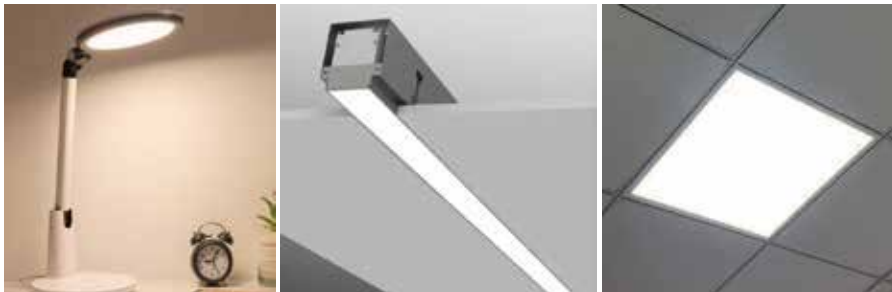
Diffuser Film, an optical diffuser film, achieves efficient light control through the precise processing of surface microstructures such as prism arrays or microlenses. When light passes through, these microstructures play a role in uniform diffusion.

Color mixing/uniform light/spot killing



Application

Flood lighting, Wall washing light, Down light, Spot light, Blackboard lamp.



Diffusion capability

Comparison of diffusion capabilities of lenses of the same size and different angles

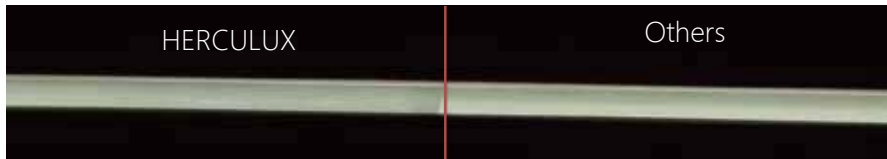
FWHM	LES	No film			With DF50			With DF80		
		FWHM (50%)	FWHM (10%)	Distribution	FWHM (50%)	FWHM (10%)	Distribution	FWHM (50%)	FWHM (10%)	Distribution
LENS		Dark 83								
10°	9.8	12°	21°		15°	29°		24°	48°	
15°	14.5	18°	30°		19°	37°		27°	55°	
24°	14.5	24°	37°		25°	43°		30°	57°	
36°	14.5	34°	51°		34°	56°		38°	69°	
50°	14.5	50°	74°		50°	80°		51°	93°	
70°	14.5	71°	99°		70°	106°		70°	120°	

Anti-Glare film

Reduce the glare and UGR of LED luminaires, Control the light with an angle greater than 65 degrees, and to increase the centre light intensity to improve visual comfort and lighting quality.



Comparison of Glare



Application

Suitable for large angles, lamps without lenses, such as panel lamps, indoor large street lamps, ceiling lamps, panel downlights. Anti-glare films are often used together with diffusion films.



Single Asymmetric film

Single Asymmetric Film can deflect the light in one direction, which can provide an excellent solution for indoor and outdoor wall washers, downlights, chalkboard lights, ceiling lights. The other side of the diffusion film, while deflecting the light, can make the light distribution very uniform, thus eliminating the problem of poor uniformity in the lighting area.

Application:

Flood lighting, Wall washing light, Down light, Spot light, Blackboard lamp.

FWHM	LES	No film			With DF80@SA15		
		FWHM (50%)	FWHM (10%)	Distribution	FWHM (50%)	FWHM (10%)	Distribution
LENS	Dark 83						
10°	9.8	12°	21°		22°X26°	57°X66°	
15°	14.5	18°	30°		25°X29°	65°X81°	
24°	14.5	24°	37°		27°X29°	66°X67°	
36°	14.5	34°	51°		33°X47°	78°X76°	
50°	14.5	50°	74°		43°X44°	125°X103°	
70°	14.5	71°	99°		57°X57.5°	130°X141°	

Double Asymmetric Film

Double Asymmetric film allows light to be deflected in two directions. The other side is a diffusion film, which can make the light very even on the wall while deflecting the light, and can eliminate the problem of poor uniformity in the lighting area.

Application:

Spotlights, Wall washing lights, Recessed lights, Linear lights, Shelf lights, - Three-proof lights.

FWHM	LES	No film			With DF80@DA30		
		FWHM (50%)	FWHM (10%)	Distribution	FWHM (50%)	FWHM (10%)	Distribution
LENS	Dark 83						
10°	9.8	12°	21°		34°X69°	149°X98°	
15°	14.5	18°	30°		38°X73°	154°X106°	
24°	14.5	24°	37°		36°X75°	146°X104°	
36°	14.5	34°	51°		40°X81°	148°X114°	
50°	14.5	50°	74°		49°X93°	156°X134°	
70°	14.5	71°	99°		60°X110°	164°X153°	
90°	/	90°	/		91°X113°	157°X148°	

Linear Film

Linear Diffuser Film can ensure to make the 0-180 degree direction light unchanged, while controlling the light in the 90-270 degree direction, so as to achieve an elliptical or rectangular light spot, with the products on the Starry Optical Platform, it can provide excellent solutions for indoor commercial lighting, office lighting, residential lighting and so on. At the same time, the other side of the diffusion film, while deflecting the light, can make the light distribution very uniform, thus eliminating the problem of poor uniformity in the lighting area.

Application:

Flood light, Wall washing light, Spot light, Linear lights, Shelf lights, Three-proof lights.

FWHM	LES	No film			With DF80@L40			With DF80@L60		
		FWHM (50%)	FWHM (10%)	Distribution	FWHM (50%)	FWHM (10%)	Distribution	FWHM (50%)	FWHM (10%)	Distribution
LENS	Dark 83									
10°	9.8	12°	21°		24°X40°	55°X72°		24°X50°	56°X86°	
15°	14.5	18°	30°		27°X42°	61°X79°		27°X53°	65°X93°	
24°	14.5	24°	37°		28°X43°	59°X77°		29°X53°	61°X91°	
36°	14.5	34°	51°		34°X47°	68°X86°		34°X57°	71°X98°	
50°	14.5	50°	74°		45°X56°	91°X104°		46°X67°	97°X116°	



Raw materials and processing size

Standard Specifications

Material: PET
Heat resistance: 95 °C
Thickness: **0.3 mm**
Width: 1200 mm
Maximum length: 1200000mm

Acceptable customization parameters

Material: PC
Heat resistance: 130 °C
Thickness: **0.55 mm**
Width: 1200 mm

Roll Mold: Made with ultra-precision nano lathe. Using high precision adamas cutting tool. Surface chromium plating process.



UV Curing Coating Laminating Machine: Coating width up to 1250mm. Maximum material thickness 0.5mm.



Bonded on PMMA

Standard Specifications

Material: PMMA
Heat resistance: 85°C
Thickness: **1.0mm**
Maximum length: 1200mm
Width: 600mm

Standard Specifications

Material: PMMA
Heat resistance: 85°C
Thickness: **2.0mm**
Maximum length: 1200mm
Width: 600mm

Length Slitting Machine: Maximum slice width 1000mm, Slicing accuracy ± 0.2 mm

