KIMOTO

Formable high performance diffusion film

OptSaver™ *PCL52*

3D lighting without limitations

Design freedom with leading optical performance

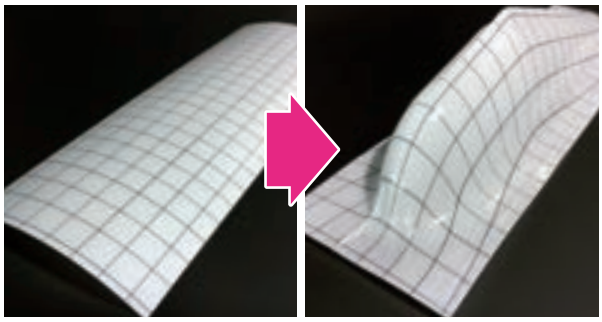
The PCL52 diffusion film is based on a thermo formable polycarbonate material. Excellent printability makes it ideal for integration in established IMD/FIM processes. The unique property of our diffusion coating lies in the stable light diffusion and hot spot hiding properties, even when formed and stretched. Over moulding is possible with standard IMD/FIM molding materials. Giving designers the biggest possible freedom for extraordinary projects.

OptSaver™ PCL52

This 3D formable light diffusion film produces natural light distribution with high efficiency for a wide variety of applications in LED lighting and printed electronics.

1 3D design freedom

The high temperature resistance of PCL52 allows the use of decoration as well as conductive inks, designed to be stretched up to 200% for unique 3D forms.



＊1 square 10 mm

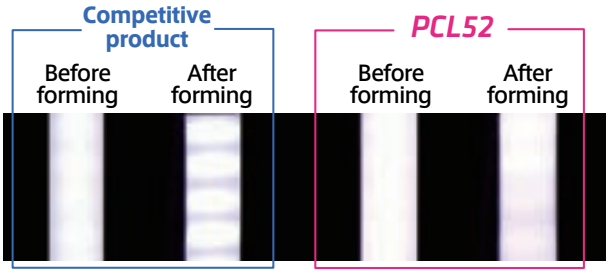
2 Excellent diffusion and hotspot hiding

The diffusion layer transforms point light sources in uniform lit areas with seamless gradations. Hotspots are effectively suppressed without excessive light loss for best in class efficiency.

＊High efficiency allows lower number of LEDs or reduced power

3 No Hotspots when stretched

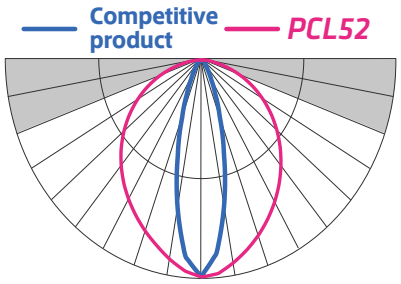
Excellent hot spot hiding is preserved after forming the 3D part (up to 200% stretch)



4 Stable diffusion angle and brightness

When thermo formed in a 3D shape the diffusion layer maintains its wide illumination angle and excellent brightness.

Luminance graph after forming



Lighting angle

5 Applications

For interior architectural lighting,white goods, automotive lighting and general printed electronics.

6 Physical properties

Item	Unit	Measuring method	Value
Total light transmittance	%	JIS K 7361-1	71
HAZE	%	JIS K 7136	99
b*	—	JIS Z 8729	2.8
60° gloss	%	JIS Z 8741	1.3
Elongation rate	%	KIMOTO Method	Over 200 %
Flammability test	—	FMVSS 302	Passed

＊Values shown are typical values and are not guaranteed.

7 Structure

- Light diffusion layer
- Polycarbonate film (250µm)
- Backing coating

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