

SOLARIS

PRECISION CAST
ACRYLIC SHEET

Solaris™ Optical Grade Colour Correction Cast Acrylic manufactured by our partner company PSC A/S Denmark. It's recognised for its outstanding optical and mechanical properties. It forms the ideal base material for display window solutions where optical performance, high light transmission, low weight, thickness uniformity and easy machining are of the essence. All Solaris Standard grades contain UV-absorbing material, blocking efficiently up to approximately 400 nm.

The **Solaris™ S range** is an endless range of transparent coloured optical filters used in a variety of applications for contrast enhancement, colour conversion or colour correction in displays.

Solaris™ S optical filters are used to control or manipulate the light emitting from a display. This is done by adapting the filter's transmittance characteristic, to the colour of the light emitted from the display.

They are therefore often used in applications in which contrast enhancement is required without loss of the full colour spectrum. Selective filters are designed to only transmit specific wavelengths of the light, i.e. specific colours. They are especially suitable for applications requiring colour correction and contrast enhancement of monochrome displays.

Colour:

More than 60 standard colours are available within the Solaris™ and the Solaris™ LS, DS, VFD and IR range.

Colour Matching:

Panel Graphic also offers a colour matching service.

Customer-specified colour references can be matched and produced accordingly. Either by matching a reference colour sample or by creating a colour filter which changes the colour of a known light source to the desired colour or chromaticity.

Working with our Polymer Chemists & their proprietary computer based C&L simulation software, we can calculate and create coloured filters and Colour Conversion Filters meeting almost any customer specified colour or chromaticity target.



Casting



Colour Matching



Application -
Window for casino chip counter*

*2.0mm Solaris S728 VFD colour conversion filter / dense black reverse print detail to rear / 3M adhesive gasket and white logo / encapsulated with Optiguard 60 Non-Glare Hardcoat



TECHNICAL DATA

MECHANICAL PROPERTIES

Parameter	Test	Values
Tensile Strength (Rupture)	DIN 53455	65-68 Mpa
Elongation	DIN 53455	3-4%
Flexural Rupture Strength	DIN 53452	120 Mpa
Compressive Strength	DIN 53454	125 Mpa
Impact Strength	DIN 53453	12 N/mm
Modulus of Elasticity	DIN 53457	3000 Mpa
Hardness	DIN 53456	175 N/mm

THERMAL PROPERTIES

Parameter	Test	Values
Specific Heat	-	1.46 J/g°C
Heat Stability - Vicat (3.0mm)	DIN 53460	115°C
Linear Thermal Expansion Coefficient	VDE 0304	0.08mm/m°C
Thermal conductivity	-	0.186 W/m K
Forming Temperature	-	150 to 170°C

ELECTRIC PROPERTIES

Parameter	Test	Values
Dielectric Strength	DIN 53481	40 Kv/mm
Volume Resistivity	DIN 53482	10 15 Ohm cm
Dielectric Constant	DIN 53483	3.4
Dissipation Factor	DIN 453483	0.06

OTHER PROPERTIES

Parameter	Test	Values
Density	DIN 53479	1.18-1.19 g/cm
Water Absorption	20°C in 34h	0.17%
Light Transmission (Clear)	450-900 nm	92%
Refractive Index	-	1.49
Fire Behaviour	UL94	HB

PRODUCT AVAILABILITY

Product Thickness:	0.5mm - 4.0mm (other thicknesses available on request)
Product Dimensions:	1500mm x 1000mm

MECHANICAL PROCESSING

Sawing, CNC milling and laser cutting into desired size and shape, optimized for application-specific needs.

SURFACE TREATMENT

Optiguard™ surface treatments can be applied to all Solaris™ materials.

