ACRILICO COLATO CRYLUX® Optima

CRYLUX

1. PRODUCT IDENTIFICATION

CRYLUX® Optima is a polymethylmethacylate cast sheet specially designed to be used with LED light in advertising and sign industry.

2. CHARACTERISTICS

LED lighting has several advantages in front of other lighting sources, for this reason LEDs have been replacing traditional lighting sources in some applications. Some of LED lighting advantages are listed below:

- Low power consumption
- Low voltage; reduce danger during manipulation, easy to comply legislation.
- Low maintenance
- Long lifetime
- High mechanical resistance
- Cool light, no thermal damage
- Wide range of LED types (light intensity, lighting angle, etc…)

CRYLUX® Optima is a new range of colours which have been designed to be used with LED light. These colours have adjusted light transmission to the wavelength of the light emitting diode. This allows to optimise the number of LED used to get an specific light intensity.

CRYLUX® Optima has a high light diffusion providing a perfect light spread through the sheet and avoiding disturbing shadows.

3. APPLICATIONS

- POP displays
- Signs
- Publicity

4. FABRICATING AND FINISHING TECHNIQUES

CRYLUX® Optima sheets are as easy to handle as standard CRYLUX® material.
Sawing, drilling, printing, milling, mechanical polishing, thermoforming, hot bending do not offer any problems to this special product.
To avoid damage during transport and handling, they are supplied protected with PE film on both surfaces. For general information about handling CRYLUX®, please refer to the "USER GUIDE", available on request.

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5. TECHNICAL DATA

GENERAL			
Property	**Method**	**Units**	**CRYLUX®**
Density	ISO 1183	g/cm³	1.19
Water absorption	ISO 62, Method A	%	0.2
Rockwell Hardness	ISO 2039-2	M scale	100
MECHANICAL			
Property	**Method**	**Units**	**CRYLUX®**
Tensile Strength	ISO 527	MPa	75
Elongation	ISO 527	%	6
Tensile Modulus	ISO 527	MPa	3400
Flexural Strength	ISO 178	MPa	120
Flexural Modulus	ISO 178	MPa	3200
Charpy (unnotched)	ISO 179	kJ/m²	17
Charpy (notched)	ISO 179	kJ/m²	2
THERMAL			
Property	**Method**	**Units**	**CRYLUX®**
Vicat Temp. (VST/B 50)	ISO 306	°C	110
Specific Heat Capacity	ISO 3146-C-60ºC	J/g.K	2.16
Linear thermal expansion	ISO 11359-2	mm/mºC	0.07
Thermal conductivity	DIN 52612	W/m.K	0.19
Max. service temperature continuous use		°C	80
Max service temperature short term use		°C	90
Degradation temperature		°C	>280
ELECTRICAL			
Property	**Method**	**Units**	**CRYLUX®**
Surface resistivity	IEC 60093	Ω	10^{14}
Volume resistivity	IEC 60093	Ω x m	10^{15}
Electrical strength	IEC 60243-1	kV/mm	10
Dielectric strength	DIN EN 60243-1	kV/mm	30
Dielectrical dissipation factor 50 Hz	DIN 53483-2		0.06
Dielectrical dissipation factor 1 KHz	DIN 53483-2		0.04
Dielectrical dissipation factor 1 MHz	DIN 53483-2		0.02
Relative permittivity 50 Hz	DIN 53483-2		2.7
Relative permittivity 1 KHz	DIN 53483-2		3.1
Relative permittivity 1MHz	DIN 53483-2		2.7

6. COLOUR RANGE

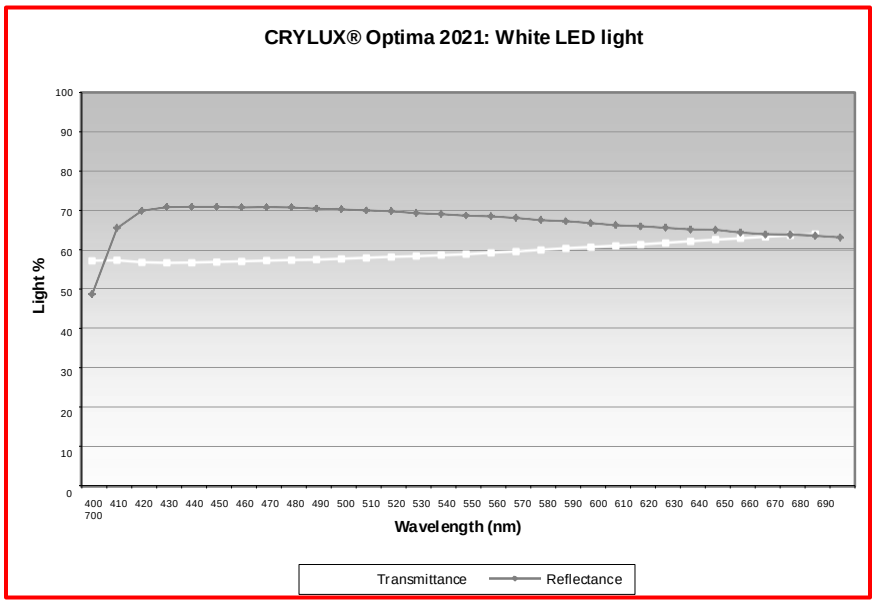
CRYLUX® Optima range is today formed by six different colours, new colours development will be available upon request.

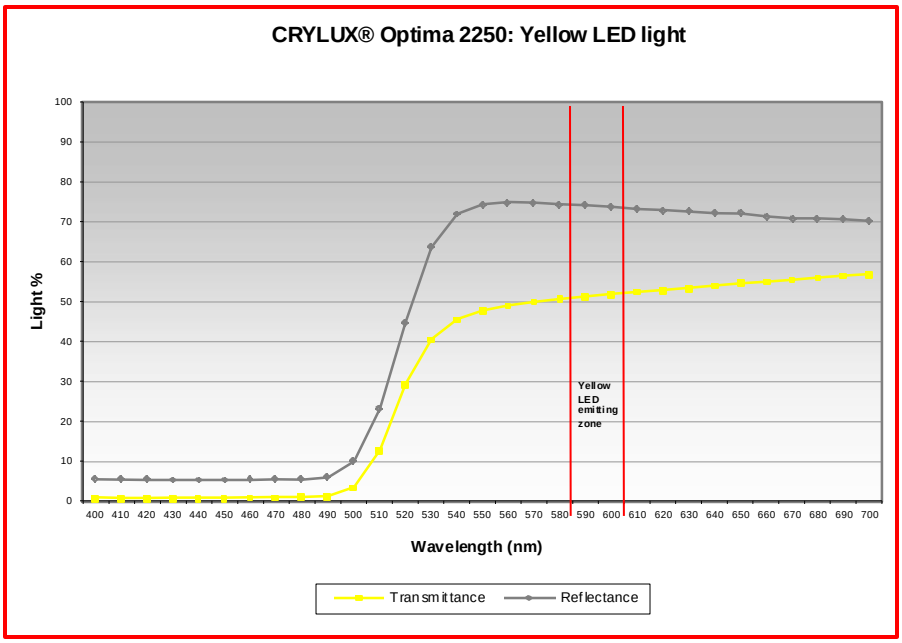
CRYLUX® Optima			Wavelength LED	Wavelength	Average LT%*
White	2021	LED	-	400-700	59.3
Yellow	2250	LED	587-594	570-610	51.3
Orange	2251	LED	606-610	580-620	62.5
Amber	2350	LED	617-624	600-640	62.1
Super-Red	2651	LED	633-645	630-700	58.6
True-green	2550	LED	520-525	500-530	36.3
Blue	2851	LED	464-469	400-480	50.7

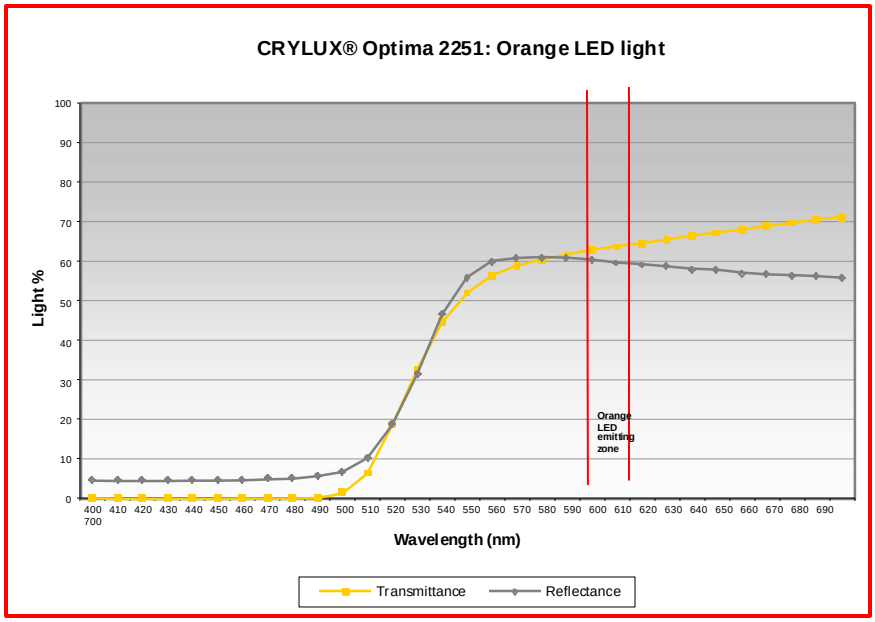
* Values are measured in 3mm, average value in the wavelength of light (LED)

6.1. COLOUR CURVES

CRYLUX® Optima colours have been designed to have a higher light transmission but also a high light reflection to get good colour intensity. The results are nice and clean colours which keep colour intensity whereas the sign is lighted or not.







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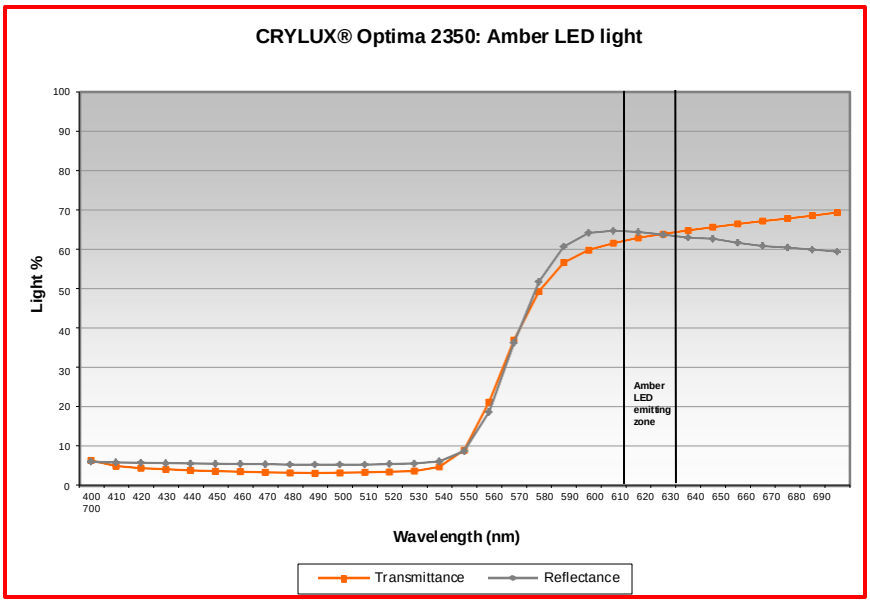

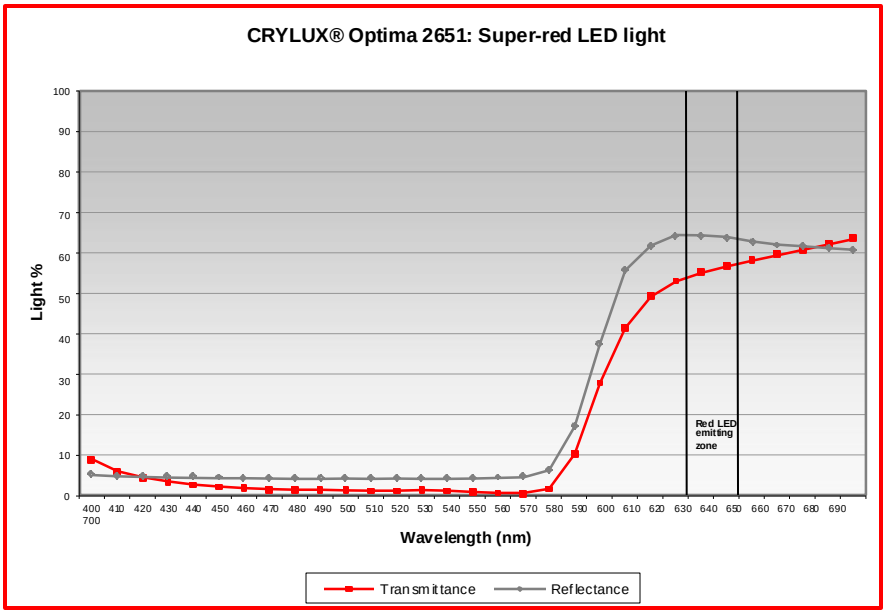

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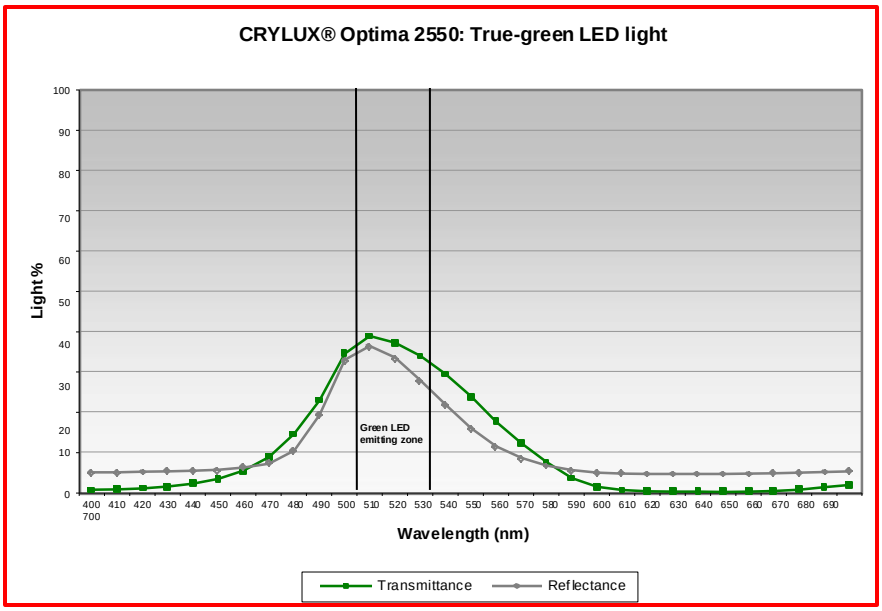

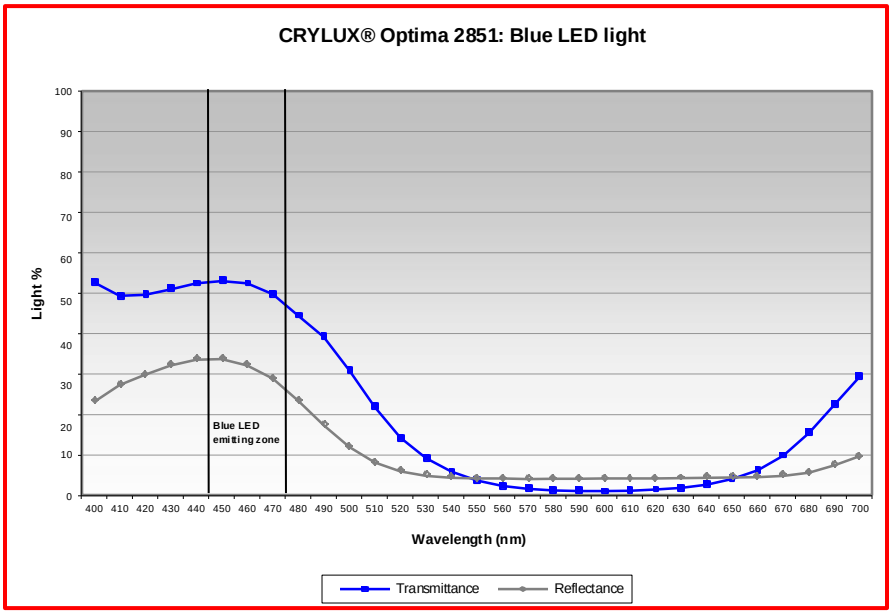

Note: These technical data of our products are typical ones; the actually measured values are subject to production variations.

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