

# NEW PRODUCT PROFILE

Sheffield Plastics  
A Bayer MaterialScience LLC Business

## MAKROLON® LUMEN XT

*Polycarbonate Light Diffuser Sheet for LED Fixtures*

More light diffusion options from us mean fewer design problems for you.

### Three levels of light diffusion:

- Simplify design considerations for new fixtures and for retrofit conversions to LED's
- Different levels also help maximize your fixture's performance

### State-of-the-art diffusion technology from Bayer MaterialScience:

- Provides hiding power for LED hot spots while maintaining high light transmission
- Increases the light uniformity throughout the lens
- Enhances uniformity with projected light



Lumen XT Diffusion Levels ( <i>Grade Designations</i> )	DIFFUSION (FWHM, degrees)		TRANSMISSION (ASTM D1003, %)	
	0.060" thickness	0.118" thickness	0.060" thickness	0.118" thickness
High (LC7)	86	135	77	61
Medium (LC5)	53	77	87	75
Low (LC3)	38	53	89	84

### Higher temperature resistance vs. acrylic:

- Enhances design versatility by allowing placement of LED's closer to the diffuser

### Temperature Resistance (ASTM D648)

Heat Deflection Temperature (°F)	MAKROLON® Lumen XT	Acrylic (PMMA)
@ 264 psi	274	181
@ 66 psi	287	190

### Far more break resistance than acrylic and glass:

- Provides toughness for fixtures in damage prone areas such as education and production facilities

### Impact Resistance (ASTM D3763)

	Total Energy (ft-lbs)
MAKROLON Lumen XT	49
Acrylic (PMMA)	2
Glass	0.5

**UL-94 V2 flammability rating: Affords improved flammability performance over acrylic.**



# MAKROLON® LUMEN XT

**Polycarbonate Light Diffuser Sheet for Design  
Versatility and Durability in LED Fixtures**

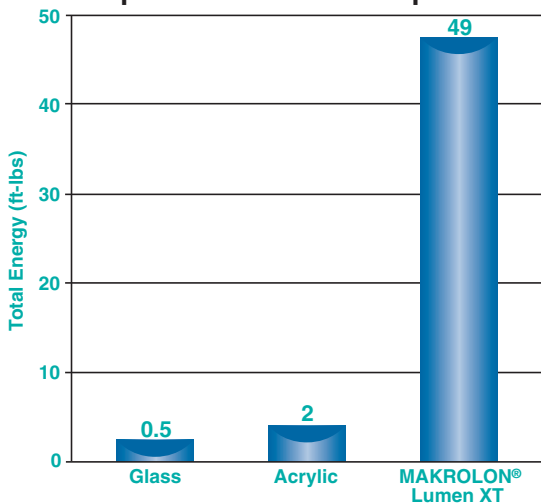
**Superior toughness makes MAKROLON Lumen XT ideal for:**

- Safety and security applications
- Damage prone areas such as detention facilities, schools, and institutions

**MAKROLON Lumen XT's exceptional temperature resistance allows far more freedom in fixture design:**

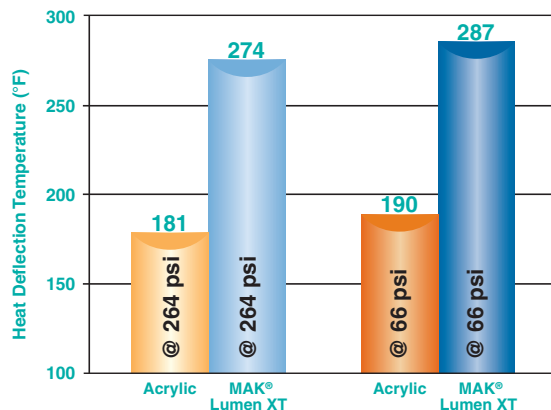
- LED's can be placed closer to the lens for thinner profile designs
- Higher temperature resistance minimizes risk of distortion due to temperature hot spots

**Impact Resistance Comparison\***



\* Instrumented Impact per ASTM D3763, sample thickness 0.118" nominal

**Temperature Resistance Comparison**



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