



## Acrylic offers several distinct advantages over glass for LED outdoor lighting applications

Acrylic's combination of durability, superior light transmission, lightweight nature, impact resistance, and affordability makes it an excellent choice for outdoor LED lighting applications compared to traditional glass enclosures.

# Genlyte Solutions Acrylic vs Glass

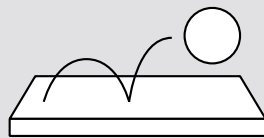
## Outdoor lighting applications



### Durability

#### Impact Resistance

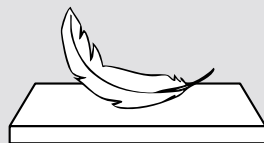
Acrylic has a much higher impact resistance than tempered glass, roughly 17 times more. It can withstand wear and tear without breaking or cracking, while glass is more fragile and can cause serious injury when broken. Acrylic is a safer and more durable alternative to glass.<sup>1,2</sup>



### Weight

#### Lighter Material

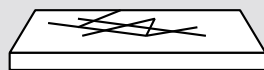
Acrylic is much lighter than glass, which simplifies installation and reduces the structural support needed for fixtures. This can lead to lower overall costs in both material and labor during the installation process.<sup>1,2</sup>



### Safety

#### Tempered Glass

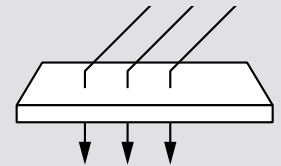
When glass breaks, it tends to shatter into big, uneven pieces with sharp, dangerous edges. Even tempered glass, known as "safety glass" shatters into small pieces that are difficult to clean, and while they aren't sharp, can still cause injury.<sup>1</sup>



### Light Transmission

#### Higher Light Transmission

Acrylic allows more light to pass through compared to glass, with a light transmission rate of over 92%. This characteristic enhances the efficiency of LED lighting by minimizing light loss, resulting in brighter and more effective illumination.<sup>2,3</sup>



### Cost-Effectiveness

#### Lower Cost

Acrylic is typically less expensive than glass, making it a more budget-friendly option for manufacturers and consumers alike. This cost-effectiveness does not compromise quality, as acrylic provides excellent performance characteristics suitable for outdoor use.<sup>1,2</sup>



- <https://advancedplastiform.com/acrylic-or-glass>
- <https://www.piedmontplastics.com/blog/acrylic-versus-glass>
- <https://www.fictiv.com/articles/acrylic-injection-molding>