

**ACRYLICS (AC):**

Acrylic is the generic name for polymethylmethacrylate or PMMA

**LIGHTING (LG)**

Lighting Grade Acrylic is best when the parts require excellent long-term resistance to yellowing. A.L.P. recommends a maximum operational temperature up to 80° Celsius to achieve optimum life. Colors are available per the price list options.

**LED (FC)**

LED Grade Acrylics have standard UV stabilizer package, which is recommended for use in SSL lighting applications. A.L.P. recommends a maximum operational temperature up to 80° Celsius to achieve optimum life.

**GENERIC**

This “Generic” acrylic classification indicates that the product is made from a variety of wide-spec acrylic materials and that no UL recognition is available. This wide-spec acrylic material is not recommended for use in high heat or HID applications. Certain products may be offered in wide-spec acrylic to provide the customer with cost savings. This “Generic” classification of materials may vary in color, diffusion, impact modifier amounts, transmittance, impact strength, etc. A.L.P.’s criteria for these variances is wide and A.L.P. shall be the sole judge of whether a material is defective based on these criteria. Material certification is not generally available.

**EDGE LIT**

Edgelit grade acrylics have limited to no additives and minimal edge color, and are only recommended for use in edgelit applications. A.L.P. recommends a maximum operational temperature up to 70° Celsius to achieve optimum life.

**MOON GLOW™ (MG)**

The Moon Glow™ designation indicates a customized pigment has been added to the PMMA resin. The appearance of Moon Glow products will be slightly translucent. Using products with a Moon Glow pigment can help to minimize glare and produce a desirable cosmetic effect. A.L.P. recommends a maximum operational temperature up to 70° Celsius to achieve optimum life.

**INTERFACE® (IAC)**

Interface white acrylic is a custom blend of diffusion and reflective materials that provides minimal color shift. A.L.P. recommends a maximum operational temperature up to 70° Celsius to achieve optimum life.

**LUMIEO®**

The Lumieo® designation indicates a concentrate is blended with a clear PMMA resin. The appearance of Lumieo products will be diffuse white. Mold configuration, machine type, and minor blending variations will result in modest differences in diffusion. LED hiding will vary slightly from part to part and this is to be expected with Lumieo. Using products with a Lumieo designation provides high transmittance with improved lamp hiding. A.L.P. recommends a maximum operating temperature up to 70° Celsius to achieve optimum life. If you have critical applications requiring substantially less variance, Frost material can be specified however this is usually at a significant cost and lead time penalty.

**IMPACT (DR)**

The Impact designation indicates an impact modifier has been compounded into the PMMA resin. The impact modifier is to increase the ability of the acrylic to withstand higher impact loads in specific applications where required. A.L.P. recommends a maximum operating temperature up to 70° Celsius to achieve optimum life.

**POLYCARBONATES (PC):**

**LIGHTING:**

Lighting Grade Polycarbonates key physical property is resistance to impact. It is virtually unbreakable. A.L.P. recommends a maximum operational temperature up to 90° Celsius to achieve optimum life. Polycarbonate should be used in areas where vandal resistance is a concern. The optical clarity of polycarbonate is degraded by ultraviolet radiation. UvaLex<sup>®</sup> coating and/or UV guarded lamps are recommended. Colors are available per the price list options.

**LED**

LED grade polycarbonates have higher transmittance values as minimal additive packages are used. These grade are for use with sources with little or no UV output, and limited outdoor exposure.

**REFLECTOR**

Reflector grade polycarbonates are custom developed for tool surface replication and coating compatibility. These grades contain limited release additives and can be black, white or clear.

**FROST**

Frost PC is ideally suited for applications requiring a softened appearance, without the use of white pigments. Frost PC uses beads within the PC to diffuse light while maintaining high transmittance. A.L.P. recommends a maximum continuous use of 80° Celsius with this material.

**UVALEX<sup>®</sup>**

Is A.L.P.'s proprietary treatment, which retards discoloration of polycarbonate due to UV from sunlight or lamps. UvaLex treatment is recommended for any outdoor or UV emitting lamp application with polycarbonate. In many cases UvaLex can double or triple the useful life of a polycarbonate part.

**SILICONES:**

**OPTICAL SILICONE**

This innovative molding material creates lenses that can sustain a 120°C operating temperature, excellent resistance to discoloration and are highly impact resistant.

**SHEET MOLDING COMPOUND (SMC):**

Sentry Elite, Sentry, EHB & TMW Housings are compression molded polyester compound with UL 5VA (Gear Tray types) or HB (Strip types) flame rating. F1 weatherability rating.

**ACETAL:**

Acetal has limited to no additives, is HB rated and is white in color. A.L.P. recommends a maximum operational temperature up to 70° Celsius to achieve optimum life.

**POLYSTYRENE:**

A.L.P. uses crystal polystyrene in the production of eggcrate louvers. This material is rigid, easily fabricated to different cut sizes and lower in cost than acrylic. A.L.P. adds either white or black styrene color concentrate to achieve the target color. A.L.P. recommends a maximum operational temperature up to 70° Celsius to achieve optimum life. White polystyrene is subject to color change if exposed to substantial UV. Most LED sources produce little or no UV.

**DIE CAST ALUMINUM:**

A.L.P. uses A380 in the manufacturing of Die cast products.

**STEEL (Gear Trays/Driver Trays):**

White, pre-painted cold rolled steel

**IMPORTANT NOTICES:**

1. All materials are subject to accelerated degradation when improperly applied. Exceeding recommended temperature limits, exposing to concentrated UV, chemicals or physical damage will result in decreased life and performance.
2. In the case of a conflict between customer drawings of A.L.P. proprietary products and A.L.P. drawings and specifications, A.L.P.'s version will govern.
3. All specifications are subject to change without notice. Please contact A.L.P. Technical Services Department for the latest material information by phone 231-547-6584 or e-mail [engtech@alplighting.com](mailto:engtech@alplighting.com).

**USE OF LENSES AND REFRACTORS WITH METAL HALIDE LAMPS**

Metal halide lamps are prone to violent end of life failure which can result in pieces of hot arc tube segments landing on the lens. NEMA Lighting Systems Division has published a document "Best Practices for Metal Halide Lighting" and NEMA has also issued a "Rationale" to UL for changing the 1598 standard. Our interpretation of these documents is that the best and safest solution for violent end-of-life lamp failures is the use of Type-O Open Rated metal halide lamps. Type-O lamps and exclusionary sockets have become more cost effective and are being commonly employed by lighting fixture OEMs on fixtures using bottom lenses.

We have also become aware that end users may fail to follow lamp and fixture manufacturer's guidelines for location of fixtures, maintenance, lamp life, etc. As a result, it is our recommendation that A.L.P. lenses not be used as lamp containment devices and that end users be notified that existing lamps should be replaced with Open Rated lamps. Our UL file E134182, which listed our "Polymeric Lamp Containment Barriers", was discontinued effective June 30, 2010.

**Trademark Information:**

Registered Trademarks of LexaLite Brand include:

LexaLite®, Lex-Efx Light Control Film®, Reflexor®, Interface®, LiteLid®, Little Lindy®, The Lindy®, UvaLex® and Lumieo®.

Trademarks of LexaLite include:

Moon Glow™, Dur-iSil™ and SilOptic™.