

Canovelles, September 2026

The company Mercantil Luz Negra, S.L. with registrated office in  
C/Carles Buigues 13, Polígono Industrial Can Castells, 08420 Canovelles (Barcelona, Spain)

# CERTIFIES

That the following products described below have carried out the relevant technical tests according to the data:

Product reference: **18.076**  
Product name: **Frosted microprismatic polycarbonate cover easy-on**

Diffusive, high-viscosity polycarbonate, with MVR 7, UV stabilization and flame retardancy (V-2 at 0.75 mm). It offers improved light transmission and good color stability under heat exposure. It has been developed for diffusive LED applications.

## MECHANICAL PROPERTIES

| Property                         | Typical Value | Unit | Standard |
|----------------------------------|---------------|------|----------|
| Tensile Stress, yield, 50 mm/min | 63            | MPa  | ISO 527  |
| Tensile Stress, break, 50 mm/min | 65            | MPa  | ISO 527  |
| Tensile Strain, yield, 50 mm/min | 6             | %    | ISO 527  |
| Tensile Strain, break, 50 mm/min | 100           | %    | ISO 527  |
| Tensile Modulus, 1 mm/min        | 2300          | MPa  | ISO 527  |
| Flexural Stress, yield, 2 mm/min | 94            | MPa  | ISO 178  |
| Flexural Modulus, 2 mm/min       | 2150          | MPa  | ISO 178  |

## IMPACT PROPERTIES

| Property                     | Typical Value | Unit                   | Standard   |
|------------------------------|---------------|------------------------|------------|
| Izod Impact, unnotched, 23°C | 326           | cm-kgf/cm              | ASTM D4812 |
| Izod Impact, notched, 23°C   | 76            | cm-kgf/cm              | ASTM D256  |
| Tensile Impact, Type S       | 557           | cm-kgf/cm <sup>2</sup> | ASTM D1822 |
| Falling Dart Impact, 23°C    | 1728          | cm-kgf                 | ASTM D3029 |

## THERMAL PROPERTIES

| Property                                    | Typical Value         | Unit   | Standard       |
|---------------------------------------------|-----------------------|--------|----------------|
| Vicat Softening Temp., Rate B/50            | 144                   | °C     | ASTM D1525     |
| HDT, 0.45 MPa, 6.4 mm, unannealed           | 137                   | °C     | ASTM D648      |
| HDT, 1.82 MPa, 6.4 mm, unannealed           | 132                   | °C     | ASTM D648      |
| CTE, -40°C to 95°C, flow                    | $6.84 \times 10^{-5}$ | 1/°C   | ASTM E831      |
| Specific Heat                               | 1.26                  | J/g-°C | ASTM C351      |
| Thermal Conductivity                        | 0.29                  | W/m-°C | ASTM C177      |
| Ball Pressure Test, 125°C ± 2°C             | PASSES                | -      | IEC 60695-10-2 |
| Vicat Softening Temp., Rate B/120           | 144                   | °C     | ISO 306        |
| Relative Temp. Index, Electrical            | 130                   | °C     | UL 746B        |
| Relative Temp. Index, Mechanical w/ impact  | 125                   | °C     | UL 746B        |
| Relative Temp. Index, Mechanical w/o impact | 125                   | °C     | UL 746B        |

## PHYSICAL PROPERTIES

| Property                              | Typical Value | Unit       | Standard   |
|---------------------------------------|---------------|------------|------------|
| Specific Gravity                      | 1.2           | -          | ASTM D792  |
| Specific Volume                       | 0.83          | cm³/g      | ASTM D792  |
| Density                               | 1.19          | g/cm³      | ASTM D792  |
| Water Absorption, 24 hours            | 0.15          | %          | ASTM D570  |
| Water Absorption, equilibrium, 23°C   | 0.35          | %          | ASTM D570  |
| Water Absorption, equilibrium, 100°C  | 0.58          | %          | ASTM D570  |
| Mold Shrinkage, flow, 3.2 mm          | 0.5–0.7       | %          | -          |
| Melt Flow Rate, 300°C/1.2 kgf         | 7             | g/10 min   | ASTM D1238 |
| Density                               | 1.2           | g/cm³      | ISO 1183   |
| Water Absorption (23°C/sat.)          | 0.35          | %          | ISO 62     |
| Moisture Absorption (23°C / 50% RH)   | 0.15          | %          | ISO 62     |
| Melt Volume Rate, MVR at 300°C/1.2 kg | 7             | cm³/10 min | ISO 1133   |

## OPTICAL PROPERTIES

| Property         | Typical Value | Unit | Standard  |
|------------------|---------------|------|-----------|
| Refractive Index | 1.586         | -    | ASTM D542 |
| Refractive Index | 1.586         | -    | ISO 489   |

## ELECTRICAL PROPERTIES

| Property                                | Typical Value | Unit     | Standard  |
|-----------------------------------------|---------------|----------|-----------|
| Volume Resistivity                      | >1.E+17       | Ohm-cm   | ASTM D257 |
| Dielectric Strength, in air, 3.2 mm     | 15            | kV/mm    | ASTM D149 |
| Relative Permittivity, 50/60 Hz         | 3.17          | -        | ASTM D150 |
| Relative Permittivity, 1 MHz            | 2.96          | -        | ASTM D150 |
| Dissipation Factor, 50/60 Hz            | 0.0009        | -        | ASTM D150 |
| Dissipation Factor, 1 MHz               | 0.01          | -        | ASTM D150 |
| Hot Wire Ignition (PLC)                 | 3             | PLC Code | UL 746A   |
| High Ampere Arc Ignition, surface (PLC) | 1             | PLC Code | UL 746A   |
| Comparative Tracking Index (UL) (PLC)   | 3             | PLC Code | UL 746A   |

## FLAME CHARACTERISTICS

| Property                                            | Typical Value | Unit | Standard       |
|-----------------------------------------------------|---------------|------|----------------|
| UL Recognized, 94V-2 Flame Class Rating             | 0.75          | mm   | UL 94          |
| Glow Wire Flammability Index 750°C, passes at       | 0.75          | mm   | IEC 60695-2-12 |
| Glow Wire Flammability Index 850°C, passes at       | 1.5           | mm   | IEC 60695-2-12 |
| Glow Wire Ignitability Temperature, 0.75 mm, by VDE | 875           | °C   | IEC 60695-2-13 |
| Glow Wire Ignitability Temperature, 1.5 mm          | 850           | °C   | IEC 60695-2-13 |
| UV-light, water exposure/immersion                  | F2            | -    | UL 746C        |

The product described has been tested according to the standards listed above. It is possible to use the CE marking.

The certificate is issued under the responsibility of the manufacturer (data issued by the manufacturer).

For the record and at request of the interested party, this certificate has been issued.

CE

Nuño Téllez  
CEO



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