

Case Study

LED module chain made from Pocan® S 7020



Figure 1 spaceLED used as bridge lighting

TridonicAtco Connection Technology is part of the TridonicAtco and Zumtobel Group, which operates internationally. The business areas of TridonicAtco Connection Technology are divided into installation technology, the lighting industry and household appliances. Great emphasis is placed on the high quality and safety of the products, a fact which is confirmed by more than 20 international inspection marks and marks of quality.

The “lighting industry” business sector produces polyamide terminal strips, screwless clamps for lamps, series connection units and transformer connections and variable connection systems for light-bands and LED applications. The “spaceLED” system is an LED module chain that is used to accentuate lines and edges (see Figure 1) and for back-lighting characters and letters on illuminated advertisements. The particular advantages of this system are that it provides even illumination with a small number of LED modules, the intensity of light can be modified individually for each module, there is minimal evolution of heat and it is simple to change the spaceLED modules (see Figure 2 for individual components).

Material: Pocan® S 7020
Producer: TridonicAtco, Austria
www.tridonicatco-ct.com
Industry: Electrical/Electronic

Consequently, high demands are made on the material used. For example, the connector and the socket must be optimally suited to each other with regard to their flexibility and dimensional stability, so that protection category IP54 (protected against dust and splash water) can be achieved. Furthermore, the materials must have a high level of UV resistance (for light colors) and good heat resistance. The electrical and flame retardance requirements must also be met by the plastics used.

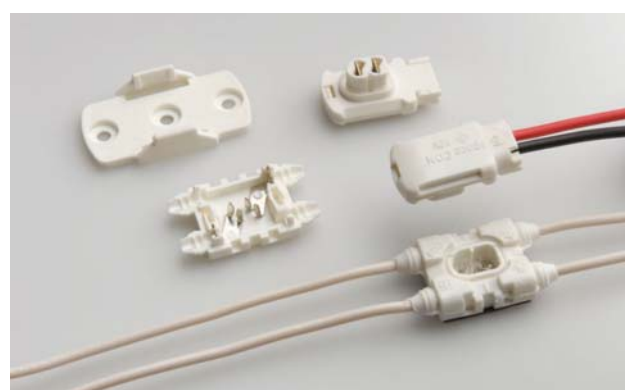


Figure 2 SpaceLED components made from Pocan® S 7020

With Pocan® S 7020, LANXESS manufactures a material for the “spaceLED” system. The non-reinforced polyester is elastomer-modified and flame-retardant and combines electrical, flame retardancy and mechanical properties in an optimal manner. These include:

- high flame retardance (UL 94 classification V-0 at 1.5 mm)
- maximum glow wire resistance (GWFI 960 °C)
- maximum tracking resistance (CTI 600 volt)
- excellent low-temperature impact strength (Charpy, unnotched 120 kJ/m² at -30 °C)
- isotropic shrinkage
- high dimensional stability

Pocan® is a registered trade name of LANXESS Deutschland GmbH

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