

MARIAN

LENS GASKET FOR LINEAR LED LIGHT ARRAY IN AN OUTDOOR LUMINAIRE

CUSTOMER

Designer and manufacturer of energy efficient lighting systems and retrofit lighting solutions

PART

Bonding and sealing lens gasket

MATERIAL

3M™ VHB™ Foam Tape in White

MARIAN ADVANTAGE

Material expertise and recommendation; Highly technical design and manufacturing capabilities

CHALLENGE

The customer was designing a luminaire containing a linear LED array with a polycarbonate optic for optimal light distribution. The luminaire in this application story was an outdoor area light with a ten year warranty. The design required that the LED arrays be bonded and sealed between the clear PC lens and the reflector. This outdoor luminaire would be exposed to a wide range of environmental elements. The gasket was required to provide reliable sealing of dust, debris and moisture for the long life of the product. Lastly, due to the heat generated by LED technology, the customer was required to use materials that helped it meet “UL Listed for Wet Locations”.

SOLUTION

Marian recommended 3M™ VHB™ Foam Tape gasket in white. The viscoelastic nature of this acrylic foam made it the ideal solution to seal the linear LED array. The acrylic chemistry of the adhesive and foam provided outstanding bond strength and durability. 3M™ VHB™ meets UL 746C, which met the UL requirements of the product. The aesthetic of the white tape behind the clear PC lens was much more visually pleasing than other dark colored gasket materials being considered.

Marian designed and manufactured an intricately designed gasket with the 3M™ VHB™ material in order to tightly and precisely fit the design of the arrays. Marian supplied the final parts kiss-cut to a roll, easy for the assembly operator to pick and place.

CUSTOMER BENEFITS

- Marian recommended 3M™ VHB™ Foam Tape. With its durability and robust performance the customer could be confident that this gasket will last the long life of this LED Lighting Product. Additionally, it met the important UL specs required of this LED lighting product.
- The customer was able to offer a visually appealing lighting product due to the white color and thin bond lines of the VHB material.
- The customer received the finished gaskets from Marian precisely kiss-cut on a roll. The VHB gaskets were easy to pick off of the liner and place into the final assembly.

