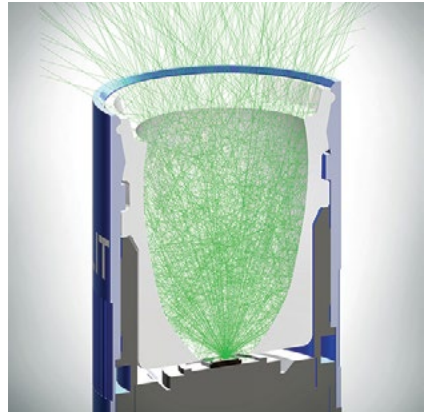


40° White reflector

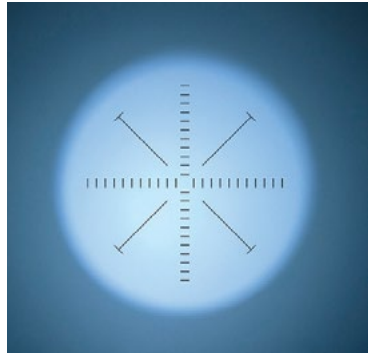
When discussing reflectors, it is common to think of mirrors or polished metal surfaces. These devices, which allow one to see a reflected image, are called specular reflectors. However, when the objective is not to image, but rather to just reflect light, a higher amount of light can actually be reflected from a white surface, which is a diffuse reflector. Diffuse reflection can happen in the volume of the reflector as well as at the surface.



A practical use of this reflective material is shown with the 40° white reflector part. The effect is similar to a Total Internal Reflection lens, but it does not rely entirely on surface reflection to guide the light. The curved shape and lip at the end help reduce stray light outside the desired pattern. This shape, with a negative draft angle, helps achieve a wider beam angle than conventional designs with specular reflectors. Surface patterning is easily accomplished in the mold and can be used to produce more diffuse reflectance.

Points to note:

- There is even light distribution with no hot spots or halo effect. It's much easier to read text under this light than with the traditional hot center aluminum reflector.
- This part enables higher system efficiency due to higher material reflectivity.
- Silicones enable molding in complex, yet flexible shapes.
- The complex shape of the reflector results in the mandrel being trapped in material during molding. The material flexibility allows it to be removed from the mold as one part, unlike incumbent materials, which may need to be welded together.



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