Lightguide Care and Accessories

Lightguide Care and Protection

Dymax offers a broad range of liquid and fiber optic lightguides. Our lightguides transmit UV and visible energy from a source mounted inside of a spot-curing system to the curing area. They are the most economical means for delivering high-intensity light to adhesives and coatings and are available in multiple lengths, diameters, and in single or multi-pole configurations.

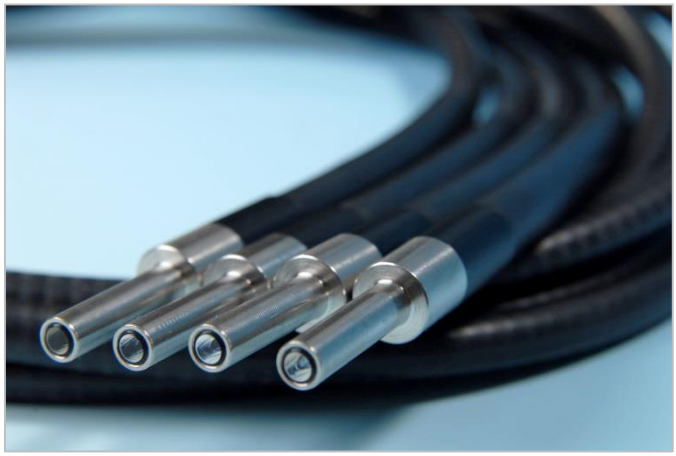

Figure 1. Multi-Pole Liquid Lightgudie

Because lightguides are a critical part of the curing process, it is important that they are maintained properly to ensure optimum performance and consistent curing results. Lightguides should be periodicly cleaned to remove foreign matter and deposits caused by outgassing. Cleaning the lightguide ensures that the maximum curing energy transmission is achieved.

One common cleaning method is to scrape adhesive and other residue from their light-emmitting end. This can be done using a plastic or metal razor blade. When using this method, it is important to take care not to scratch or damage the light-emmitting end of the lightguide as this can reduce light transmission to a lower level than the original adhesive residue did. For more details about cleaning lightguides, please see the instructions available in INST001.

In addition to periodic cleaning of your lightguide, Dymax also recommends the use of two accessories to to keep your lightguide in top condition: a lightguide end protector (PN 40539) and the end-of-wand heat-reducing filter* (PN 35301). Both accessories protect the lightguide by reducing heat and glare. Unfortunately each also attenuates the intensity, resulting in shorter useable lamp life. The end-of-wand heat-reducing Filter attenuates the intensity by approximately 30%, while the lighguide end protector attenuates light intensity by only 12%.

**Please note that this lightguide filter is not compatible with the BlueWave® 200 spot lamp.*

Figure 2. Lightguide End Protector (Side View)

Figure 3. End-of-Wand Heat-Reducing Filter (Left) & Lightguide End Protector (Right)

Lightguide Accessories

Lightguide Simulator

To ensure optimum lightguide performance, Dymax recommends using a lightguide simulator (PN 38408) to monitor the curing process. A lightguide simulator can be used to accurately measure the direct light intensity from the system's energy source. When testing, intensity levels should be measured at the light-emitting end of the lightguide and then compared to a measurement taken with the Lightguide Simulator. Subtracting the lightguide intensity measurement (from the light-emitting end) from the lightguide simulator's intensity measurement permits calculation of the percentage of lightguide degradation. If intensity appears to be low, the most common cause is a dirty lightguide tip.

Figure 4. Lightguide Simulator

Angled Terminators

Angled terminators attach to any Dymax 5-mm diameter liquid lightguide. They provide significant value when delivering curing energy to hard to reach and semi-hidden bond lines. They can also enhance worker safety for handheld applications by blocking UV energy below 340 nm. Angled terminators are available angled at 60 or 90 degrees.

Figure 5. Angled Terminators

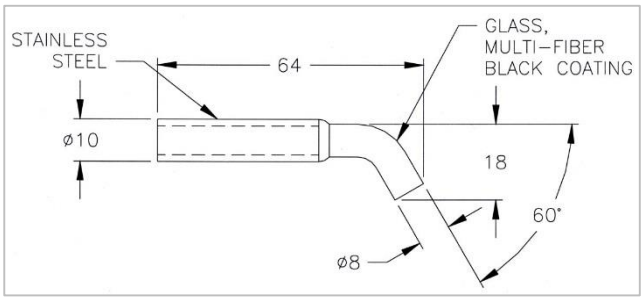

Figure 6. Angled Terminator PN 38042

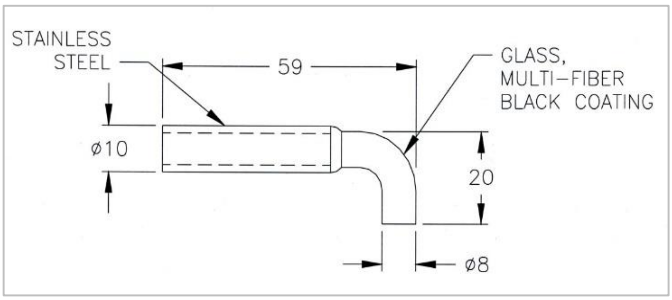

Figure 7. Angled Terminator PN 38049

Rod Lenses

Rod lenses refocus the UV light emitted from a spot lamp to create a very uniform curing area. Dymax currently offers the following rod lenses:

- PN 38698 – 2.75" - 5" Rod Lens (A)
- PN 38699 – 0.75" - 2" Rod Lens (B)
- PN 41148 – 5 mm Rod Lens (C)
- PN 41256 – 3 mm Rod Lens (C)

Figure 8. Rod Lens

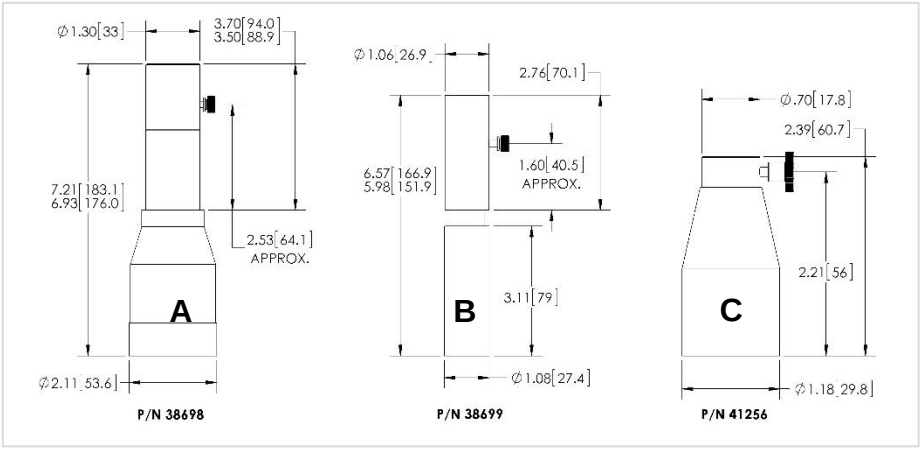

Figure 9. Rod Lens Dimensions

For applications such as positioning fiber optic components, stands are available to reduce movement.

Part Numbers:
38680 - Rod Lens Stand Only
38931 - Clamp Only
38968 - Rod Lens Stand & Clamp

Figure 10. BlueWave® 200 with Rod Lens and Stand

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