



If you only consider functionality, BlackLite tubes can be used without painting at all. The impregnated phenolic resin makes them durable and water resistant. However, many scope builders want their telescope to look nice, too. Following the guidelines below will produce an attractive and professional looking tube.



**Important:** Sanding and painting your tube will generate small particles and fumes which you should not breathe. It is important to perform this work outdoors or in a well-ventilated area, and also be sure to wear an appropriate mask when sanding and painting.



## Simple Finishing: Prime & Paint

BlackLite tubes are made with butt-jointed spiral wraps (not overlapped joints like plain cardboard tubes), and this minimizes the appearance of the spiral groove. Simply priming and painting the tube with spray paints will produce good results, and is the fastest way to finish the tube's exterior. It's best to paint the tube before drilling any holes or cut-outs in it. Mask the ends of the tube with paper and tape to prevent sanding dust and paint overspray from contaminating the flocked interior. While not mandatory, light sanding with 220-grit sandpaper (or finer) before and after priming will improve the final finish and gloss.

Stand the tube on one end, and spray on a light-colored primer. Superior results are obtained with so-called filler-primer products, such as Dupli-Color® DPP104 or Plasti-kote® T235 light gray. Filler-primers apply thicker so they fill voids better, and they can be sanded. Filler-primers improve the appearance of the spiral groove, though they will not make it disappear entirely. Let the primer dry for at least one hour before sanding or painting.

The most durable paint to use is an enamel type. High quality enamel paints will dry the hardest, but they also take the longest to fully cure. Usually two to three light coats from a spray can will sufficiently cover the tube. Allow the tube to dry for at least one full day before handling it, and it may take several days before the paint feels completely dry to the touch.



DupliColor or Plastikote filler-primer products work well on BlackLite tubes

## Filling the Spiral Grooves and Paint

If you have an electric palm sander, consider taking the time to fill the spiral grooves before you paint. Fill the spiral groove with Latex-based wood filler or body shop fillers (both are available in small tubes for easy application). Resist the temptation to scrape the filler material off with a straight edge. After it dries completely, sand the grooves with the palm sander using 120-grit, followed by sanding the entire tube exterior with 220-grit or finer. Examine the groove for voids or depressions, and repeat this process where needed. Prime and paint per the instructions above.

## Using Automotive Paints

Automotive grade paints are the best possible due their high hardness, gloss, and durability. While most people don't have access to the equipment needed to spray on automotive grade paints, some customers tell us they've had success in getting a local body shop to paint their tube for them. If you do have a professional paint the tube, make sure the ends are masked off. BlackLite tubes can endure paint baking up to 200 °F.

## Tube Color

If you ask around, you'll probably get different advise on what is the best color for a telescope tube. To some degree, the color you choose does affect how fast the tube radiates heat off into outer space at night, and in theory it could affect the wall temperature of the tube. In practice, this effect can be ignored if the tube is made of a material with a high thermal insulating property like BlackLite tubes. The *inside* wall temperature will be at the same temperature as the ambient air even if the outside wall drops a few degrees below ambient. So, go ahead and paint your tube any color you wish.

## Technical Assistance

If you have a special application, or a question not covered in this paper, feel free to call for technical support at (614)-785-0245 (9:00-5:00 EST).