

Design Guide

If you have checked the pricing on fiber optic cable, you know how expensive it is. If you spend a little time designing your project, you will find that you can save hundreds - even thousands of dollars!

Here are a few things to keep in mind:

- 1) Where you place the illuminator is very important. The closer to your project, the better. Remember, however, if you place the illuminator in a space that is not air conditioned, you may reduce the lamp life from 10,000 hours to 8,000 hours or even less. In all cases you must have **AT LEAST** 50 cubic feet of free air per minute for each illuminator. A dust free area is recommended as well. Wherever you place the illuminator, allow room to work on the illuminator. If you need more than one illuminator, don't place the illuminators close together, two feet between them is fine. Take into consideration that the illuminator can get hot!
- 2) When you measure the length of cable that you will need, add 18 inches as a "service loop". In many cases, it's cheaper to buy a second (or third) illuminator rather than buy enough cable to reach all corners of your project from only one illuminator. If you want a starfield that changes color and twinkles at the same time, it can be done with the purchase of a special color wheel. If you want more than 750 "stars" in your starfield, use a double port illuminator that will handle up to 1,500 strands of cable. If your project is an exterior one, the largest port available (ST150) will handle 750 strands. The 75 watt exterior unit will handle 350 strands of cable at this time.
- 3) It's covered in the Fiber Guide, but it's worth going over again. The perceived "brightness" of your project is a subjective one. However, there are a few guidelines. A 75 watt illuminator is fine where the ambient lighting is low, such as a garden at night or a darkened home theater. But if you want to make an impact with your project in a mall or you have very long cable runs, then you will have to use the 150 watt illuminator. And don't forget to "loop" the cable for side emitting projects - that will double your light output! Also, the size of the cable directly correlates to the amount of light that is seen at your project. Think of the cable as a water pipe and you have the right idea. Solid core cable carries more light than stranded cable but is stiffer and harder to work with. So if you have some tight curves you have to negotiate, you might stick with the stranded cable.
- 4) Light can bring two spaces together and make spaces look bigger. Windows can become black mirrors at night. To balance outside light levels with those inside the home, illuminate features off the patio and surrounding areas. Uplight trees and shrubs by placing the fixture close to the trunk. Fixtures placed farther back from the tree or shrub can create dramatic shadows on surfaces behind the object. Use the light beam to create shadows, mark pathways, and driveways. Sconces light up walls to highlight textures.
- 5) When you plan your project, try to centrally locate the illuminator. Try to make the cables equal in length. If possible, keep runs to under 40 feet. If runs of over 40 feet are unavoidable, be aware that the fixtures on the shorter runs may appear brighter. To overcome this, plan on adding extra fibers on the longer run (example: for garden fixtures using 10 strands on the shorter runs, increase the cable to two runs of 10 strand or even one run of 30 strand for the longest run) You can adjust the light level by simply removing single fibers until the desired light level is achieved.

We hope this guide has helped you. Please feel free to call us if you have any questions about any of this or if something isn't covered. Thank you for coming to our site! We hope we can supply you with our fine products and be of service on this and any future projects you have.