
Subject: Re: Optics simulation with IDL?

Posted by [dmarshall](#) on Tue, 22 May 2001 14:31:17 GMT

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The light guides operate on the principle of total internal reflection which necessitates that the light-carrying core have a higher index of refraction than the outside cladding (for simple plexiglass/perspex the "cladding" is air). This is why covering it made the transmittance go down. Also the guide should be as straight as possible or bends being gradual instead of sharp.

Dave.

In article <3B0986A3.E97827AE@fz-juelich.de>, Jaco van Gorkom <j.c.van.gorkom@fz-juelich.de> writes:

> karri wrote:

>> On Mon, 21 May 2001, Pavel A. Romashkin wrote:

>>> karri wrote:

>>>>

>>>> My problem is that I have made a light guide to transfer the light from 5
>>>> leds to the front panel of a box. In this array the light leaks a lot from
>>>> one light guide to the other. I tried to fix this by putting opaque
>>>> material all around the guides but this approach reduced the intensity a
>>>> _lot_.

>>>

>>> Instead of using either language to simulate the case, mount the LEDs
>>> right onto the front panel of the box. This will save a lot of time.

>>>

>> ... It is just that the box designer wants to have oval blue light sources
>> spread out on a parabolic path around a front panel that only has curved
>> surfaces.

>>

>> Not flat green or red light sources in a straight row as I would make it.

>

> Just your luck again:)

>

> For optics simulation, go for some optics package. I have no experience
> there though.

>

> For your problem, I'd glue five blue leds to the inside of this flashy front
> panel. Or alternatively, try covering the guides with reflective material.
> Standard household aluminum foil should do for testing, and comes a lot
> cheaper, easier and faster than IDL.

>

> Have fun,

> Jaco
