

Importing LightTools® Libraries of OSRAM LEDs with Optics from LED Light for You Partners

Introduction

OSRAM Opto Semiconductors has several optical partners through our LED Light For You network. These partners have developed a number of optics for use with OSRAM LEDs, specifically the Dragon family, Diamond Dragon, and OSTAR. Osram OS has created LightTools® library files to model the far field output of LED plus Optic. The procedure for importing and using these models is described in this document.

Library Import Process

Library files can be found at <http://www.ledlightforyou.com/Services/Optical-Tools.php?id=20&lan=eng>. There are links to a number of *.zip files. Each *.zip file contains:

- Library (*.ent) file(s).
- A file depicting the orientation of the library
- CAD files (for mechanical package study only)

Next, refer to the file depicting the orientation of the rayfiles (typically named *_orientation.pdf or *_info.pdf). You will see a mechanical drawing of the LED plus lens, with an (x,y,z) axis system superimposed. This shows the orientation and location of the coordinate system relative to the optic.

To import the *.ent file into LightTools®, in the File menu, select “Restore Library...”. You will be prompted to select a file and, after selection, you will be prompted for command line input. It is recommended that the library be imported to the coordinate origin, with the +Z axis as the primary axis and +Y as the secondary axis. The command line sequence will be “xyz 0,0,0

[Enter] xyz 0,0,1 [Enter] xyz 0,1,0 [Enter]” (see Figure 1).

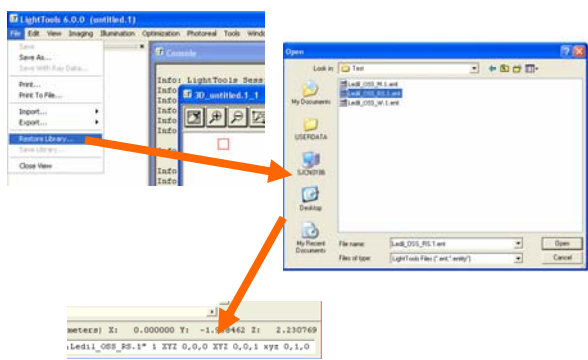


Figure 1. Import the library into LightTools®.

Library Contents

The library consists of detailed mechanical models of the LED and lens holder (if applicable), a non-functional model of the lens, and a surface source model with a far field apodization file (see Figures 2 and 3).

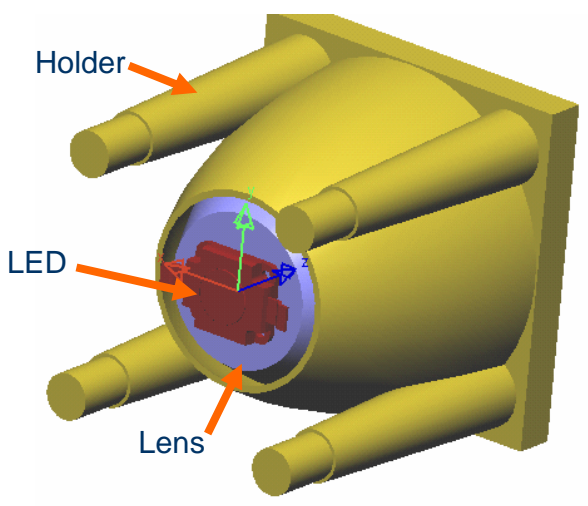


Figure 2. Mechanical components within the library.

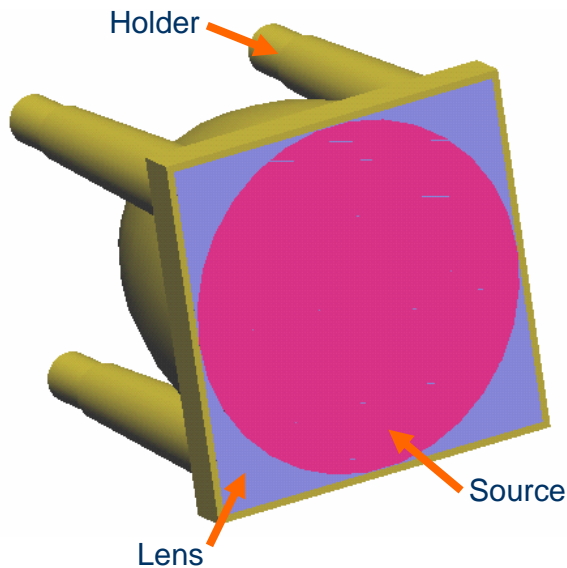


Figure 3. Library components, including source.

Considerations For Using the Library

Before using the library, it is important to consider:

- Ray Traceable setting of the library components
- Setting the source power/flux
- Spectral information

Ray Traceable Setting

The mechanical components are included for reference and do not influence the source model. To decrease ray tracing time, it is recommended that the Ray Traceable setting of these components be disabled (see Figure 4).

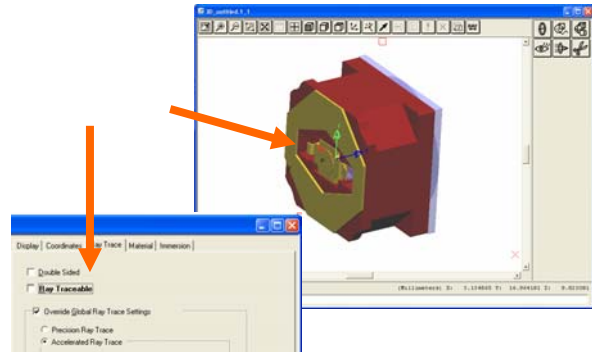


Figure 4. Ray Traceable setting for a mechanical component.

Flux Setting

By default, the flux setting for each source model is set to 1 lumen. Keep this in mind before using the library.

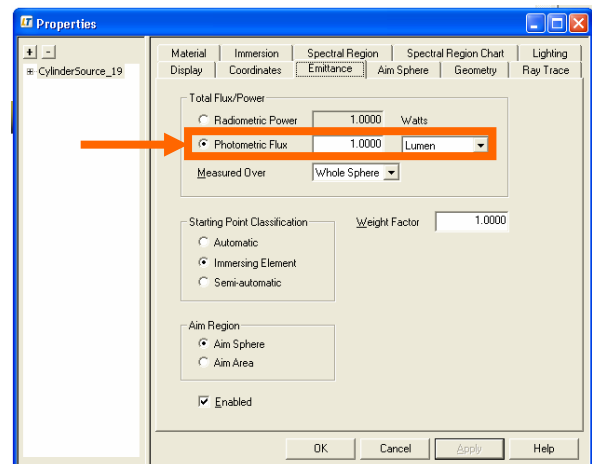


Figure 5. Flux setting.

Conclusion

The selection of optical libraries will continue to expand. Check with your Osram Opto representative for updates, questions, or comments.

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About Osram Opto Semiconductors

Osram Opto Semiconductors GmbH, Regensburg, is a wholly owned subsidiary of Osram GmbH, one of the world's three largest lamp manufacturers, and offers its customers a range of solutions based on semiconductor technology for lighting, sensor and visualization applications. The company operates facilities in Regensburg (Germany), Santa Clara (USA) and Penang (Malaysia). Further information is available at www.osram-os.com.

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