

# OptiFiber 2.2 Release Notes

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OptiFiber 2.2, August 2, 2016

## 1. Overview

Recently Effective Area has become more popular as a mode measure. Unlike some of the other mode measures, Effective Area can be defined, and makes sense, for any mode. In this release, the effective area is calculated for every selected mode, and the results are displayed in a table with the other mode measures. This release is the first version of OptiFiber for a 64 bit operating system. This release also fills a couple of omissions in the documentation.

## 2. New Features

### 2.1. OF - 2 Display Effective Mode Area in the Table

Calculate Effective Mode Area for all modes and display the result as a new column in the table in the Calculated Results dialog box.

### 2.2. Vector Mode Amplitude display

When vector modes were introduced in version 2.0, only one of the field components was displayed. For high index contrast waveguides, both field components can have significant values and therefore showing only one component is not very meaningful. Starting in version 2.2, vector modes will now be displayed by showing the electric field vector amplitude instead. The display will show the vector amplitude

$$\sqrt{E_x^2(x, y) + E_y^2(x, y)}$$

and that value will be normalized such that the maximum is 1.0.

## 3. Enhancements, Fixes, and Corrections

### 3.1. OF-3 Modal Index and Group Index are not defined

Modal Index and Group Index are used and displayed in OptiFiber, but they were not defined in the Technical Background. Definitions have now been written for these.

### 3.2. OF-4 Need Details about Polar Angle

In the Decomposition dialog box, when the Input field is Gaussian and the offset  $X_0$  is 0, it is possible to enter an angle in degrees in the Polar field. The manual now specifies that the input is from air.