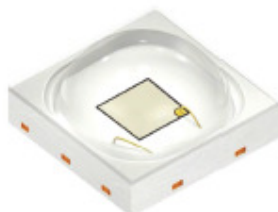
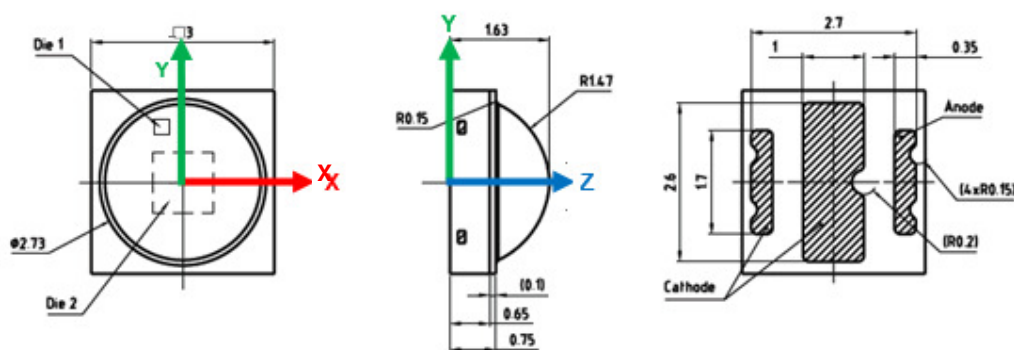


## Information for OSRAM rayfile data

GT\_QSSPA1\_13, OSCONIQ\_P3030 Color – True Green



### 1. Position of global coordinate origin vs. Package



The global coordinate origin is at the center of the package at bottom surface. The CAD model provided with this rayfile package has the same global orientation as the rayfile.

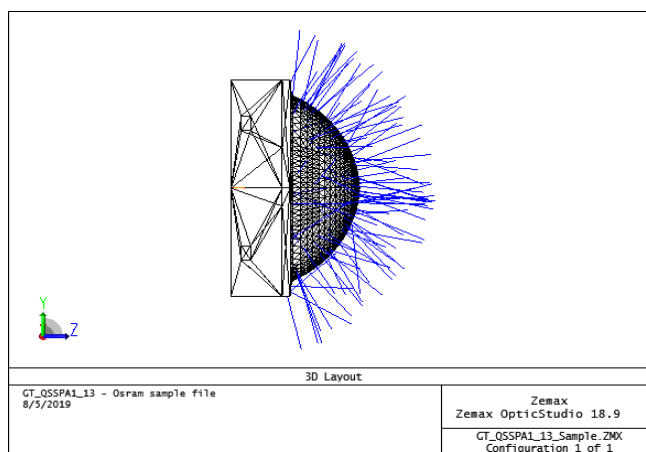
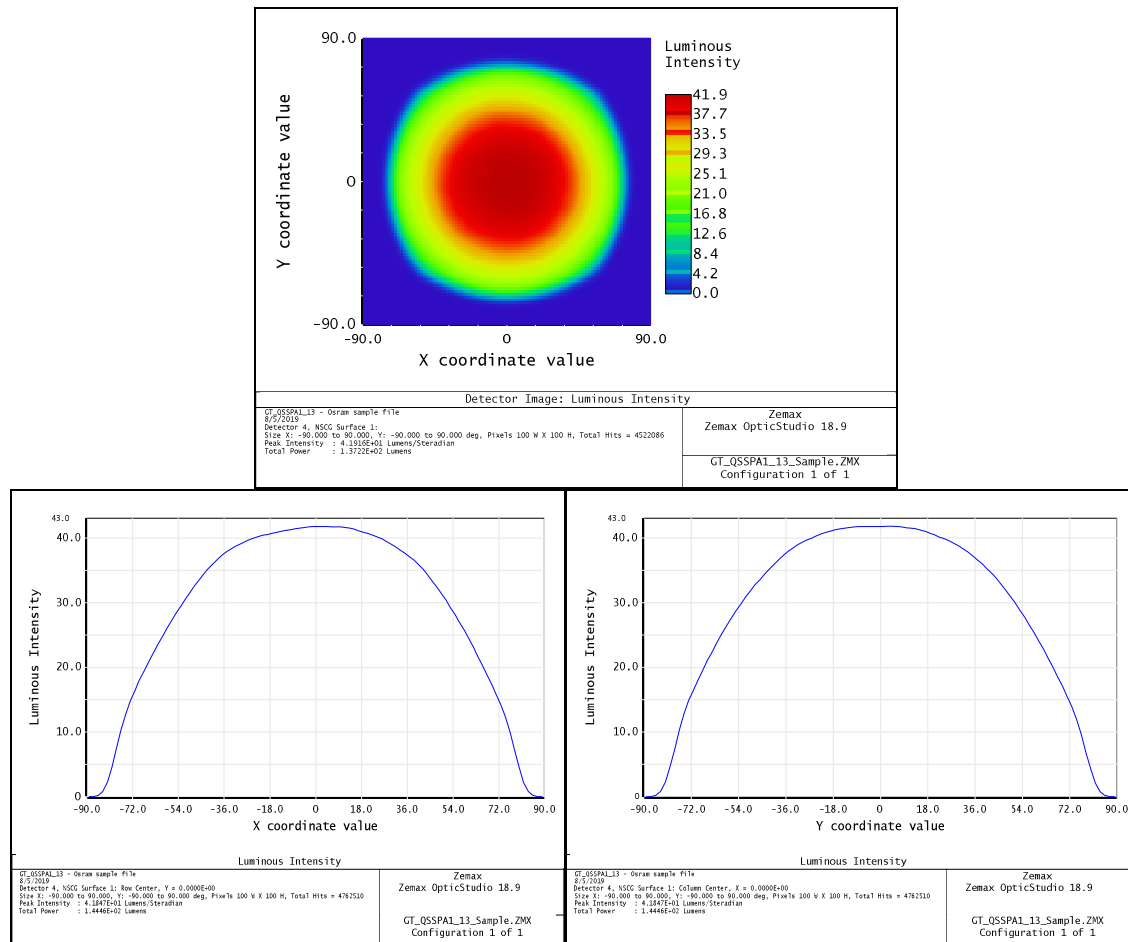


Fig. 1: Orientation of LED

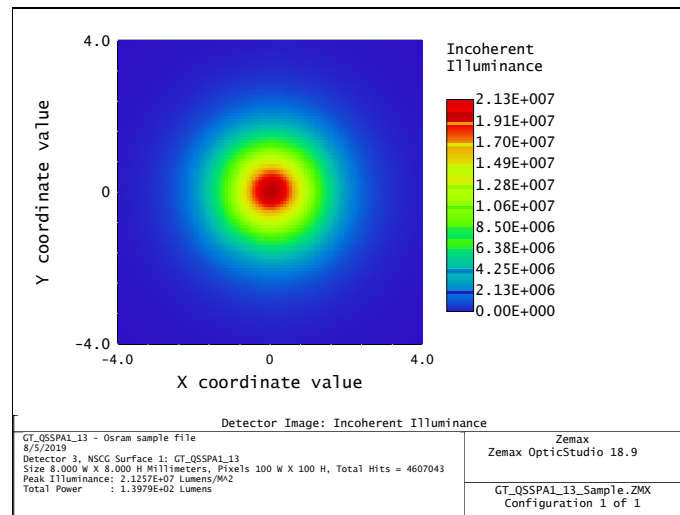
## 2. General Properties of the Rayfile

- the starting points of the rays need to be in air
- the rays are randomly ordered in the rayfile
- the CAD model provided with this rayfile package is intended for the design of mechanical components and not valid for optical raytracing calculations
- the units used for the coordinates in the rayfile and for the CAD model are mm
- the virtual focus of this rayfile (5M rays) with respect to the above coordinate origin is:
  - x = 0.03156 mm
  - y = 0.02886 mm
  - z = 0.55078 mm

## 3. Luminous Flux (units: cd, LED Luminous flux, $\Phi = 143 \text{ lm}$ )



**4. Near field luminous (units:lumen ,LED luminous flux, $\Phi$  =143 lm,  
z= 1.68 mm)**



## 5. Software Related Information

### ASAP

The provided rayfiles for ASAP are in binary format. Flux is set to a default of **143lm** the user has to adapt the flux setting in the software. Wavelength is set to peak emission wavelength.

The typical radiometric spectrum in ASCII format \*.txt is included in the package. Units for wavelength are nm.

### IES TM25

The provided rayfiles for IES TM25 contain the typical spectrum and the typical flux; the user has to adapt the flux setting in the software.

In addition the spectrum is included in the package as \*.txt file in ASCII format. Units for wavelength are nm.

### Lighttools

This rayfile package contains additionally the LED as a Lighttools library element.

This provides the following information:

- link to rayfile with 100k rays, the rayfile should be placed in the same folder as the Lighttools file
- CAD model
- rayfile and CAD model are grouped. In case the grouping is resolved, the correct positioning of rayfile vs. CAD model must be ensured
- typical spectrum of the LED

For importing the library element into an existing Lighttools project, please consider the following:

- File → Restore Library... → select path and file
- indicate scaling factor: "1"
- indicate position: e.g. "XYZ 0,0,0"
- indicate z axis direction: e.g. "XYZ 0,0,1"
- indicate y axis direction: e.g. "XYZ 0,1,0"

The typical radiometric spectrum in ASCII format \*.sre is included in the package.  
Units for wavelength are nm.

### **Lucidshape**

The provided rayfiles for Lucidshape are in binary format. Flux is set to a default of **143lm** the user has to adapt the flux setting in the software.

The typical radiometric spectrum in ASCII format \*.txt is included in the package.  
Units for wavelength are nm.

### **Simulux**

The provided rayfiles for Simulux are in binary format. The rayfiles contain as wavelength information the peak emission wavelength of the LED. Flux is set to a default of **143lm** the user has to adapt the flux setting in the software.

The typical radiometric spectrum in ASCII format \*.txt is included in the package.  
Units for wavelength are nm.

### **Speos/Optis**

The provided rayfiles for Speos/Optis are in binary format. The rayfile contains the typical color spectrum and the typical Luminous flux. In addition the spectrum is included in the package as \*.spectrum file in ASCII format.

### **TracePro, Photopia**

The provided rayfiles for TracePro and Photopia are in binary format. The rayfiles contain as wavelength information the peak emission wavelength of the LED. Flux is set to a default of **143lm** the user has to adapt the flux setting in the software.

The typical radiometric spectrum in ASCII format \*.txt is included in the package.  
Units for wavelength are nm.

### **Zemax**

The provided rayfiles for Zemax are in binary format. In addition a sample file is included in the package showing the recommended settings and placement of rayfiles and CAD model. The sample file contains the typical Luminous flux of the LED and the typical spectrum (see "sources" tab in the object properties dialog box). Additionally, the radiometric color spectrum is included as \*.spc file in the package.

## 6. Provided files

file type	file name
rayfile	rayfile_GT_QSSPA1_13_[number of rays]_[YYYYMMDD]_[data format].[extension]
CAD geometry	GT_QSSPA1_13_[YYYYMMDD]_geometry.IGS GT_QSSPA1_13_[YYYYMMDD]_geometry.STEP GT_QSSPA1_13_[YYYYMMDD]_geometry.SLDPRD
library elements	GT_QSSPA1_13_[YYYYMMDD]_sample_[data format].[extension]
spectrum	GT_QSSPA1_13_[YYYYMMDD]_spectrum.[extension]
information (this file)	GT_QSSPA1_13_[YYYYMMDD]_info.pdf

## 7. Disclaimer and User Agreement

OSRAM assumes neither warranty, nor guarantee nor any other liability of any kind for the contents and correctness of the provided rayfile data. The rayfile data has been generated with highest diligence but the provided data may in reality not represent the complete possible variation range of all component parameters. Therefore, in certain cases a deviation between the real emission characteristic and the emission characteristic which is encoded in the provided rayfile data could occur.

OSRAM reserves the right to undertake technical changes of the component without further notification which could lead to changes in the provided rayfile data.

OSRAM assumes no liability of any kind for the loss of data or any other damage resulting from the usage of the provided rayfile data.

The user agrees to this disclaimer and user agreement with the download or usage of the provided files.

## 8. Revision History

Date	Type	code
2019-04-01	rayfiles generated	BZ
2019-08-05	updated rayfile	BZ