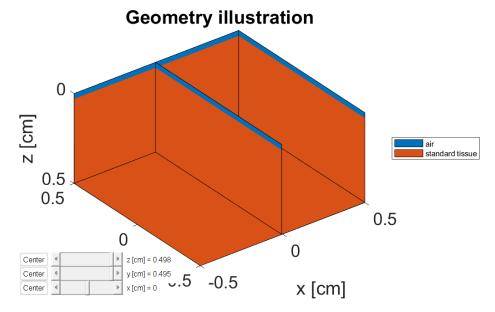
# MS3

#### Jad Awada, Kobe Hwong, Mark Le

- Power Output of each LED can be found in the datasheet, and is as follows:
  - Red LED generates **9.8 mW** when driven at **20 mA**.
  - Green LED generates 17.2 mW at 50 mA.
  - IR LED generates 6.5 mW at 20 mA
- **Distance between sensor and LED** = 5 pins \* 0.8 mm/pin = 4 mm
  - So, the detector is offset by 4mm from the light source.
  - This was used in power analysis.
- Power analysis calculation code is found in MS3.m in the repository.
- The geometry was kept the same for all LEDs
  - The simulated volume was 1x1x0.5 cm
  - Small layer of air between LED and standard tissue

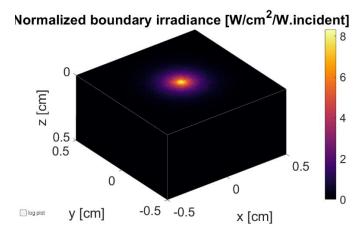


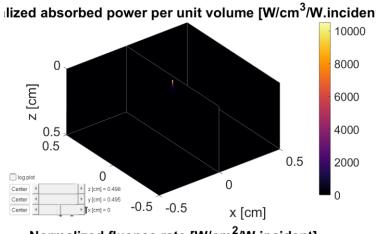
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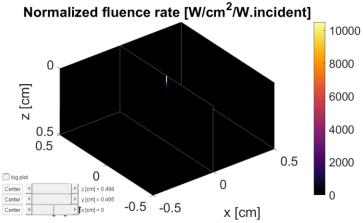
### **Red LED results:**

The Red LED results in the detection of 0.0270 mW at the detector.

Figures:





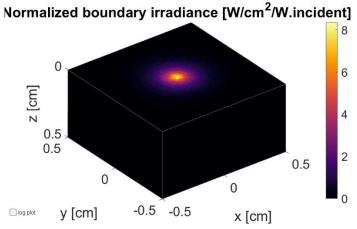


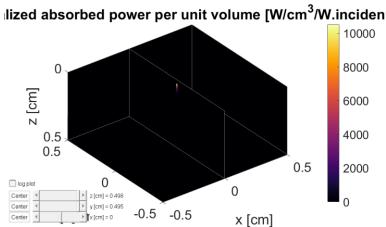
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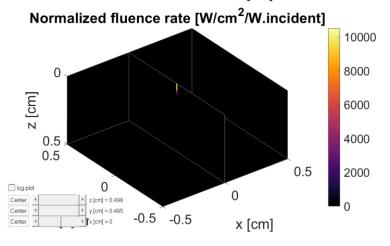
# **IR LED results:**

The IR LED results in the detection of 0.0179 mW at the detector.

Figures:







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# **Green LED results:**

The Green LED results in the detection of **0.0464 mW** at the detector.

Figures:

