

Special Problem 6.C-3

A transmitter delivers **100 Watts** to an antenna.

This antenna radiates **all** of this transmitter power **uniformly** throughout a **solid angle** Ω .

This solid angle Ω **subtends a rectangle**, located at a distance of **100 meters** from the antenna.

The rectangle is **20 meters wide** and **10 meters high**.

- Determine the **intensity** of the propagating wave within the solid angle Ω .
- Determine the **power density** of the wave at a distance of **200 meters** from the antenna.
- Determine the **directivity** of this antenna.

