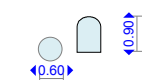
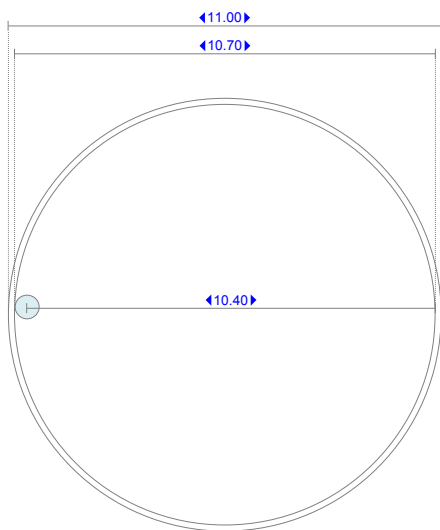


Ring light design V1



$$10.7 - 1.25 = 9.45 \text{cm}$$

$$\pi \times 9.45 = 29.68 \text{cm circumference}$$

$$29.68 / 0.6 = 49.46$$

I only need to get 49 LEDs on the inside, which is possible. The slightly increased circumference on the outside ring should easily give room for 50 LEDs, giving me the magic 99 LEDs that I need.

Also the inside circumference will be a little higher given that I have measured for the two LEDs to stack in line. In reality the inside LEDs will sit between the outside ring, 50 outside, 49 inside, and therefore will sit a little further back.

$$\text{inv-sin} (5.0 / 6.9) = 46^\circ$$

LED spread  $20^\circ$   
 $10^\circ$  from centre

Add  $8^\circ$  for slight overlap  
 $46 + 8 = 54^\circ$

LED  $54^\circ$  from horizontal

