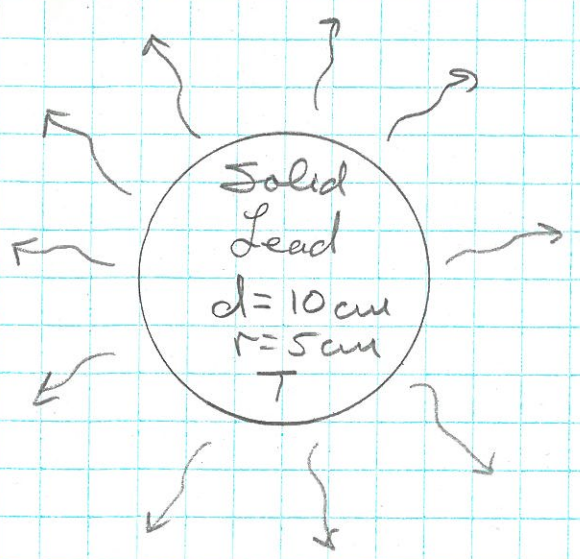

$e = 1$

maximum temperature is melting temp of lead

$T = T_m = 328°C = 601\,K$

So, emitted power is:

$$\frac{Q}{\Delta t} = e\sigma A T^4 = e\sigma(4\pi r^2) T^4$$

$\sigma = 5.67 \times 10^{-8} \frac{W}{m^2 K^4}$

So:

$$\frac{Q}{\Delta t} = 232.4\ W$$