

Kako stvari delujejo?

Žarnica

# zakaj inertni plin?



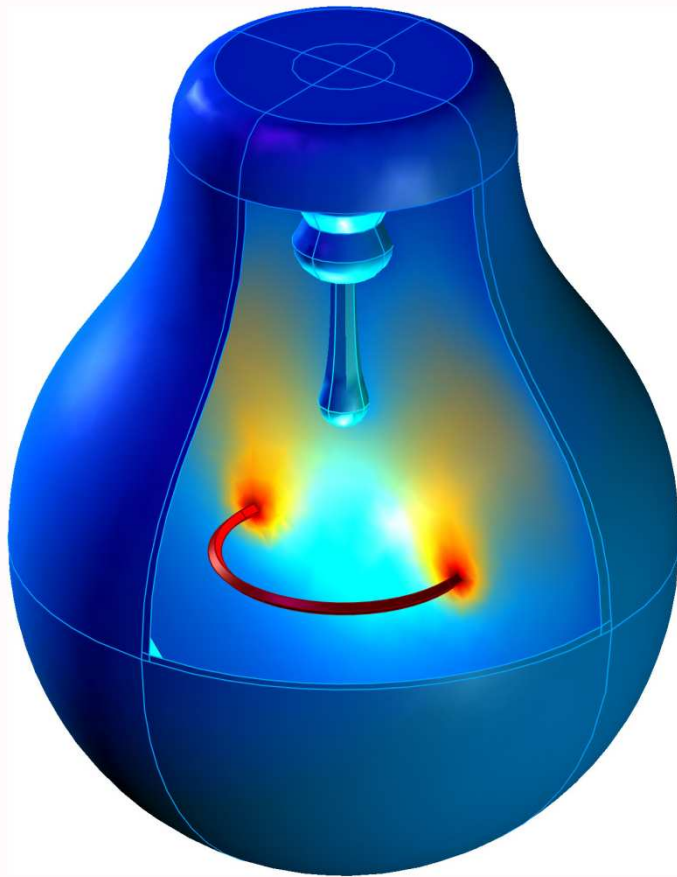
na zraku volfram oksidira – zgori,

tališče volframa: 3680 K

v žarnici segret do 3000 K (2500 K)

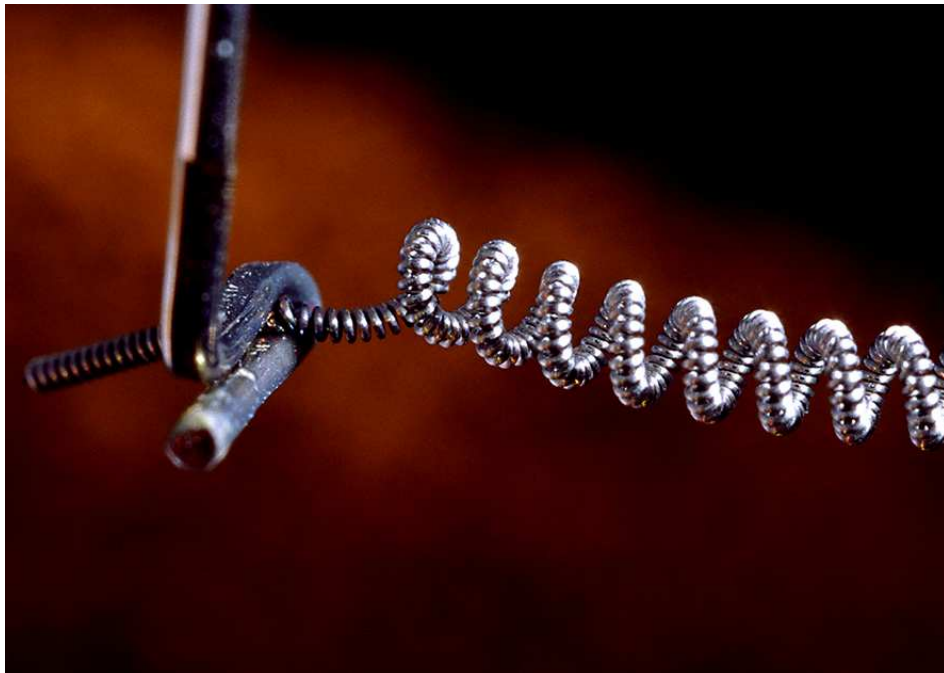
halogenke: 3000 – 3500 K

# zakaj inertni plin?



halogenke – manjše  
večji tlak – halogenski cikel poskrbi, da  
se izpareli volfram vrne na nitko  
pomen konvekcije

# dvojna vijačnica



resorpcija

- izsevane svetlobe
- izparjenega volframa

# spekter sevanja črnega telesa

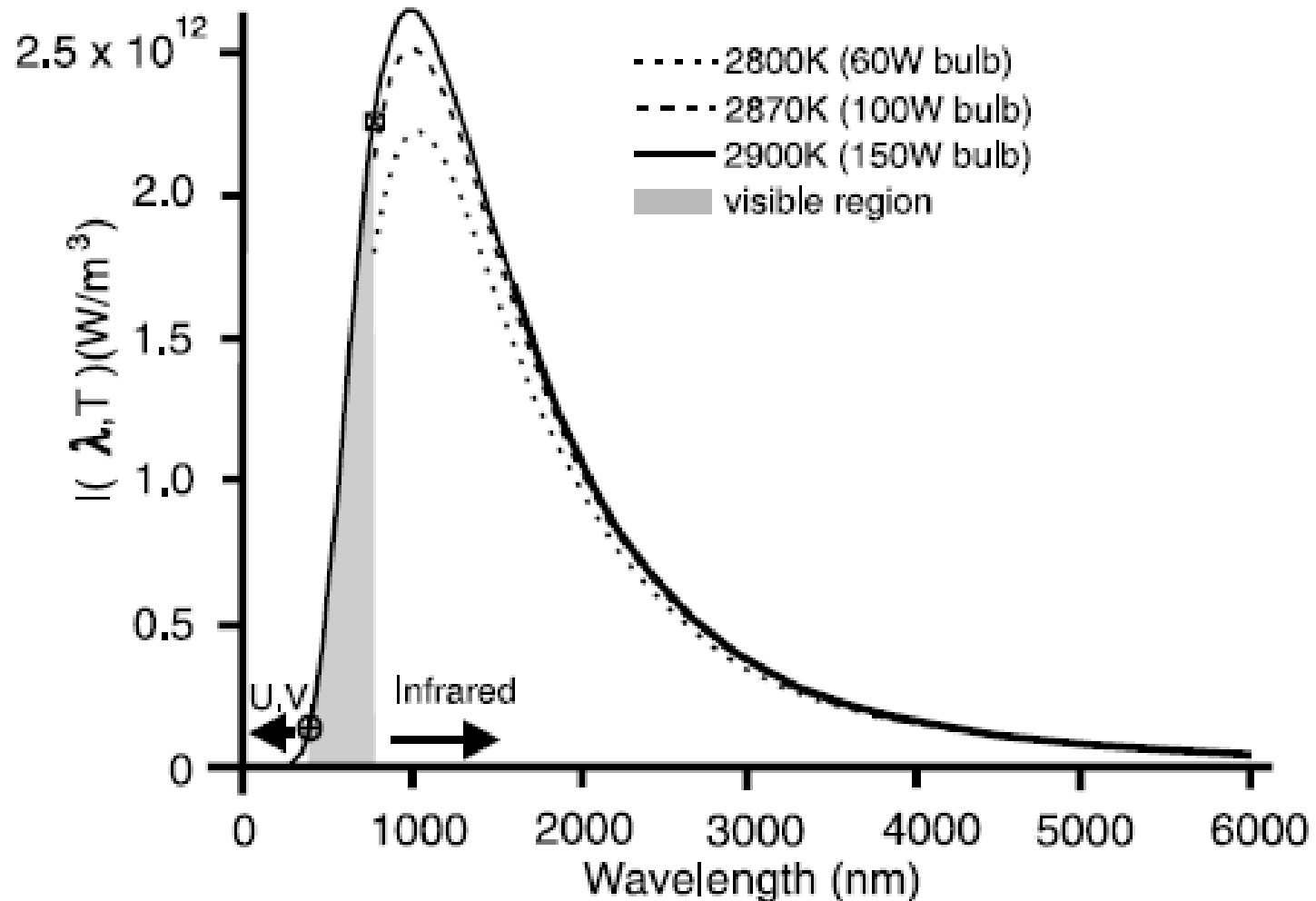
Planckov zakon

$$\frac{dj(\lambda, T)}{d\lambda} = \frac{2\pi hc^2}{\lambda^5} \frac{1}{1 - e^{-hc/\lambda kT}}$$

Stefan (-Bol'tzmannov) zakon

$$j^* = \int_0^{\infty} \frac{dj(\lambda, T)}{d\lambda} d\lambda = \sigma T^4$$

# spekter sevanja črnega telesa



# spekter sevanja črnega telesa

primerjava spektrov

Spectral Distribution of Tungsten-Halogen Lamps and Blackbody Radiators

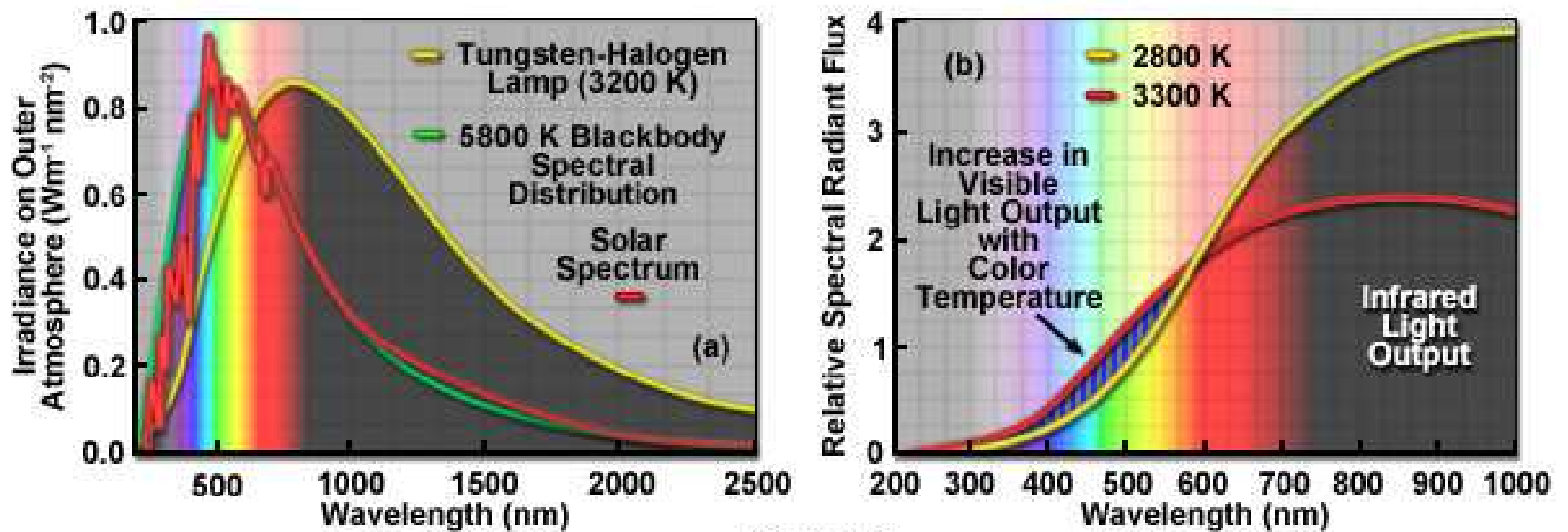


Figure 3

# spekter sevanja črnega telesa

primerjava spektrov

Spectra From Common Sources of Visible Light

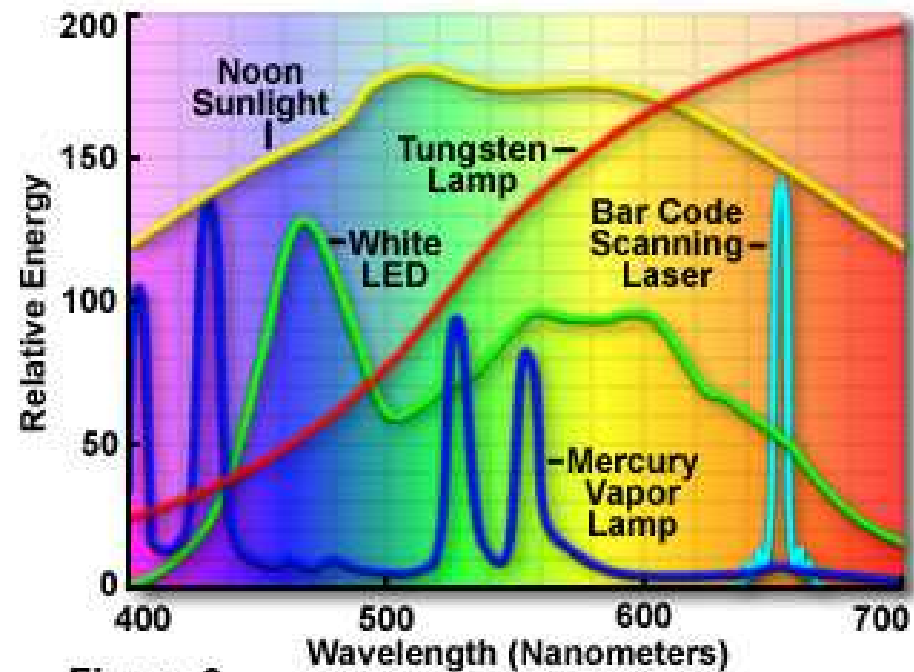
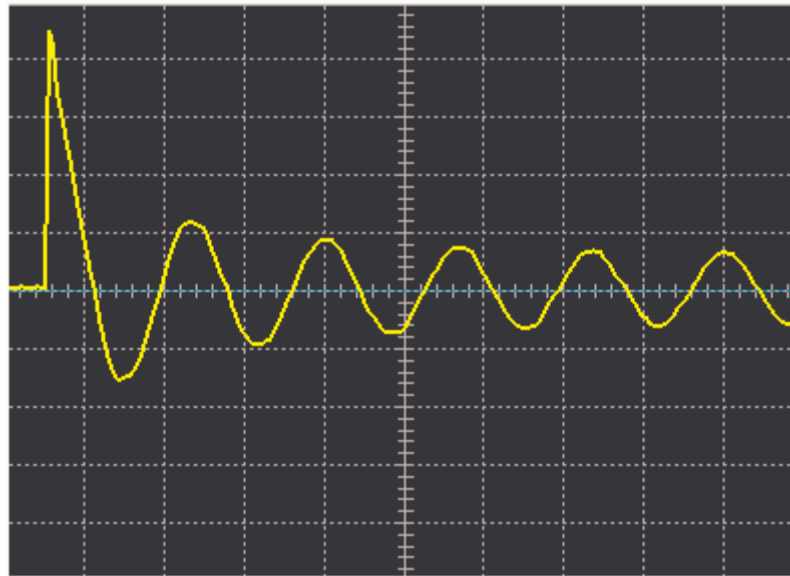


Figure 3



# vžig luči – izmenična napetost



pomen faze za pregorevanje