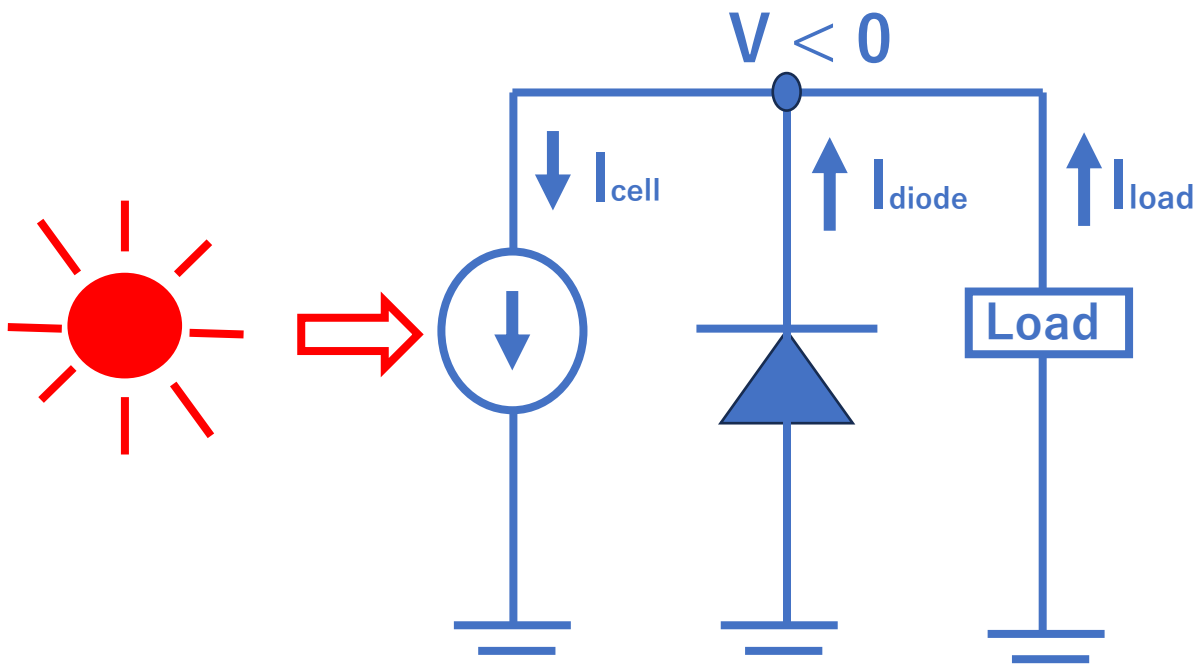
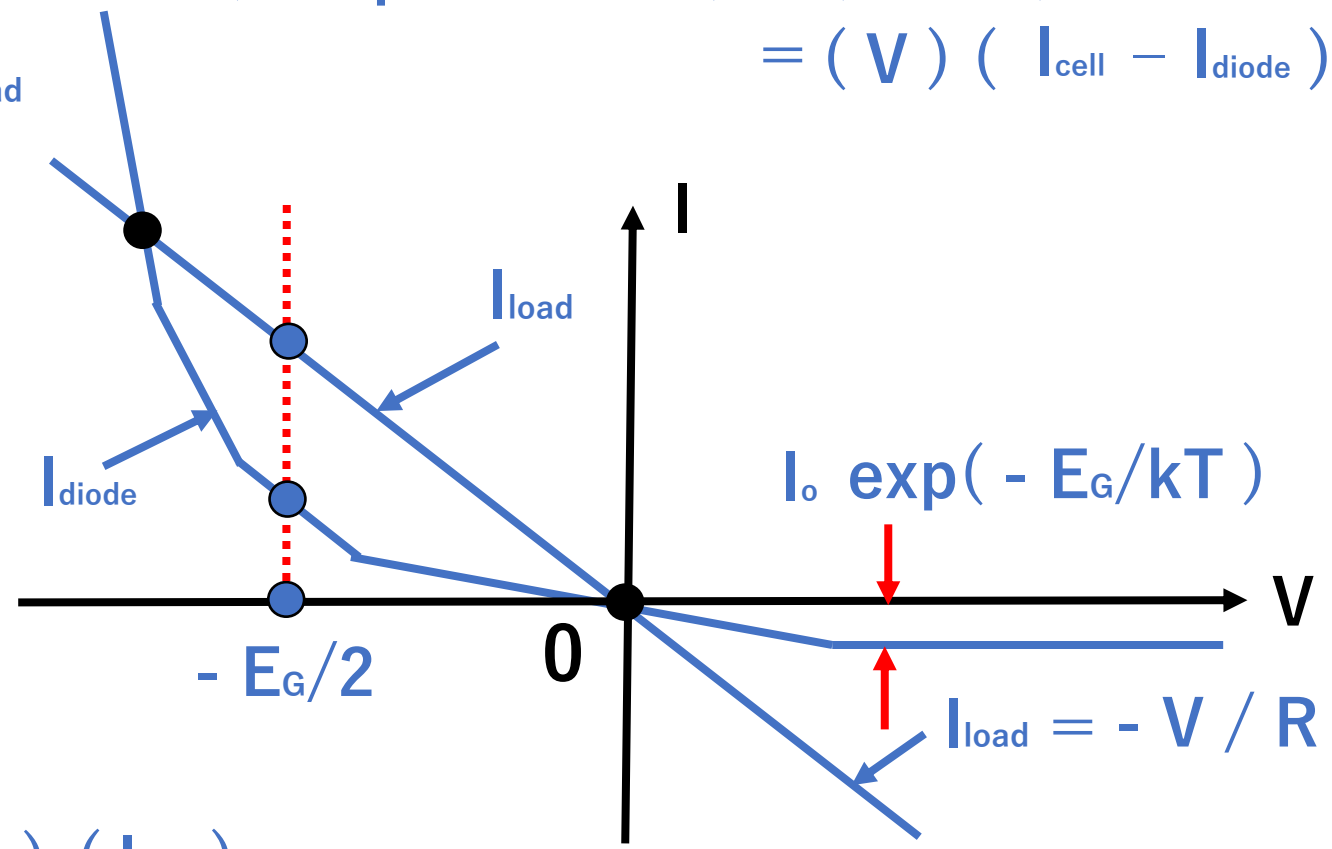


$$(\text{Output Power}) = (V\ I_{load})$$
$$= (V)(I_{cell} - I_{diode})$$



$$I_{cell} = I_{diode} + I_{load} \qquad I_{load} = -V/R$$

d (Output Power) / dV = 0 gives

$$(\text{Power})_{max} = \frac{(V_{max}^2/kT)(I_{cell})}{1 - (V_{max}/kT) - \exp(V_{max}/kT)}$$

As V_{max} goes zero, $(\text{Power})_{max}$ goes $\frac{1}{2}(I_{cell})(V_{max})$

When $V_{max} \sim -E_G/2$, $(\text{Power})_{max} \sim (I_{cell})(V_{max})$