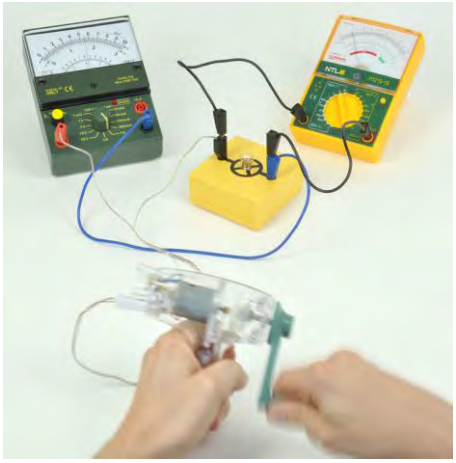
ENERGY DEMAND OF A LIGHT BULB - QUANTITATIVELY

AES 2.1.1

What can be said about the specified values on a lamp? How can you check these values?



Experiment 1:
The specified values of a lamp can be checked and the performance can be determined with the help of 2 meters.

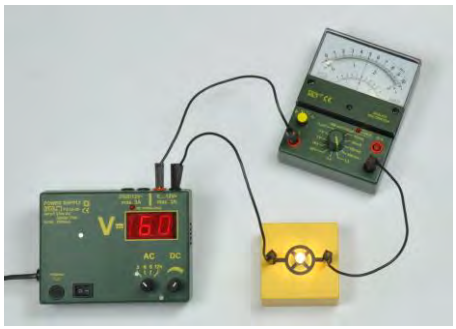
Experiment set-up:
Construction according illustration. The voltmeter has to be connected parallel with the consumer, the amperemeter has to be connected in series with the consumer.

Advice:
For this experiment the use of analog measuring devices is recommended because the current supply is not delivering a constant value.
Big measuring areas should be used a digital measuring devices because the measured values would be very hard to read.

Result:
Which values can be read?

Voltage (U): ..... V Current (I): ..... A Power (P): ..... W (P = U·I)

Experiment 2:



- Instead of the handgenerator we use an adjustable power supply
- Use DC, watch polarity!
- Set a voltage of exactly 6V

Result:
Read off the displayed value and compare it with the value marked on the lamp.

Voltage (U): ..... V Current (I): ..... A Power (P): ..... W (P = U·I)

Attention:
Electric components have tolerances to given technical values. Thus, there may be deviations to the values marked on the lamp!

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