

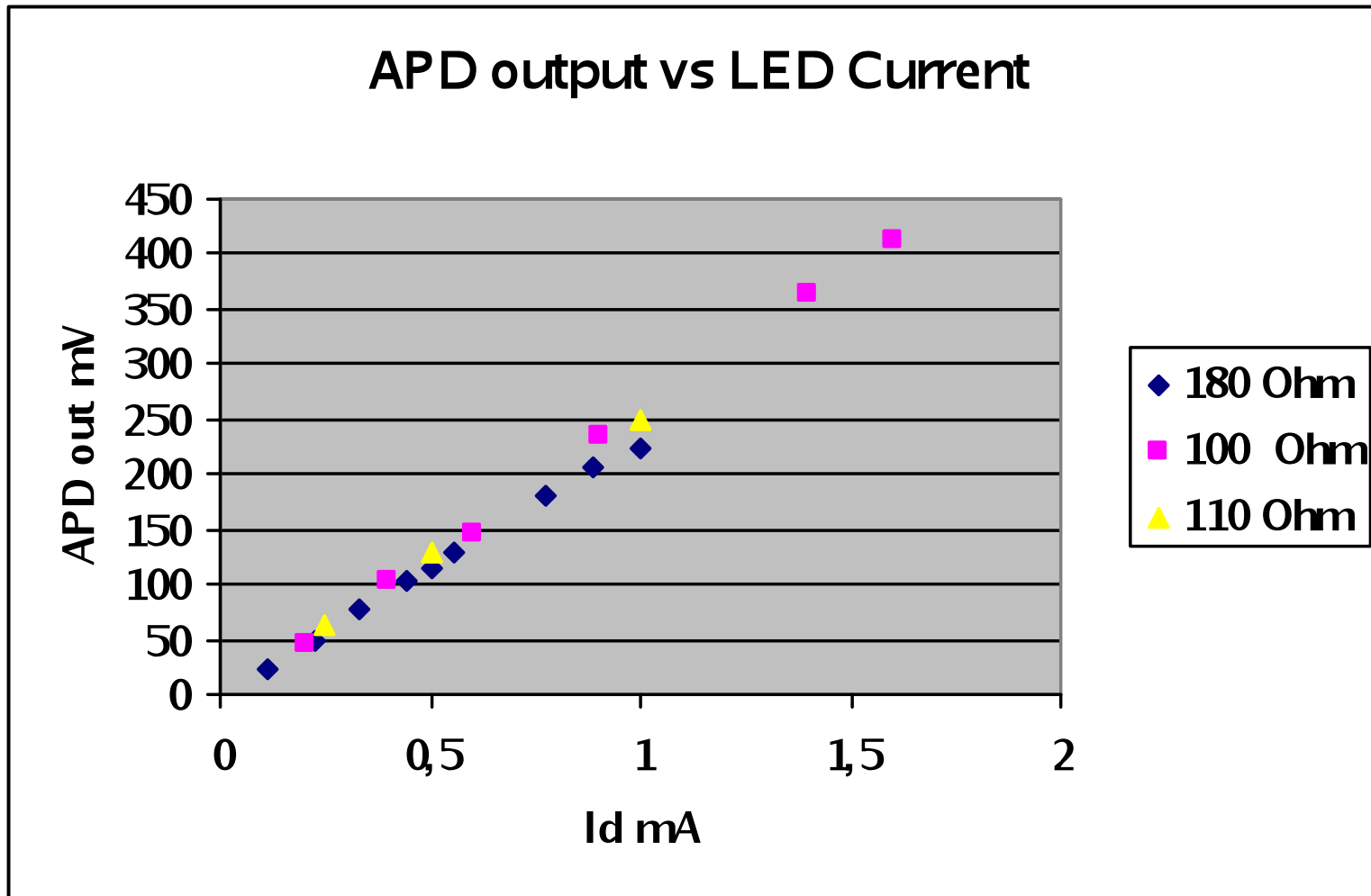
# On the question about max light output from the LED.

- A LED is placed in 5 cm from the PMT
  - LED: KP-QBC Blue, Dome lens
  - PMT Hamamatsu F.M. HV= 1000 V
  - V pulser 5.50 V
  - Output : V<sub>peak</sub> 1.52 V, Width 6,8 ns
  - Estimated # of Photo Electrons: 32000
- For the calculation above I used the Gain from the specifications. The tube is not calibrated

# On the question about linearity.

- I built a voltage controlled current source.
- I measured the light yield for small currents.
- The deviations are caused from imperfections of the set-up.

# Linearity plot.

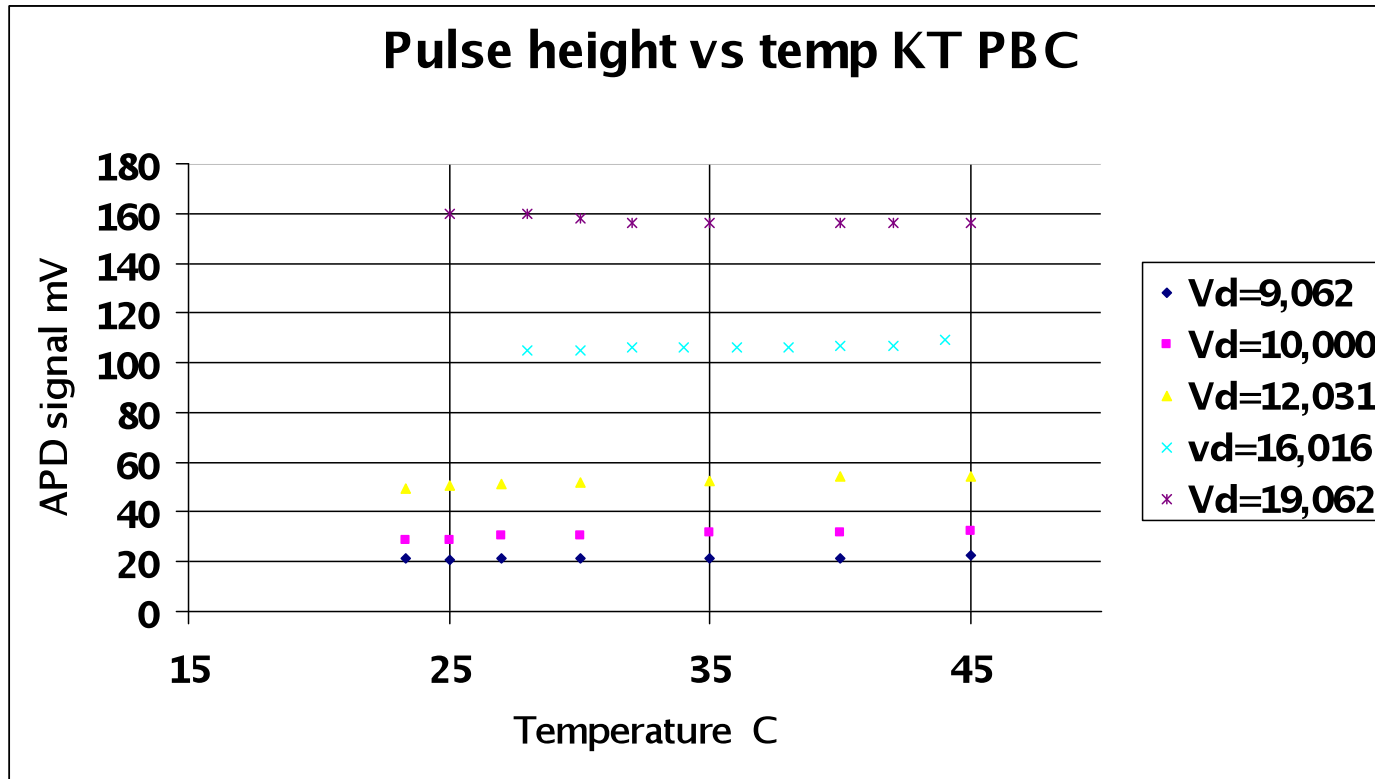


# About Temperature Dependence.

- The variation as measured is about 0.5 % per degree.
- This matches the specifications of the manufacturer.
- More literature in my web page:

[http://web.cc.uoa.gr/~gvoulgar/about\\_LED](http://web.cc.uoa.gr/~gvoulgar/about_LED)

# Blue LED, Temperature dependence for different driver voltages $V_d$



Temperature dependence for different supply voltages across a blue InGaN LED. In this plot the two effects compete and there is a range where the temperature dependence is small.