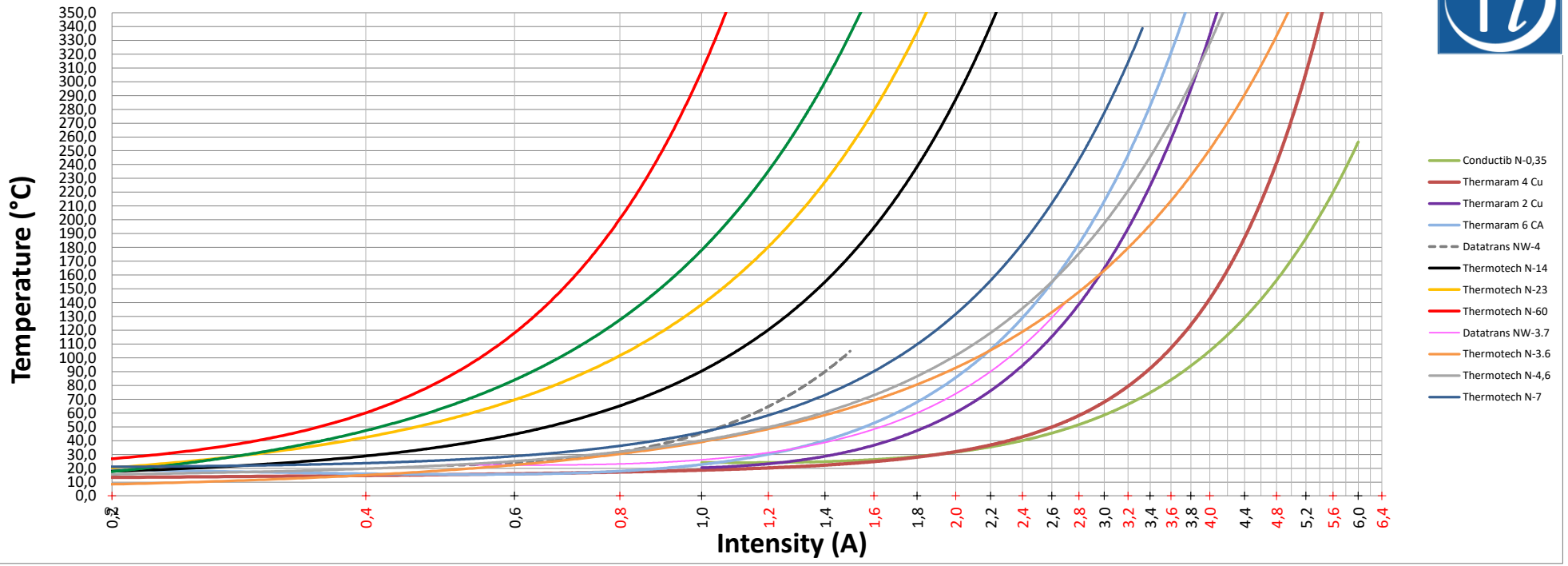Temperature evolution as function of the intensity