



1. Thickness control of an adhesive layer on a fluorescent plastic film

The thickness of a transparent glue on a transparent but fluorescent plastic film should be measured. For this purpose, a UV sensor type **SPECTRO-1-FIO-UV/BL** in connection with an optical fiber type **R-S-A3.0-(3.0)-1200-22°-UV** and an optical frontend type **KL-9-A3.0** is used. At this, the distance from the optical frontend to the object is approximately 11mm and the spot size at this distance is around 2mm in diameter. As shown the screen shots, the adhesive layer is absorbing, depending of the thickness, partly the UV light, thus less light can be converted into the visible range. It can be shown, that there is a certain repeatable relation between the absorption and the thickness of the layer. Furthermore, the available conversion table in the software allows a linearization of the effect, which means, that the analog output signal is proportional to the thickness of the adhesive layer.

