



### 1. Detection of a perforation line in a plastic film

A perforation line should be detected in a plastic film. At this the speed of the plastic film is a few m/s and the diameter of the holes in the plastic film is approximately 0.3mm. For this purpose a color sensor type **SPECTRO-3-FIO-JR** in connection with a through beam optical fiber type **D-S-Q4-(28x0.2)-1200-67°** is used. The distance of the optical fiber head to the plastic film is roughly 10mm. The spot size on the plastic surface is approximately 30mm x 3mm, but due to the same aperture at the transmitter as well as at the receiver side, the detection width of the optical fiber in movement direction is about 0.2mm. As shown in the screen shots, the perforation line can be proper detected.

