HIDDEN
SECURITY
LABELS

hidden security label
with important information

→ **TWO TYPES OF LABELS**

→ **HIGH LEVEL SECURITY**

→ **LABORATORY WAY OF READING**

Senior Research Scientist
Dmitry Zuev

d.zuev@metalab.ifmo.ru

ITMO ITMO ITMO ITM
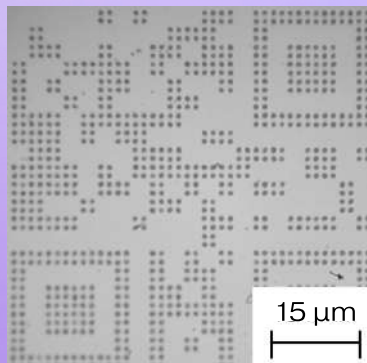
FIRST TYPE
OF THE LABEL

- holes are created in a two-layer thin erbium/silicon film using laser irradiation

- each hole luminesces in the ir-range when excited by visible light

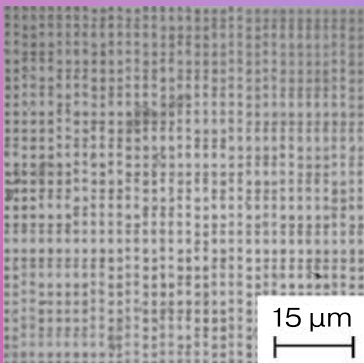- the photoluminescence signal has a characteristic shape at the telecommunications wavelength

SECOND TYPE
OF THE LABEL

- this label type is a continuation of the first label type

- a uniform pattern is formed in which some holes have luminescence, while others do not

- using this kind of security labeling allows to display different bitmaps as well as text

for additional information
follow the link