

2D Symbol Today – Practical Use at Osaka University Hospital, JAPAN

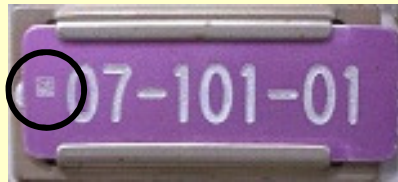


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S A K U R A S E I K I C o L
t d . (J a p a n)



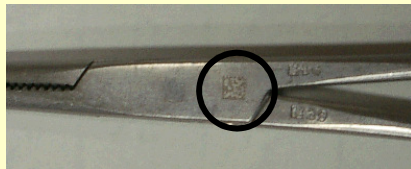
Practical Use up to now

- Laparotomy container for Obstetrics and Gynecology: 5
- Surgical instruments per container: 88
 - 5 Containers × 88 instruments = 440 instruments with serial number management
- Details engraved on container plates



Details of engraved symbols : **【9 digits】**

- Details engraved on surgical instrument



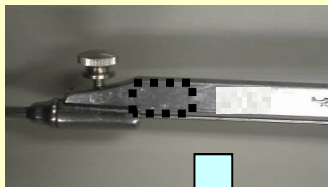
Details of engraved symbols : **【16 digits】**

■ Engraving pattern

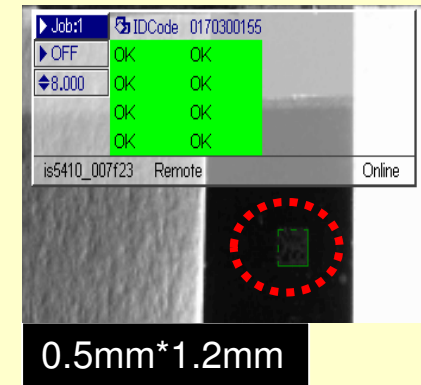
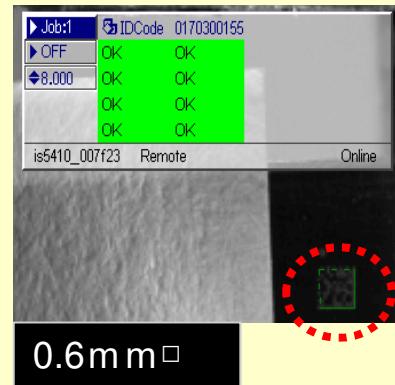
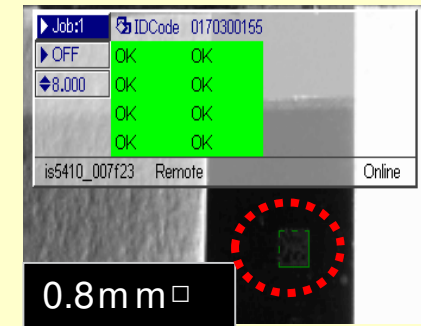
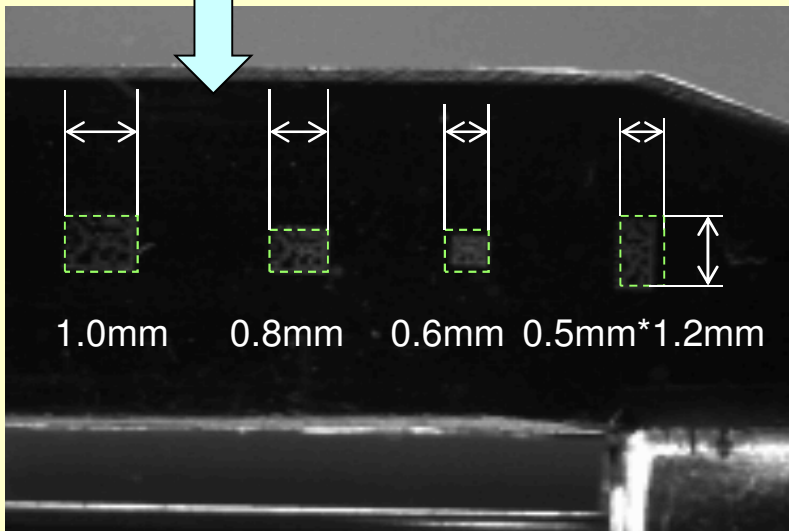
① 2.5mm×2.5mm ② 1.2mm×2.7mm ③ 1.0mm× 1.0mm



Feasible Study - Minimum Symbol Size



YAG Laser Symbol
Numeric 16 Bytes



Symbols with size of 5mm □ ~ 0.6mm □ (w/16Bytes) could be read without failure.



Feasibility Study – Focus and Ambient Light

Intensity

Focus



Various focus points does not affect reading performance.

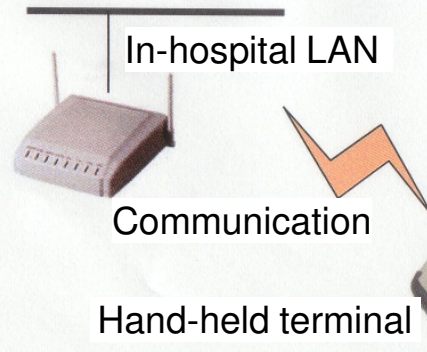
Intensity

- To confirm if ambient light intensity affects reading performance.
- Ambient light intensity was set at 35 lx and 400 lx.

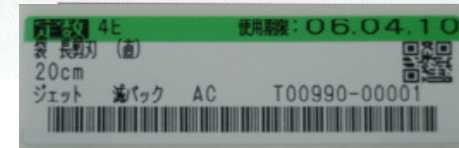
照度	コッヘル【長直】	撮子【長】	吸引嘴管	メス柄
35 lx				
400 lx				



Feasible Study - Handy Reader for 2D Symbol on Container Plate and Generally Available Barcode Including QR Code



All engraved symbols were 100% readable with the hand-held 2D symbol reader.



Conclusion

- 1) Average reading time for 88 instruments/container set is 5 to 7 minutes, which is well accepted and used for routine practical use.
- 2) The 2D symbol has been used for more than 2 years and it is still used without any reading failure.
- 3) Current laser and reading technology enables to use smaller size of 2D symbol, 0.8 X 0.8mm with high reading performance.
- 4) On going development of the technology will be widely adapted to wider range of instrument, particularly for neurosurgery and eye surgery. (For high cost asset management and risk management.

