

"WORLD'S SMALLEST BARCODES"
for injection molding



problem-solving a medical device

WHERE DID IT COME FROM?

- Who made it? What is it?
- What happened during moulding?
- What happened after moulding?

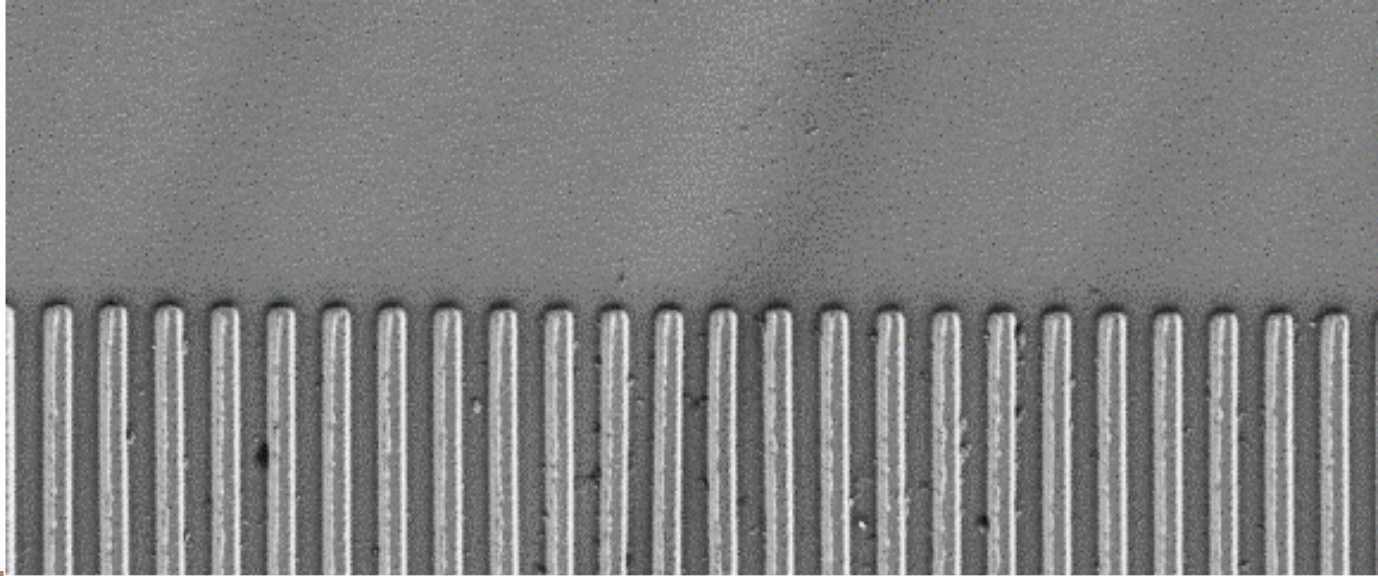


Too small for labels and markings

McKinsey:

“Direct Cost of Poor Quality is **4.5 - 6.2%** of annual sales”

SOLUTION : MICRO - BARCODES



Fits on small products

= critical information on every part

Barcodes applied DURING molding

= traceability includes entire production chain

No complexity, No contamination

= Low risk + Low cost

Customer Case

HIGH - VOLUME PRODUCTION OF DRUG DELIVERY DEVICE

(Large pharma company)

Challenge

- Small barcodes do not work on white plastic

Customer business case

- 8 cavity tool
- 1 cavity fails every 12 months
- Savings: 7 of 8 parts for a full day
- Includes processed (filled, assembled, packed, labelled)

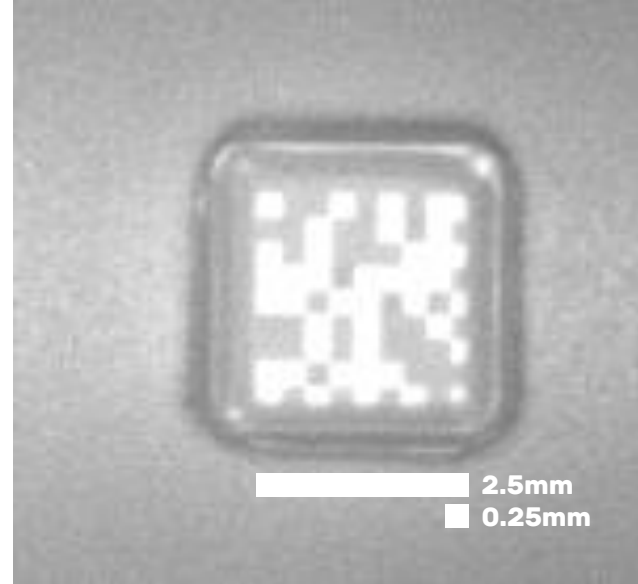
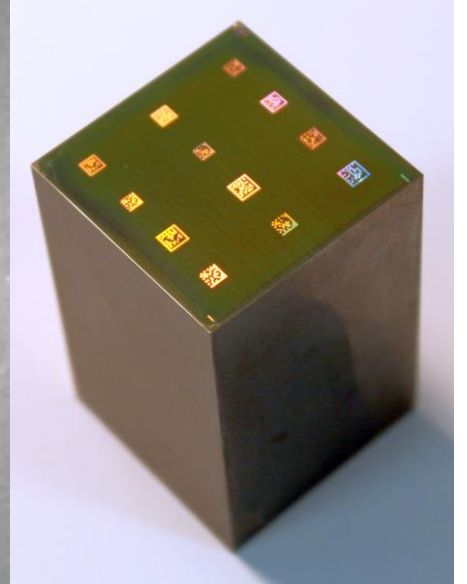


Image from Vision system



Our delivery

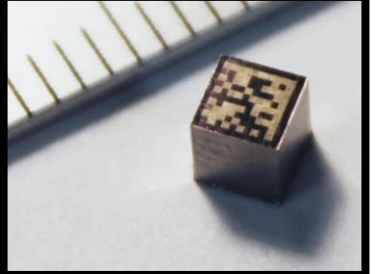
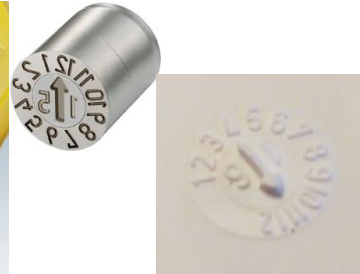
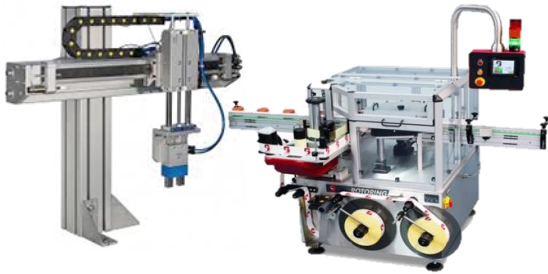
Requirements

- Unique cavity ID
- 10X10 GS-1 Datamatrix
- Size area $\leq 3 \times 3 \text{ mm}^2$

Solution: **imZERT** barcode inserts

- Barcodes replicate accurately on white PP
- No change in mold cycling time!!!
- Barcodes scan directly in pre-existing Vision

COMPETITION: NONE WITH COMPARABLE FEATURES



Label

Laser

Ink

Date Wheel

Laser mold



Integration	Complex	Complex	Complex	Simple	Simple	Simple
Contamination?	Foreign materials Migration	Laser pigment Particulates	Yes	No	No	No
Cavity ID?	No	No	No	No	Yes	Yes
Small?	No (package)	No	No	No	No (not scannable)	Yes Size < 3x3 mm ²

Small Devices

Contamination free

Molding parameters unchanged

Machine-Readable

Any color plastic

Trace-to-molding

Standard GS-1 barcodes

Smartphone compatible

Low complexity

Low cost

No energy or resources

Sustainable

