CASE STUDY

SEWOO INCORPORATION

Sewoo Incorporation, Korea

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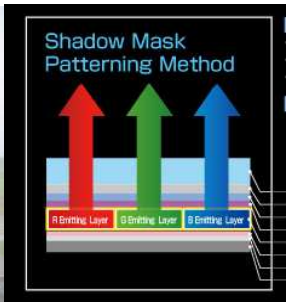
PRODUCT

OLED shadow masks

The method of depositing RGB emitting layers at each pixel is called the "Shadow Mask Patterning Method".

Shadow masks define device areas and form micro-structures with precision by masking or covering the target surface.

LMJ used for:
- Cutting or drilling the thin nickel masks
- Line-type or slot type



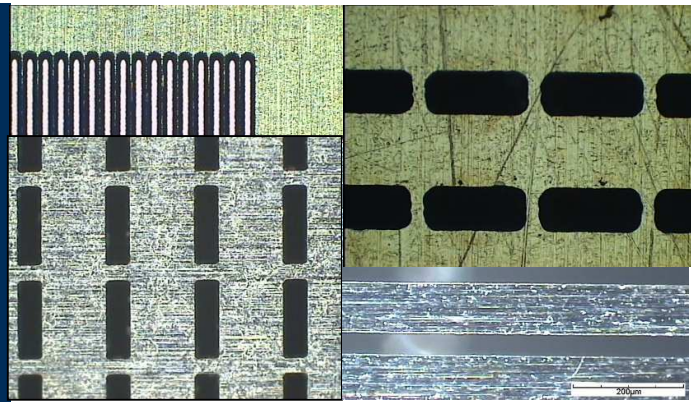
CHALLENGE

Perfect cut on a challenging material

Nickel foils for shadow masks is a challenging material to cut/ablate due to its large size and low thickness.

Main processing criteria:
- No HAZ
- No deformation
- No burrs
- Controlled wall angle
- Narrow tolerances
- High speed

Machining technologies that can meet these criteria:
- Photo etching
- Electroforming
- Laser MicroJet (LMJ) - water jet guided laser technology



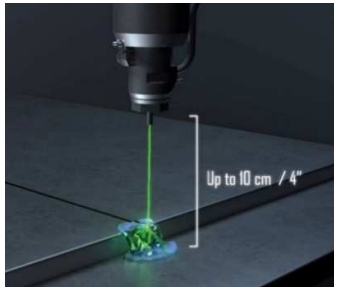
SOLUTION

No HAZ, production-proven, better ROI

LMJ advantages versus etching:
- Higher productivity
- Higher flexibility
- Shorter cutting time
- Large masks

Installed machine type:
- LCS 1200
- 100 W green laser and 100 W fiber laser

LCS 1200



Sources: websites, Synova