

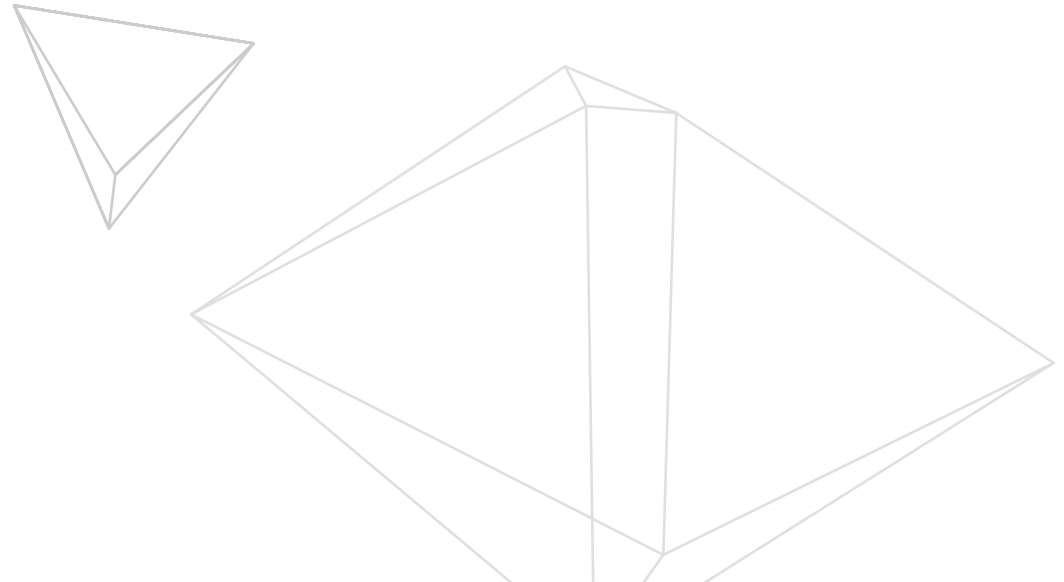


KÖSTLIN
PREPRESS SERVICES

**SURFACE STRUCTURES & PRODUCTION VARIANTS
ON FLEXOGRAPHIC PRINTING PLATES**

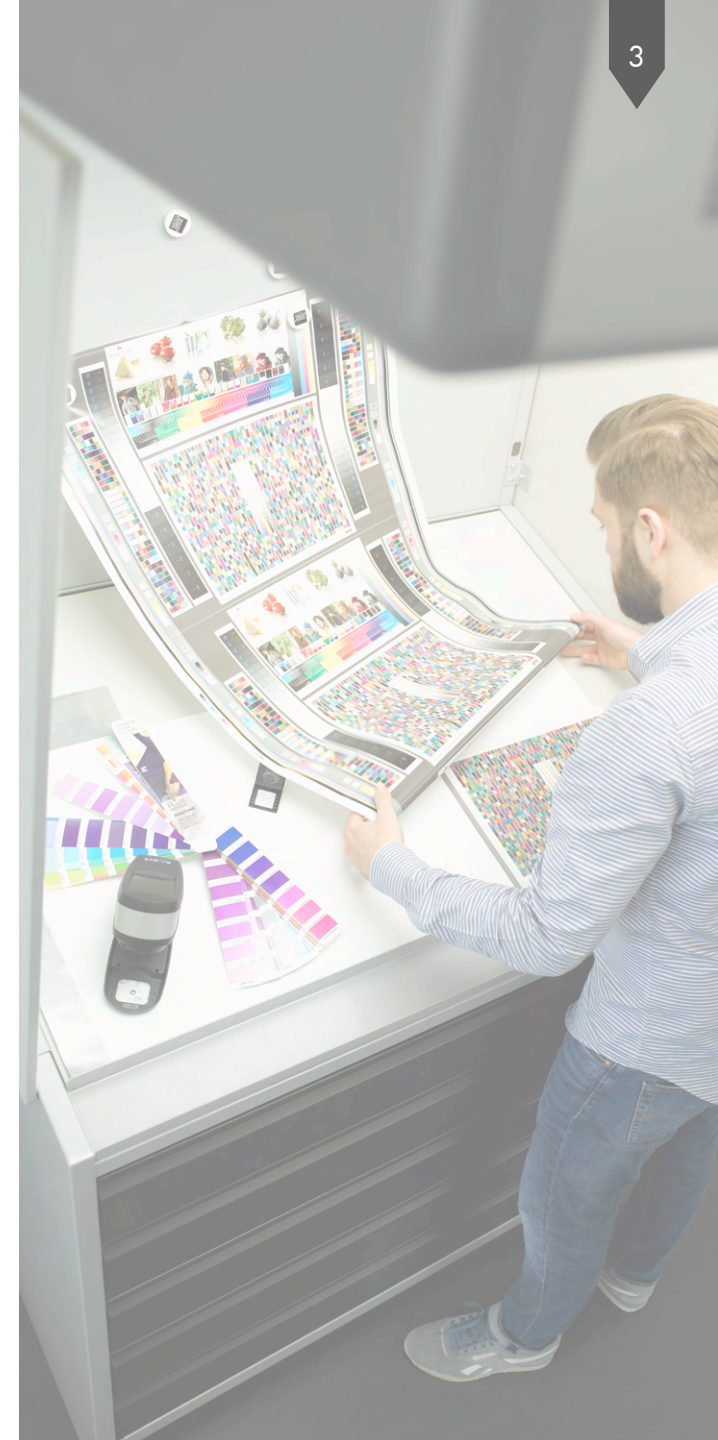
**International Sales Conference Ink
14.03.2024**

- 1 TRENDS & CHALLENGES
- 2 CURRENT MANUFACTURING PROCESSES & VARIANTS FOR FLEXO PRINTING PLATES
- 3 ROUND TOP DOT VS. FLAT TOP DOT
- 4 SURFACE STRUCTURES
- 5 PRINT TEST & RESULTS ZG
- 6 OPEN Q&A SESSION

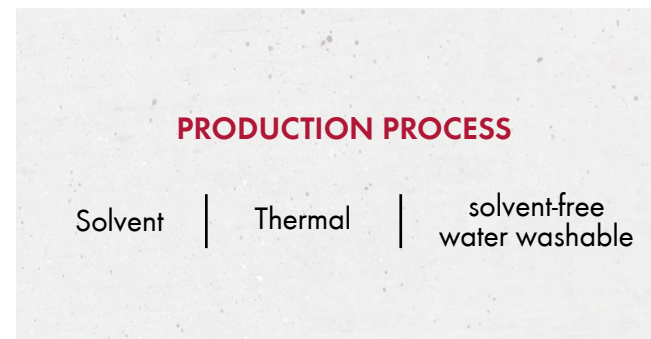
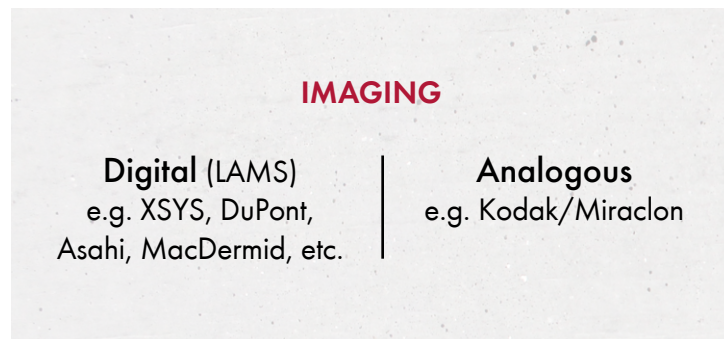


TRENDS & CHALLENGES

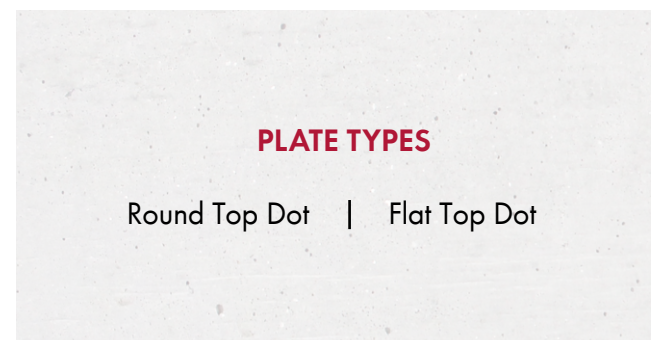
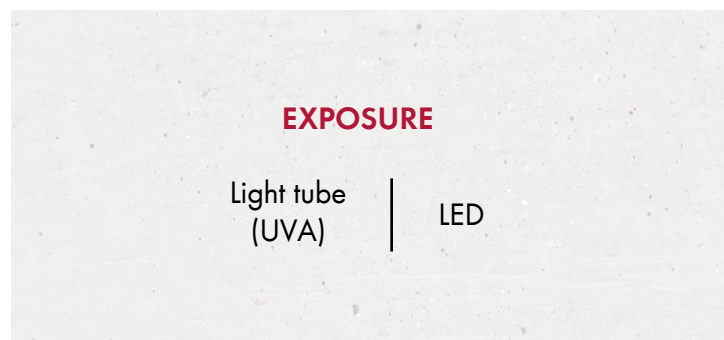
- Higher demands on print quality
- Consistency of the print
- More sustainable printing processes
- Lower quality of the substrates (recycling)
- Higher cost pressure
- Lean Manufacturing
- Increased OEE
- Wide variety of printing plate types
- Broad selection of production processes for clichés
- 7c/ECG



CURRENT MANUFACTURING PROCESSES & VARIANTS FOR FLEXO PRINTING PLATES



CAN BE LINKED IN VARIOUS WAYS

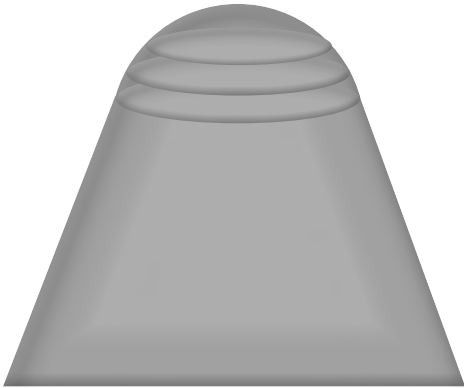


ROUND TOP DOT VS. FLAT TOP DOT

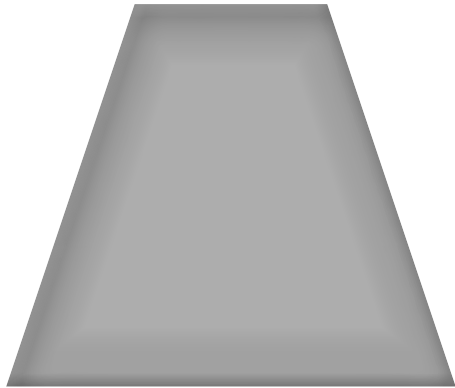
Light tube exposure/UVA
(Round Top Dot) | LED exposure
(Flat Top Dot)

Flat Top Dot
Plate types | Round Top Dot
Plate types

Optional: surface structures



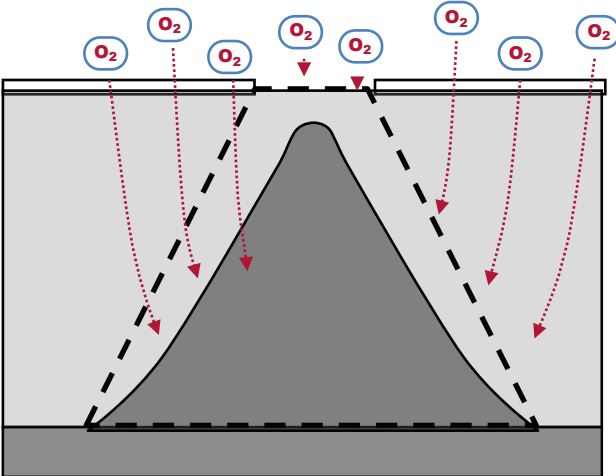
Round Top Dot



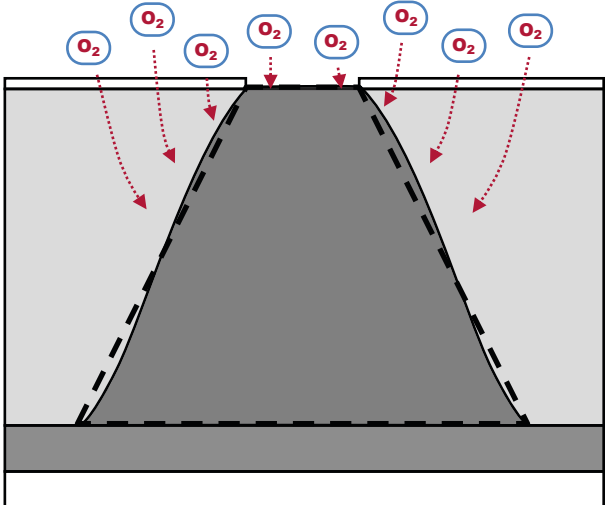
Flat Top Dot



ROUND TOP DOT VS. FLAT TOP DOT

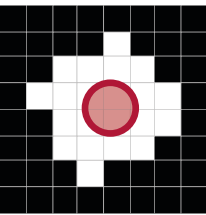


Round Top Dot

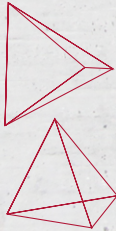
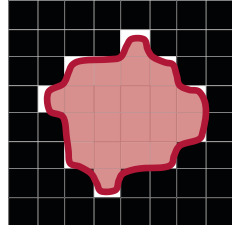


Flat Top Dot

Dot reduction

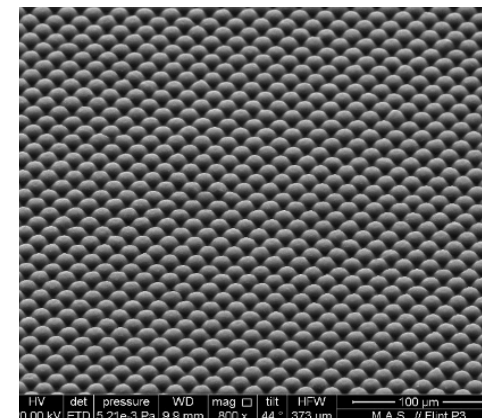
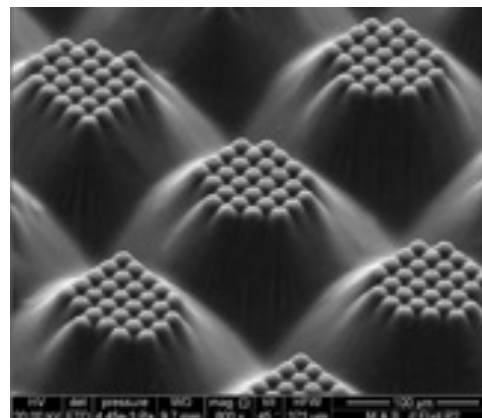
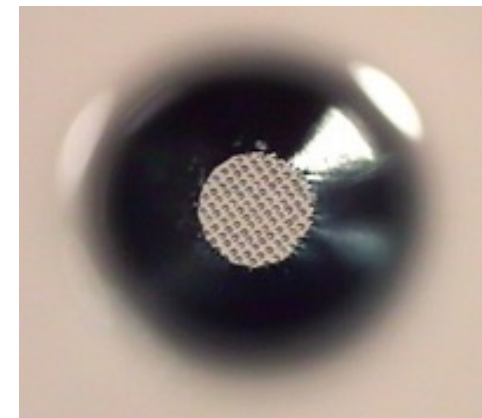
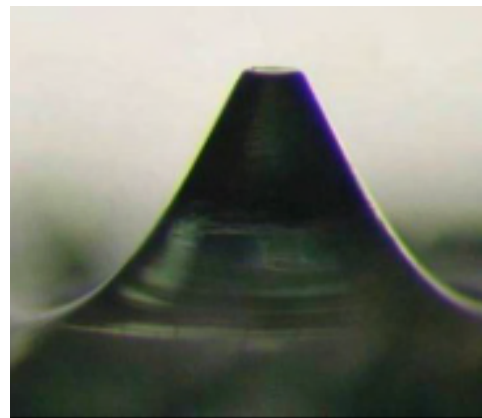


1:1 copy



BENEFITS OF USING FLAT TOP DOT

- FTD are less sensitive to different pressure settings (dot gain)
- Predictable and stable print runs
- Higher resistance to mechanical stress
- Possibility to use surface screening
 - Generally better ink lay-down and density
 - No or improved trail edge void effects
- Greater tonal range can be printed (held on plate)



SURFACE STRUCTURES

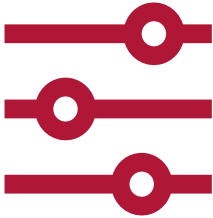
CONTROL

via special TIL Film (Kodak)	via Pixel + at the CDI	Clichés with(out) pre-structured surface
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Increased density with optimized ink transfer by up to

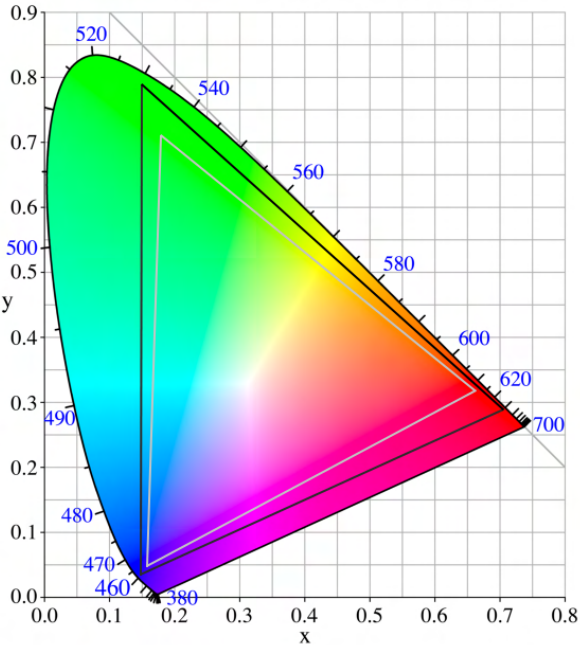
15%*



Decrease press setup times by

5-20%*

New patterns specially tailored for UV applications increase print performance and print stability across a wider range of print conditions additional efficiencies in platemaking

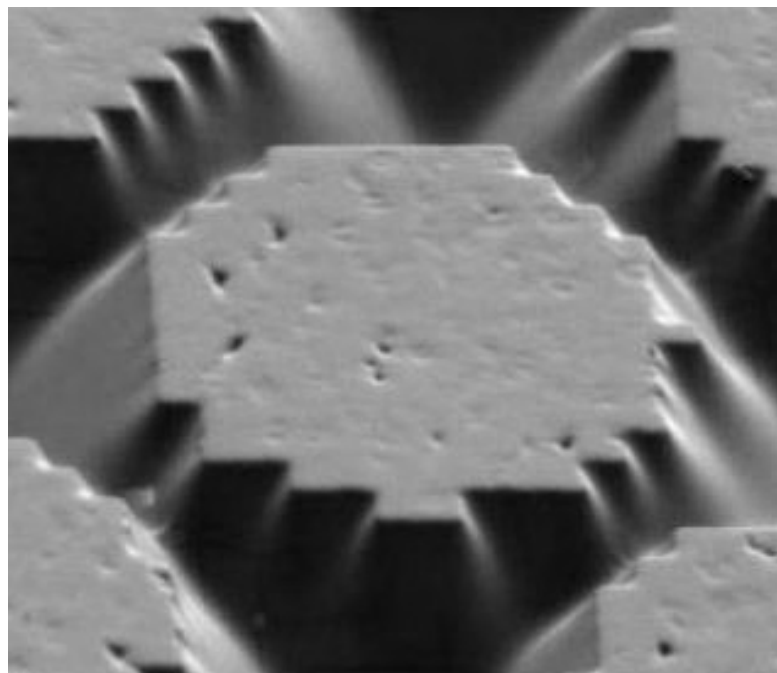


- Std. Digital Plate
- Flat Top Dot Plate + Surface Structure

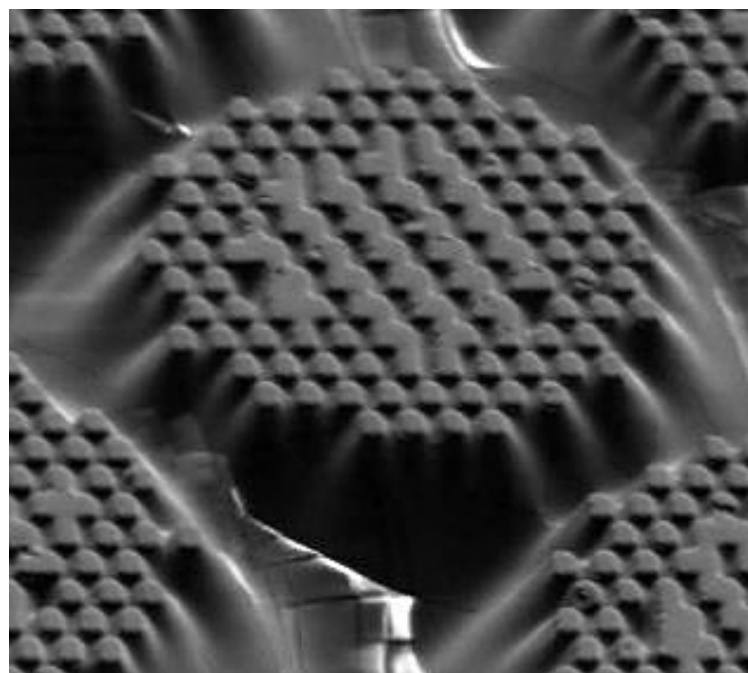
*versus NO SURFACE STRUCTURE



SURFACE STRUCTURES



NO PATTERNING



PATTERNED



SURFACE STRUCTURING

Avoid familiar problems in flexo:

- Pin-holing
- Halo-effects
- Trail edge void
- Dot-bridging



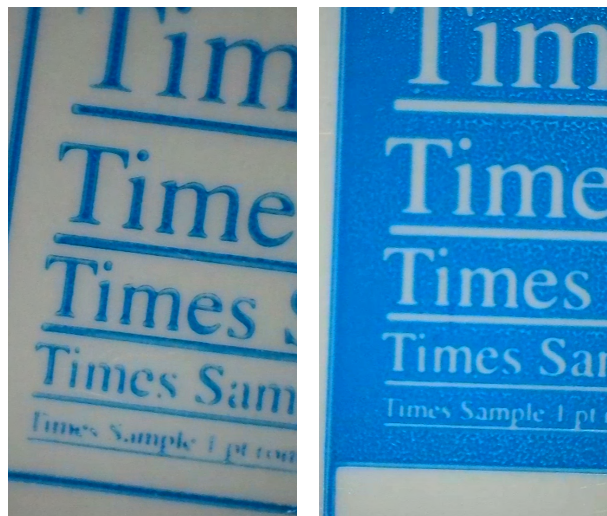
PRINT TEST ZG

Parameters:

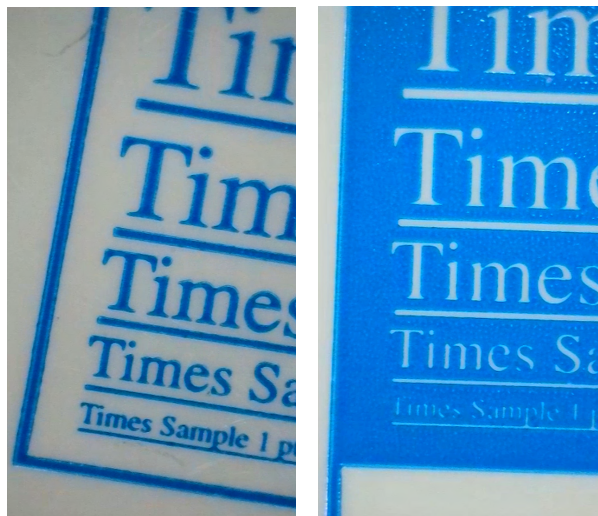
Substrate:	White, glossy, polyethylene (PE) film
Print type:	surface print
Anilox:	400 L/cm, 2,7 cm ³ /m ²
Tape:	Tesa medium
Ink:	UVAFLEX® FCM LED Y581 Ink Series, Cyan
Printing forms:	ACE 1,14 mm (XSYS) ITP60 1,14 mm - Crystal XPS FTP (MacDermid) NXH 1,14 mm (KODAK)
Structures:	See samples
Screening:	49 L/cm



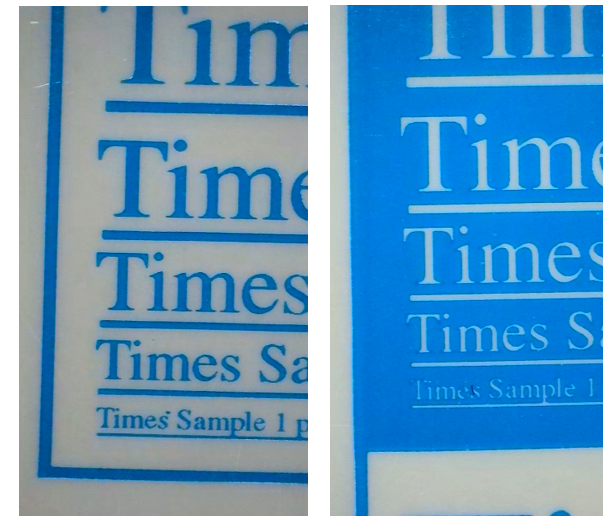
RESULTS TEST PRINT ZG



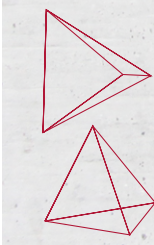
**1. ROUND TOP DOT
NO SURFACE STRUCTURE**



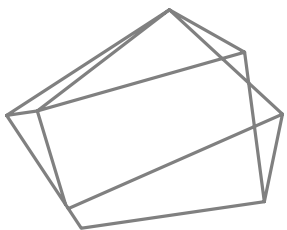
**2. FLAT TOP DOT
NO SURFACE STRUCTURE**



**3. FLAT TOP DOT
UV OPTIMIZED SURFACE STRUCTURE**



OPEN Q&A
SESSION



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