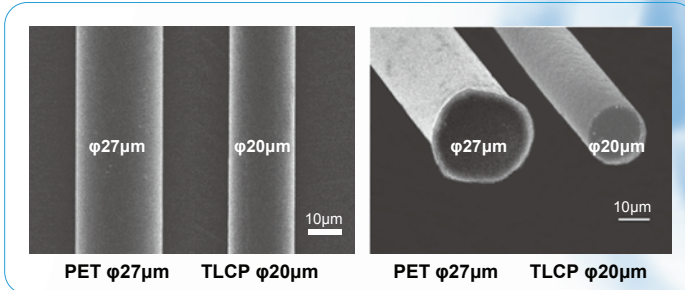


# Next Generation TLCP (Thermotropic Liquid Crystal Polymer) Monofilament Mesh for High Precision Screen Printing Applications

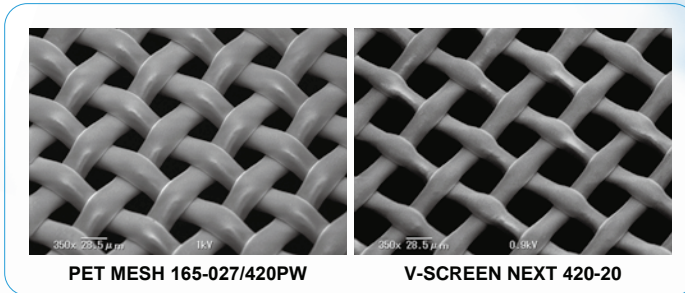
## Material

TLCP (Thermotropic Liquid Crystal Polymer) Monofilament thread available as fine as 20µm in diameter.



### On-Press Benefits

- Excellent dimensional accuracy & longevity
- Improved fine line resolution
- Thinner ink deposit & smoother ink transition

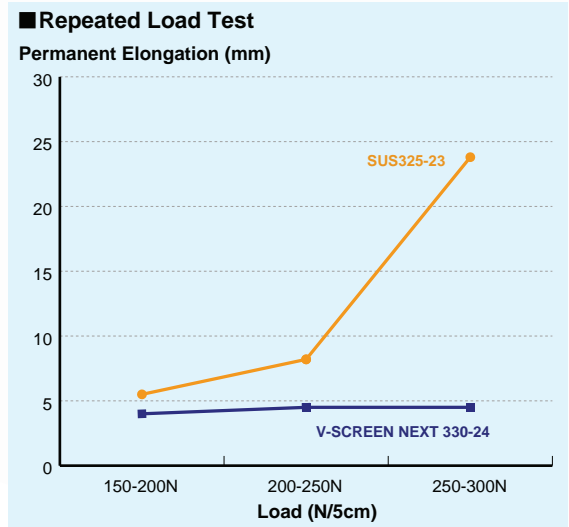
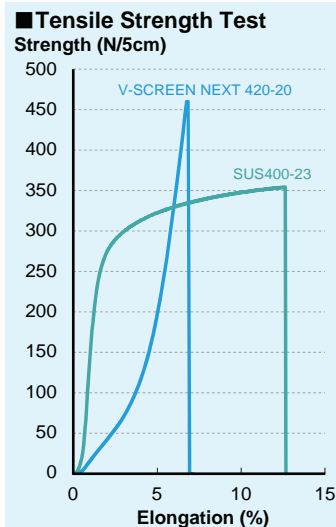


- Super fine threads create larger mesh openings, which reduce mesh interference to the print image and improve ink transition.
- Thinnest commonly available PET threads are φ27µm, compared with V-SCREEN NEXT's φ20µm.
- Smooth mesh surface helps achieve proper emulsion Rz value a key factor contributing to the highest possible resolution.

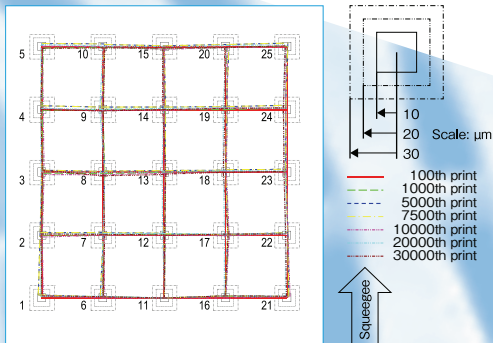
## Outstanding Physical Properties

V-SCREEN NEXT features excellent tensile strength and recovery elasticity, as shown in the diagrams below.

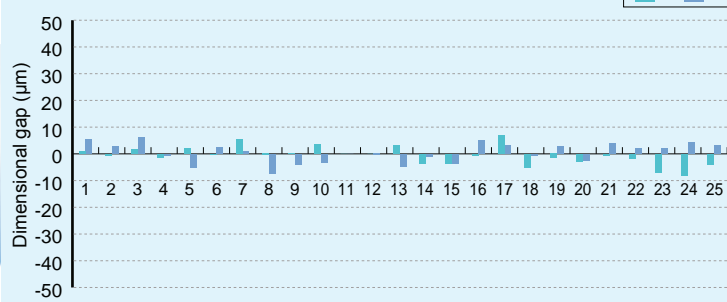
- Benefits:
- High screen tension for dimensional accuracy
  - Minimal screen tension loss and distortion even after long press runs



## Superior Dimensional Accuracy Proven by 30,000 Print Test



Dimensional gap between 100th and 30,000th print



### Screen Parameter

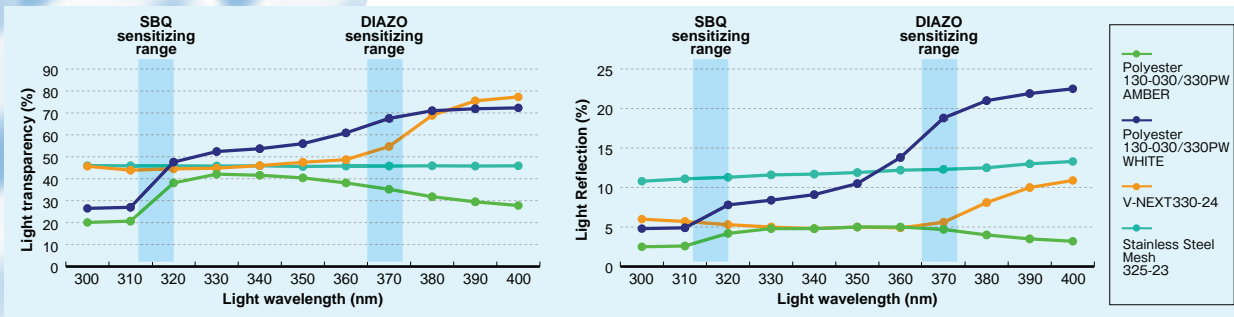
Frame OD	: 320mmx320mm
Frame type	: Aluminum cast frame
Mesh type	: V-SCREEN NEXT 420-20
Screen tension	: 28.4N/cm
Stretching angle	: 23 degrees
EOM	: 10µm

### Printing Parameter

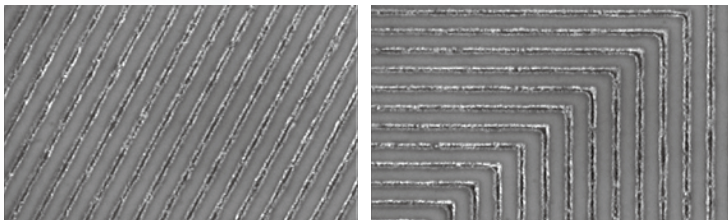
Printer	: LZ-150	Squeegee type	: Micro-Squeegee
Clearance	: 2.0mm	Squeegee shore	: 70 shores
Squeegee press.	: +50kPa	Squeegee angle	: 70 degrees
(kPa/170mm)		Squeegee width	: 170mm
Down stop	: Free	Squeegee speed	: 200mm/sec

## High Performance Exposure

V-SCREEN NEXT boasts higher light transparency and lower light reflection than stainless steel wire mesh as shown in the light spectrum analysis below. This enables easier set-up of exposure time for fine screen resolution.



## Excellent Resolution for Fine Line Printing



### Printing & Screen Parameters

Print output	: 20µm Line & 40 µm Space
Paste	: Ag paste for LTCC (300Ps · sec)
Mesh type	: V-SCREEN NEXT 420-20
EOM	: 10µm

## Specifications

Mesh code		Mesh count		Thread diameter µm	Mesh thickness µm	Mesh opening µm	Mesh open area %	Theoretical ink volume cm <sup>3</sup> /m <sup>2</sup>
		/cm	/inch					
V-SCREEN NEXT	420-20	165	420	20	27±3	40	45	12.1
	380-20	150	380	20	27±3	47	49	13.3
	380-24	150	380	24	33±3	43	41	13.6
	330-24	130	330	24	33±3	53	47	15.6

The above specifications may change without notice as a result of product quality improvements. Please ask your sales representative or supplier for availability or more information.