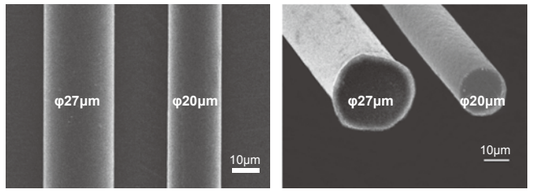
Extra Value with Advanced Mesh Technology

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

Material

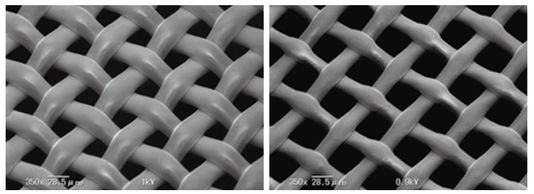
TLCP (Thermotropic Liquid Crystal Polymer) Monofilament thread available as fine as 20μm in diameter.



PET φ27μm TLCP φ20μm PET φ27μm TLCP φ20μm

On-Press Benefits

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



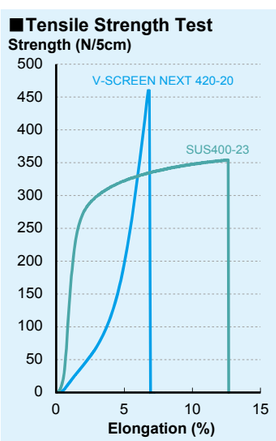
PET MESH 165-027/420PW V-SCREEN NEXT 420-20

- ☐ 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

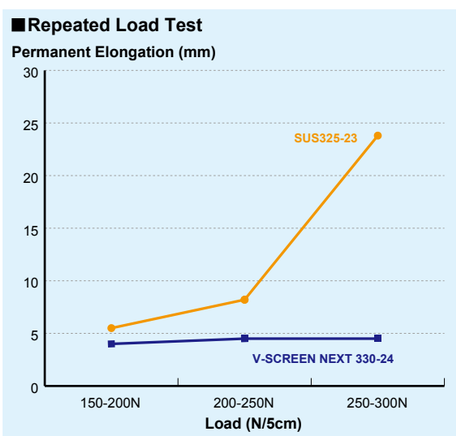
V-SCREEN NEXT features excellent tensile strength and recovery elasticity, as shown in the diagrams below.
Benefits: ☐ High screen tension for dimensional accuracy
☐ Minimal screen tension loss and distortion even after long press runs

■Tensile Strength Test



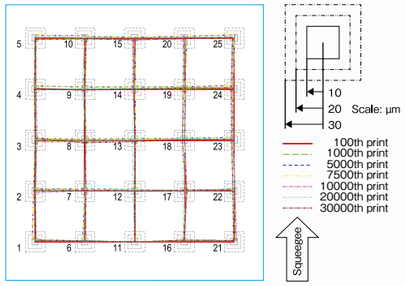
■Tensile strength test method in accordance with ISO1096-1990
■Sample strip width：5cm
■Sample strip length：20cm
■Stretching speed：10cm/min

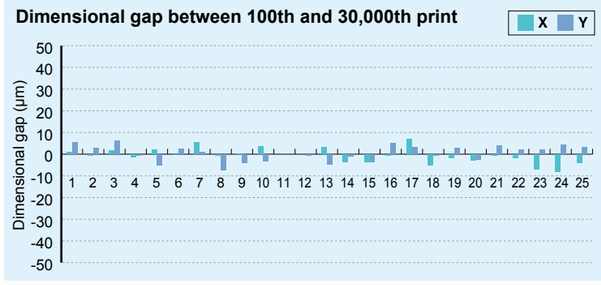
■Repeated Load Test



■Repeated load test method: Amount of permanent elongation measured after sample strip run through 50 load/release cycles
■Sample strip wdth：5cm
■Sample strip lenght：20cm
■Stretching speed：10cm/min

Superior Dimensional Accuracy Proven by 30,000 Print Test



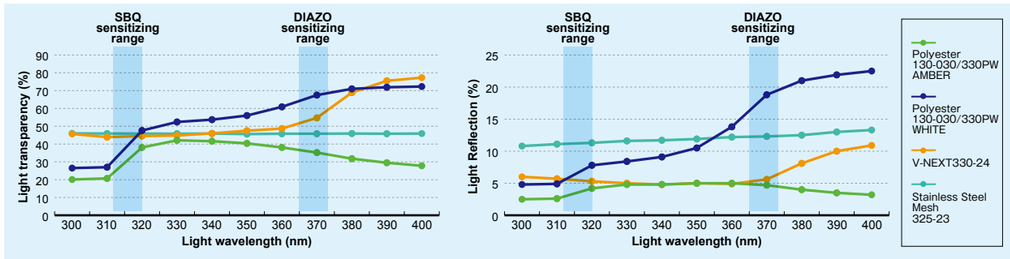


Screen Parameter	
Frame OD	：320mm×320mm
Frame type	：Aluminum cast frame
Mesh type	：V-SCREEN NEXT 420-20
Screen tension	：28.4N/cm
Stretching angle	：23 degrees
EOM	：10μm

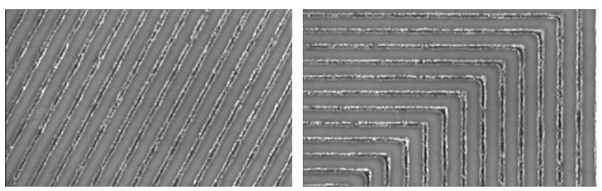
Printing Parameter	
Printer：LZ-150	Squeegee type ：Micro-Squeegee
Clearance：2.0mm	Squeegee shore ：70 shores
Squeegee press.：+50kPa	Squeegee angle ：70 degrees
(kPa/170mm)	Squeegee width ：170mm
Down stop：Free	Squeegee speed：200mm/sec

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 /cm	Mesh count /inch	Thread diameter μm	Mesh thickness μm	Mesh opening μm	Mesh open area %	Theoretical ink volume cm^3/m^2
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.