



L-SCREEN

UX-SCREEN

Top Quality, Super High Modulus Polyester Monofilament Mesh for Precision Screen Printing Applications

Alpha series NEWSUPER treatment

NEWSUPER treatment is a combination of NBC's unique chemical and atmosphere plasma treatment (Corona treatment) which modifies the surface properties as well as the structure at the submicron level, as in the SEM photo below.

Original mesh



NEWSUPER treatment



Alpha series Benefits of NEWSUPER treatment

1. Smoother paste/ink transition

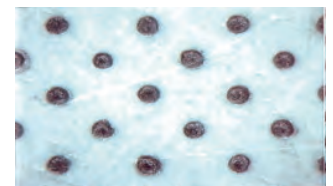
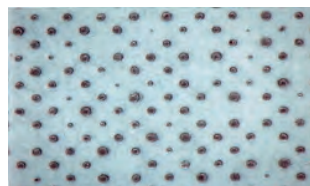
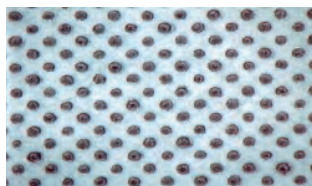
Modified mesh surface in the submicron level reduces the contact area of paste/ink particles, improves paste/ink transition through the mesh and optimizes print resolution, making it ideal for halftone and fine line printing.

20% tone at 150Lpi

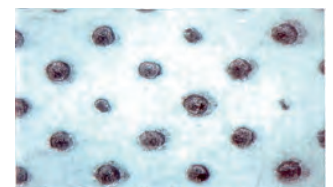
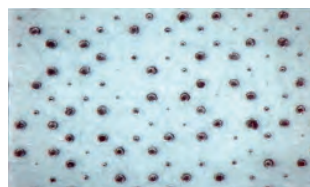
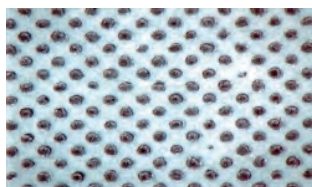
10% tone at 150Lpi

5% tone at 100Lpi

Alpha series
(L-150-027/380PW)

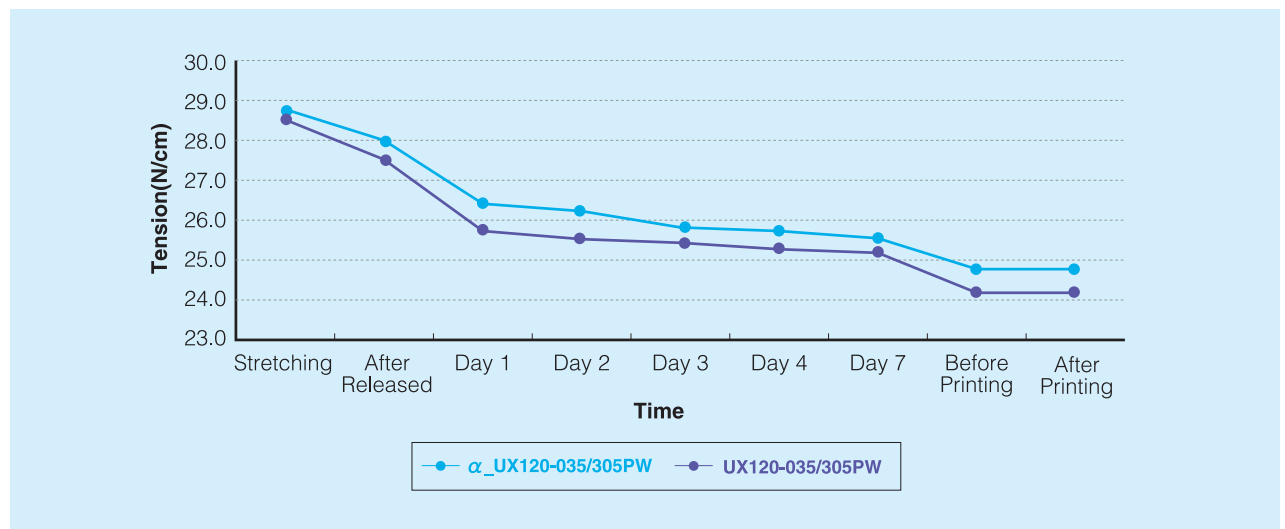


Conventional Mesh
(L-150-027/380PW)



1. Minimized screen tension loss

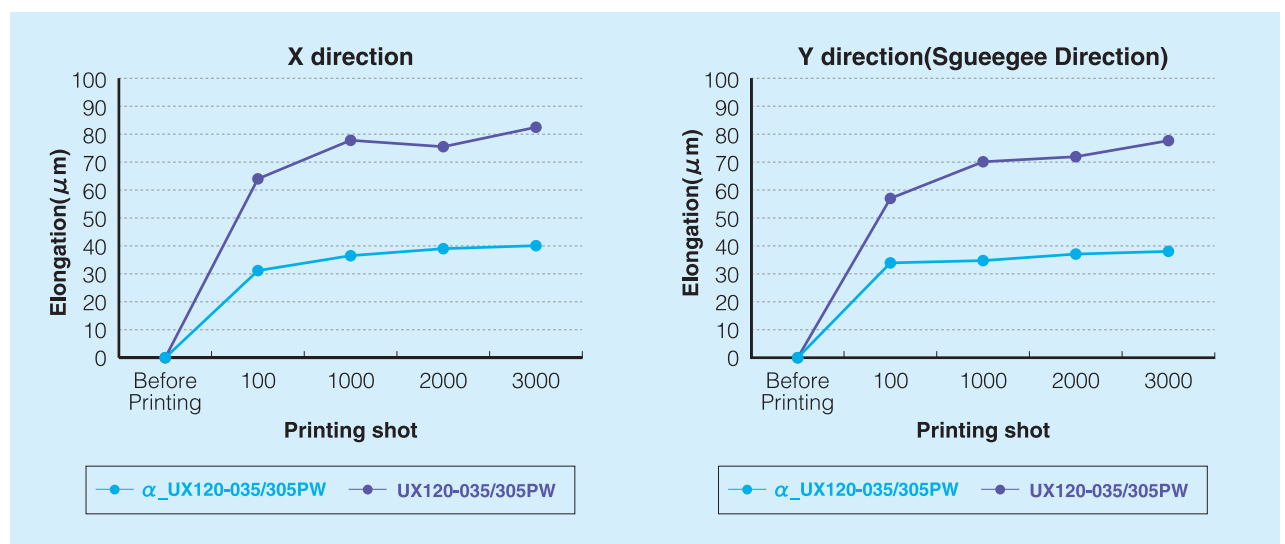
α series of NBC high modulus polyester mesh is further improved by an optimized heat-setting process and rigorous quality control system to minimize screen tension loss after stretching and printing process. The below diagram shows the comparison data in tension loss between α series and original mesh.



2. Further improved dimensional accuracy

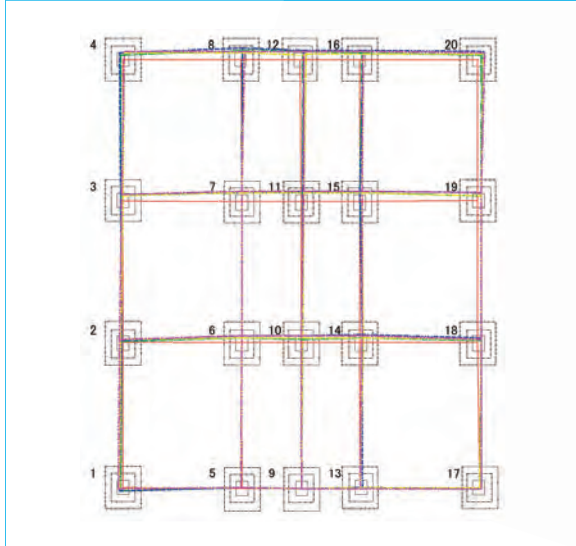
The diagrams show the comparison data of dimensional gap between the screen image (300mm ×300mm) and printing result, proving that the dimensional accuracy of α UX120-035/305PW is significantly improved and more consistent for long run printing.

Dimensional gap change from 100th print to 1500th print

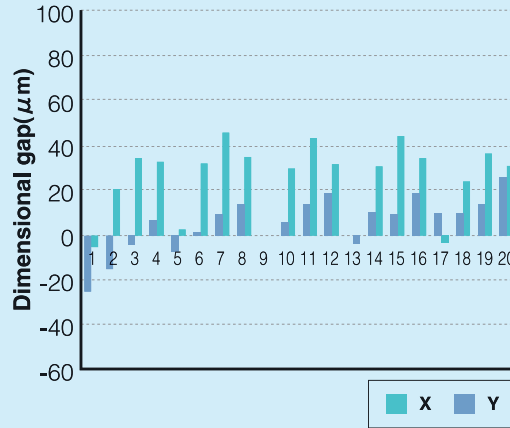


Dimensional gap between screen image and 3000th print

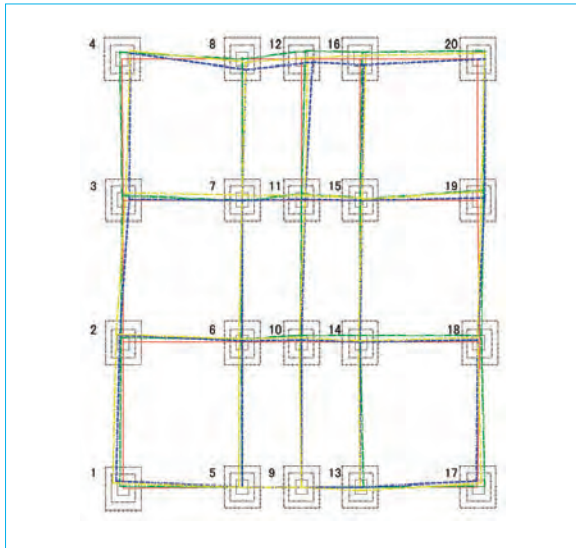
series UX120-035/305PW



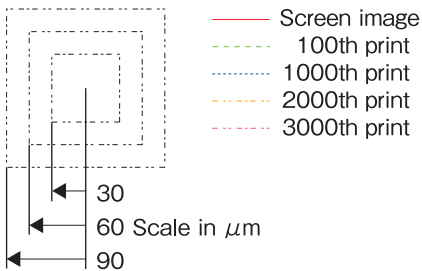
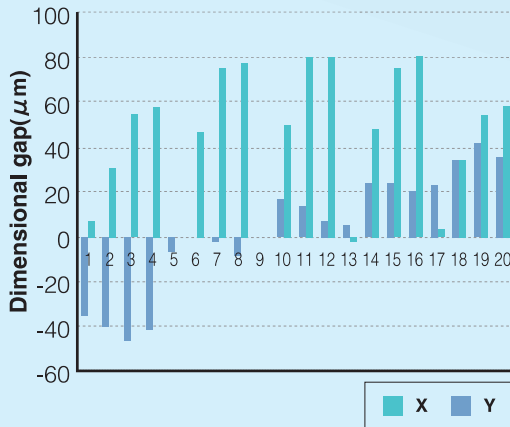
■ Dimensional gap between screen image and 3000th print



Original UX120-035/305PW



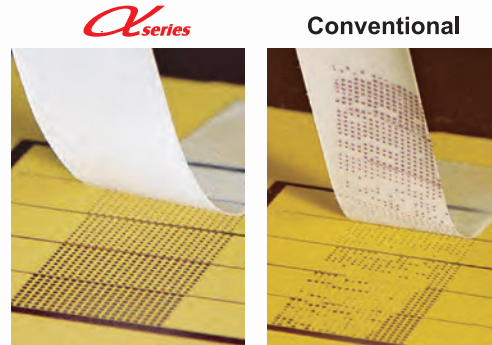
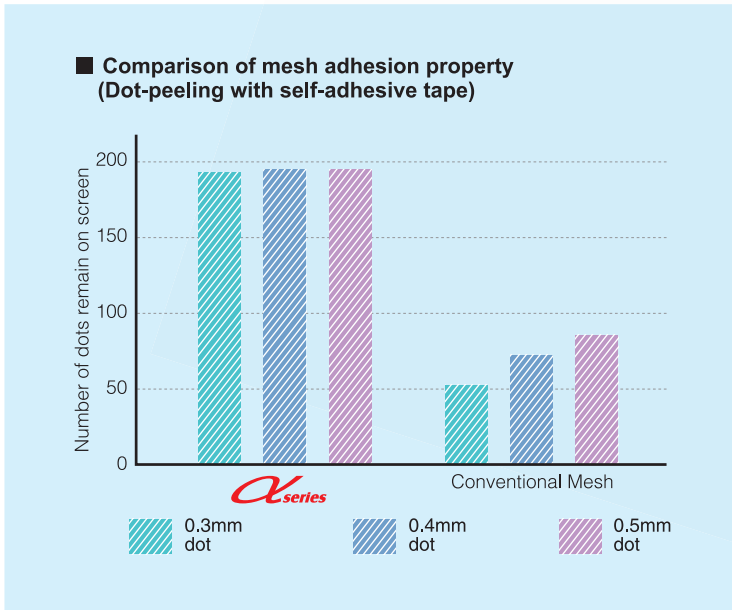
■ Dimensional gap between screen image and 3000th print



Printing Parameter	Screen Parameter
Printer: Flat Bed(Micro Tech MT1000 TVC)	Frame Size: 860mm × 860mm
Clearance: 3.8mm	Frame Type: Aluminum Tubular Frame
Squeegee Pressure: 42N per 380mm	Mesh Type: UX120-035/305PW
Type of Squeegee: Micro-Squeegee	Tension: 24.2 N/cm before press
Squeegee Shore: 70 shores	Stretching Angle: 15 degrees
Squeegee Angle: 70 degrees	EOM: 10 μm
Squeegee Length: 380mm	
Squeegee Speed: 150mm/sec	

2. Extended screen service life

Modified mesh surface with NEWSUPER treatment holds emulsion/capillary film tight and it prolongs screen service life particularly on long run prints or printing with abrasive paste. The adhesion property of mesh is proven below by a comparison test with self-adhesive tape.



Test Parameter

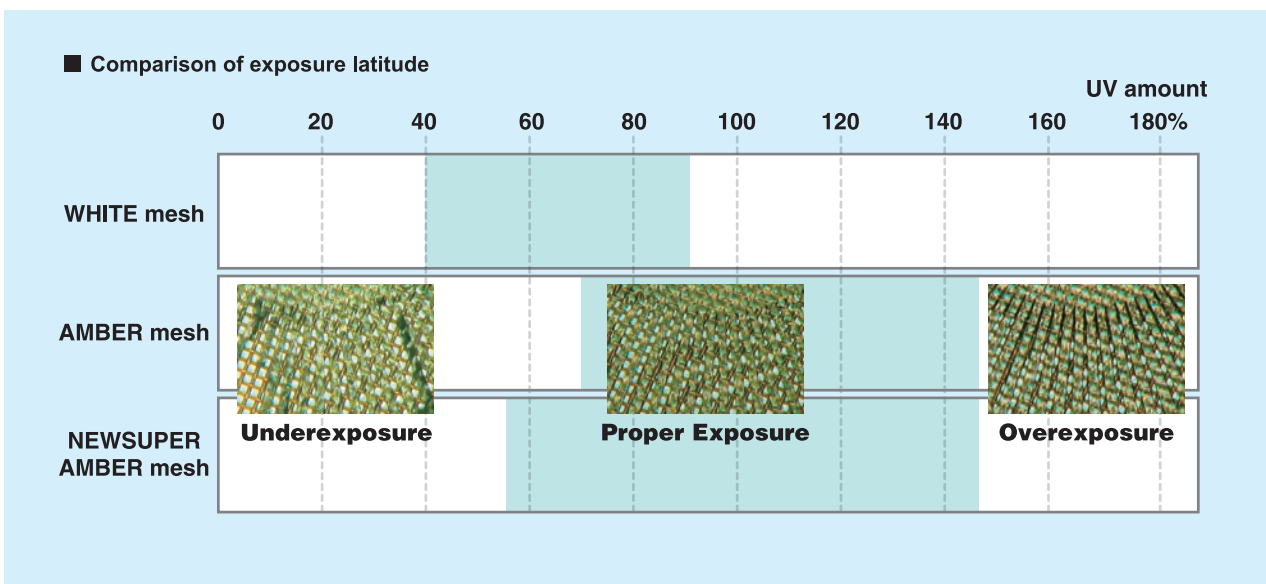
- Mesh type: L-Screen 150-030/380PW
- Emulsion: Dual-Cure
- EOM: 10 μm
- Dot size: 0.3mm, 0.4mm and 0.5mm square dot
- Number of dots: 200 each
- The above dots are peeled-off by self-adhesive tape.
- The number of dots remaining on the mesh are counted.

3. Extended exposure latitude

NEWSUPER treatment not only offers improved adhesion of emulsion/capillary films; it also extends the limit of exposure latitude (underexposure). This is particularly effective for fine detail and use with CTS systems. The below diagram shows the comparison of exposure latitude of three different types of mesh.

Screen Parameter

- Mesh: UX 110-035/280PW
- Mesh Thickness: 50μm
- Emulsion: Dual-Cure
- EOM: 12μm
- Exposure Unit: Metal halide 3KW with Fresnel lens
- Illuminance: 7.0mW/cm²
- Distance to screen: 90cm distance from light bulb





Top Quality, Super High Modulus Polyester Monofilament Mesh for Precision Screen Printing Applications

* Excluding EX SCREEN

Thread type

L: Conjugated Polyester Monofilament (27µmφ - 30 µmφ)

UX: Super High Modulus Polyester Monofilament (33µmφ - 45 µmφ)

EX: High Modulus Polyester Monofilament

Mesh Code	Mesh Count		Weaving	Thread Diameter	Mesh Thickness		Mesh Opening	Open Area	Theoretical Ink Volume	
	Tolerance ±3%				115cm	165cm & wider			115cm	165cm & wider
	/cm	/inch			µm				µm	
α_L- 200 -024/ 508 PW	200	508	1:1 PW	24	36±2µm	N/A	24	23	8.3	N/A
α_L- 200 -027/ 508 TW	200	508	2:2 TW	27	50±3µm	N/A	22	19	9.7	N/A
α_L- 180 -027/ 460 PW	180	460	1:1 PW	27	41±2µm	42±3µm	24	19	7.7	7.9
α_L- 180 -030/ 460 TW	180	460	2:2 TW	30	55±3µm	56±4µm	23	17	9.5	N/A
α_L- 165 -027/ 420 PW	165	420	1:1 PW	27	40±2µm	41±3µm	30	25	9.8	10.1
α_L- 165 -030/ 420 PW	165	420	1:1 PW	30	45±2µm	46±3µm	25	18	8.0	8.2
α_UX 165 -033/ 420 TW	165	420	2:2 TW	33	60±3µm	60±3µm	24	16	9.4	9.4
α_L- 150 -027/ 380 PW	150	380	1:1 PW	27	40±2µm	41±3µm	38	32	12.9	13.3
α_L- 150 -030/ 380 PW	150	380	1:1 PW	30	45±2µm	46±3µm	33	24	11.0	11.2
α_UX 150 -033/ 380 PW	150	380	1:1 PW	33	48±2µm	49±3µm	27	16	7.8	8.0
α_UX 150 -035/ 380 TW	150	380	2:2 TW	35	64±3µm	64±3µm	30	20	12.9	12.9
α_L- 140 -027/ 355 PW	140	355	1:1 PW	27	40±2µm	41±3µm	44	38	15.1	15.5
α_L- 140 -030/ 355 PW	140	355	1:1 PW	30	45±2µm	46±3µm	39	30	13.4	13.7
α_UX 140 -035/ 355 PW	140	355	1:1 PW	35	53±2µm	54±3µm	32	19	10.3	10.5
α_UX 140 -035/ 355 TW	140	355	2:1 TW	35	61±3µm	61±3µm	34	23	13.8	13.8
α_L- 130 -027/ 330 PW	131	334	1:1 PW	27	40±2µm	41±3µm	49	42	16.6	17.0
α_L- 130 -030/ 330 PW	131	334	1:1 PW	30	45±2µm	46±3µm	44	33	15.1	15.4
α_UX 130 -035/ 330 PW	130	330	1:1 PW	35	53±2µm	54±3µm	38	24	12.9	13.2
α_L- 124 -027/ 315 PW	124	315	1:1 PW	27	40±2µm	41±3µm	54	45	17.9	18.4
α_L- 124 -030/ 315 PW	124	315	1:1 PW	30	45±2µm	46±3µm	49	37	16.6	17.0
α_L- 120 -030/ 305 PW	120	305	1:1 PW	30	46±2µm	46±3µm	53	41	18.6	18.6
α_UX 120 -033/ 305 PW	120	305	1:1 PW	33	50±2µm	51±3µm	47	32	15.9	16.2
α_UX 120 -035/ 305 PW	120	305	1:1 PW	35	53±2µm	54±3µm	45	29	15.5	15.8
α_UX 120 -040/ 305 PW	118	300	1:1 PW	40	62±2µm	63±3µm	37	19	11.8	12.0
α_UX 110 -035/ 280 PW	110	280	1:1 PW	35	53±2µm	54±3µm	53	34	18.1	18.4
α_UX 106 -040/ 270 PW	106	270	1:1 PW	40	60±2µm	61±3µm	49	27	16.3	16.6
α_UX 100 -035/ 255 PW	100	255	1:1 PW	35	53±2µm	54±3µm	64	41	21.9	22.3
α_UX 100 -040/ 255 PW	100	255	1:1 PW	40	60±2µm	61±3µm	56	32	19.0	19.3
EX* 100 -048/ 255 PW	100	255	1:1 PW	48	76±2µm	76±3µm	45	20	15.5	15.5
α_UX 90 -040/ 230 PW	90	230	1:1 PW	40	60±2µm	61±3µm	67	37	22.1	22.5
α_UX 90 -045/ 230 PW	90	230	1:1 PW	45	68±2µm	69±3µm	60	30	20.1	20.4
EX* 90 -048/ 230 PW	88	225	1:1 PW	48	75±2µm	79±4µm	58	26	19.8	20.9
EX* 90 -055/ 230 TW	88	225	2:1 TW	55	91±4µm	95±5µm	54	23	20.8	21.7
EX* 90 -071/ 230 TW	88	225	3:1 TW	71	139±10µm	N/A	38	11	15.7	N/A
α_UX 90 -33x2 230 PW	90	230	1:1 PW	33	57±3µm	60±4µm	40	13	7.5	7.9
α_UX 79 -045/ 200 PW	79	200	1:1 PW	45	68±2µm	69±3µm	81	41	27.7	28.1
EX* 79 -048/ 200 PW	79	200	1:1 PW	48	75±2µm	79±4µm	75	35	26.2	27.6
α_EX* 79 -055/ 200 PW	79	200	1:1 PW	55	88±4µm	88±4µm	69	30	26.0	26.0

The above specifications may be changed for quality improvement without notice.

*α_EX SCREEN upgrade is also possible upon request.

Please ask your sales rep or supplier for availability and more information.

Mesh Code	Mesh Count		Weaving	Thread Diameter	Mesh Thickness			Mesh Opening	Open Area	Theoretical Ink Volume	
	Tolerance ±3%				115cm	165cm & wider	115cm			165cm & wider	
	/cm	/inch			µm		µm				cm³/m²
α_UX 71 -045/ 180 PW	71	180	1:1 PW	45	70±2µm	72±3µm	95	45	31.7	32.6	
EX* 71 -048/ 180 PW	71	180	1:1 PW	48	76±2µm	80±4µm	91	42	31.6	33.3	
EX* 71 -055/ 180 PW	71	180	1:1 PW	55	88±4µm	88±4µm	85	36	31.9	31.9	
EX* 71 -063/ 180 PW	71	180	1:1 PW	63	98±5µm	N/A	71	25	24.8	N/A	
EX* 63 -048/ 160 PW	63	160	1:1 PW	48	80±4µm	80±4µm	110	48	38.4	38.4	
EX* 63 -063/ 160 PW	63	160	1:1 PW	63	105±5µm	105±5µm	93	34	36.0	36.0	
EX* 63 -071/ 160 PW	63	160	1:1 PW	71	116±6µm	116±6µm	79	25	28.7	28.7	
α_UX 59 -045/ 150 PW	59	150	1:1 PW	45	72±2µm	74±4µm	124	54	38.6	39.7	
EX* 59 -048/ 150 PW	59	150	1:1 PW	48	76±2µm	80±4µm	120	50	38.2	40.2	
EX* 59 -055/ 150 PW	59	150	1:1 PW	55	88±4µm	88±4µm	114	45	39.9	39.9	
EX* 59 -063/ 150 PW	59	150	1:1 PW	63	105±5µm	105±5µm	104	38	39.9	39.9	
EX* 59 -071/ 150 PW	59	150	1:1 PW	71	116±6µm	116±6µm	91	29	33.5	33.5	
EX* 55 -063/ 140 PW	55	140	1:1 PW	63	105±5µm	105±5µm	116	41	43.2	43.2	
EX* 55 -080/ 140 PW	55	140	1:1 PW	80	140±7µm	140±7µm	97	29	40.0	40.0	
α_UX 53 -045/ 135 PW	53	135	1:1 PW	45	73±4µm	74±4µm	143	58	42.2	42.7	
EX* 53 -048/ 135 PW	53	135	1:1 PW	48	79±4µm	79±4µm	139	55	43.1	43.1	
EX* 53 -055/ 135 PW	53	135	1:1 PW	55	95±5µm	95±5µm	133	50	47.5	47.5	
EX* 49 -071/ 125 PW	49	125	1:1 PW	71	116±6µm	116±6µm	130	41	47.6	47.6	
α_UX 47 -045/ 120 PW	47	120	1:1 PW	45	73±4µm	74±4µm	167	62	45.4	46.1	
EX* 47 -048/ 120 PW	47	120	1:1 PW	48	80±4µm	80±4µm	163	59	47.4	47.4	
EX* 47 -055/ 120 PW	47	120	1:1 PW	55	95±5µm	95±5µm	157	55	52.3	52.3	
EX* 47 -063/ 120 PW	47	120	1:1 PW	63	105±5µm	105±5µm	149	50	52.0	52.0	
EX* 47 -080/ 120 PW	47	120	1:1 PW	80	137±7µm	137±7µm	130	38	51.4	51.4	
EX* 43 -080/ 110 PW	43	110	1:1 PW	80	132±7µm	132±7µm	150	42	55.7	55.7	
EX* 39 -055/ 100 PW	39	100	1:1 PW	55	95±5µm	95±5µm	199	61	58.3	58.3	
EX* 39 -071/ 100 PW	39	100	1:1 PW	71	122±6µm	122±6µm	182	51	62.6	62.6	
EX* 39 -080/ 100 PW	39	100	1:1 PW	80	134±7µm	134±7µm	174	47	62.9	62.9	
EX* 35 -071/ 90 PW	35	90	1:1 PW	71	125±6µm	125±6µm	210	55	69.2	69.2	
EX* 35 -080/ 90 PW	35	90	1:1 PW	80	137±7µm	137±7µm	202	51	70.2	70.2	
EX* 31 -055/ 80 PW	31	80	1:1 PW	55	95±5µm	95±5µm	263	69	65.2	65.2	
EX* 31 -071/ 80 PW	31	80	1:1 PW	71	125±6µm	125±6µm	246	60	75.0	75.0	
EX* 31 -100/ 80 PW	31	80	1:1 PW	100	170±9µm	170±9µm	218	47	80.1	80.1	
EX* 27 -055/ 70 PW	27	70	1:1 PW	55	95±5µm	95±5µm	308	72	68.4	68.4	
EX* 27 -071/ 70 PW	27	70	1:1 PW	71	125±6µm	125±6µm	291	64	80.4	80.4	
EX* 27 -125/ 70 PW	27	70	1:1 PW	125	240±24µm	240±24µm	238	43	103.3	103.3	
EX* 24 -125/ 60 PW	24	60	1:1 PW	125	230±23µm	230±23µm	298	50	114.0	114.0	
EX* 24 -150/ 60 PW	24	60	1:1 PW	150	260±26µm	N/A	271	41	106.5	N/A	
EX* 20 -200/ 50 PW	20	50	1:1 PW	200	370±37µm	N/A	308	37	136.0	N/A	
EX* 16 -200/ 40 PW	16	40	1:1 PW	200	370±37µm	N/A	435	47	173.6	N/A	
EX* 12 -150/ 30 PW	12	30	1:1 PW	150	290±29µm	N/A	696	68	196.0	N/A	
EX* 12 -250/ 30 PW	12	30	1:1 PW	250	480±48µm	N/A	597	50	238.7	N/A	
EX* 10 -300/ 25 PW	10	25	1:1 PW	300	600±60µm	N/A	716	50	173.9	N/A	

The above specifications may be changed for quality improvement without notice.

*α_EX SCREEN upgrade is also possible upon request.

Please ask your sales rep or supplier for availability and more information.

Highest stretching tension of *α* series

Highest stretching tension value of NBC *α* series polyester monofilament meshes.





40N/cm		30μm		35μm	35μm	35μm		40μm	40μm	40μm	45μm	55μm	55μm	63μm	63μm	63μm		71μm	63μm	80μm		80μm	100μm	
			33μm	33μm				35μm	35μm		40μm		48μm											
			30μm										48μm									71μm	71μm	71μm
35N/cm				30μm	30μm			33μm	33μm	33μm			45μm		55μm									
						33μm								48μm									71μm	
30N/cm	27μm					30μm											55μm							
		27μm	27μm	27μm			30μm														55μm			
						27μm															48μm			
25N/cm				27μm																		55μm		
	24μm																							
						27μm																		
20N/cm																								
mesh/cm	200	180	165	150	140	130	124	120	110	100	90	79	71	63	59	55	53	49	47	43	39	35	31	27
mesh/inch	508	460	420	380	355	330	315	305	280	255	230	200	180	160	150	140	135	125	120	110	100	90	80	70

Remark: The above screen tension values are calculated from breaking tension in 1000mmx1000mm sized mechanical stretching devices and they are measured by NBC tension meter. NBC takes no responsibility for accidental damage to the mesh or improper stretching operation.

Top quality guaranteed

Every roll of NBC polyester mesh is supplied with an inspection tag. While flaws are kept to a minimum by careful quality control, any flaw found under our thorough inspection is clearly marked to prevent it being stretched into your image area. Thickness and mesh count are precisely controlled and documented on the tag -- critical information for setting your production standards. You will keep your presses running and save time spent troubleshooting.

NBC also compensates for flaws by adding one half meter of mesh to the end of the roll free of charge for each flaw...now that's value.

品名 Item	α L- SCREEN 140-030/355PW			品名 Item	 *AL-140-030/355PW155P*		
巾 Width	155CM/ 61"	製造番号 Roll No.	E1206A00110-03	製造番号 Roll No.	 *E1206A00110-03*		
原料 Material	POLYESTER 100%	規格値 Catalogue Value	355	経厚 Thickness (μm)	45		
総長 Length	29.5m	実測値 Actual Value	359	総長 Length	 *29.5*		
	キズ引長 Extra		0.5m	キズ引長 Extra	 *0.5*		
Meshtec™ NBC				株式会社NBCメッシュテック / NBC Meshtec Inc. 東京都日野市豊田2-50-3 / 2-50-3 Toyoda, Hino, Tokyo 191-0053, Japan TEL (042) 582-2411 FAX (042) 584-1374 http://www.nbc-jp.com			