

SONY

Why Sony's Thermal Print Media? Manual



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2017.10.6 Ver.1.1

Summary of the advantages

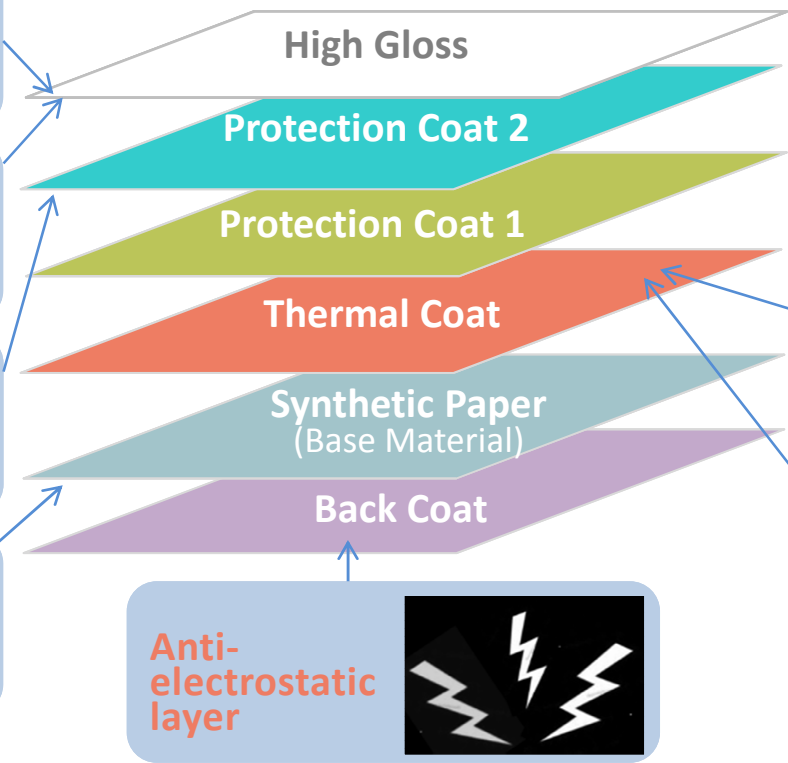
e.g. Composition of UPP-110HG

High water resistance

High gloss and High quality prints

Head-matching performance

Good tearing properties



Minimal curling

Grey-scale reproduction

High humidity and heat resistance

Optimal print quality

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High water resistance

The high-gloss layer, the result of proprietary technologies, provides high water resistance and high storage stability. This layer prevents print smudging from fingerprints or water and increases storage stability.

High gloss and high quality prints

The heavy-duty high-gloss layer achieves smudge-free, high-quality printing while at the same time adding an attractive high-gloss finish to the sheet.

Head-matching performance

The top coat layer of the media, designed to optimally match the printer heads of Sony's printers, provides continuous smooth printing.

Grey-scale reproduction

Accurate grey-scale reproduction is critical to achieve the correct tonal range of the printed image. Sony simultaneously develops video printers and print media with carefully matched grey-scale characteristics that give the best quality.

Minimal curling

Sony's media is designed for minimal curling to ensure reliable, smooth throughput. Minimal curling enables you to file it easily.

High humidity and heat resistance

High humidity can cause loss of print density. This degradation in quality is much less marked with Sony's print media than others, especially in highly humid conditions. Choosing Sony's print media means that picture durability is maintained.

Optimal print quality

Thanks to rigorous application pressure control, the thermal coat layer delivers high-quality coloring properties. The curve and Dmax are strictly adjusted to enable consistent and optimal image quality.

Good tearing properties

For the base material, the foundation of print media, Sony uses a dedicated substrate that matches the thermal specifications of Sony's printers, and applies a special process to improve coating properties. This is the secret behind the tearing properties of Sony's media. The specification prevents cutting in the machine direction, yet enables good cutting properties in the cross direction.





Anti-electrostatic layer

Sony's thermal print media has a built-in anti-electrostatic layer to avoid buildup of electrostatic energy. Without this layer, electrostatic energy would accumulate and reach levels at which sparking could occur. Sparking destroys vital electronic components in a printer, particularly in the thermal head.



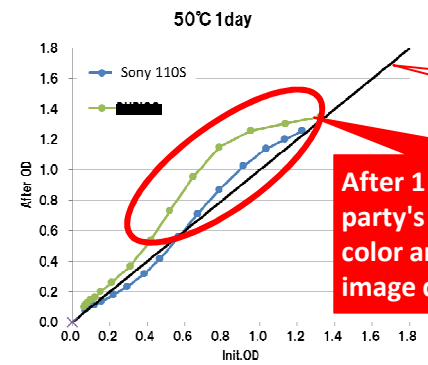
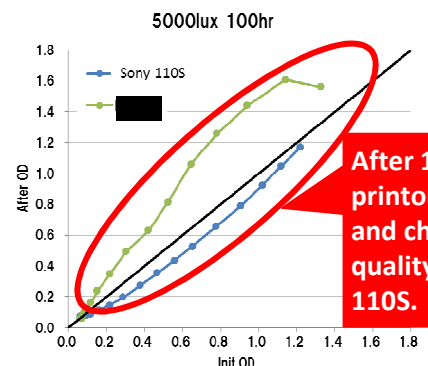
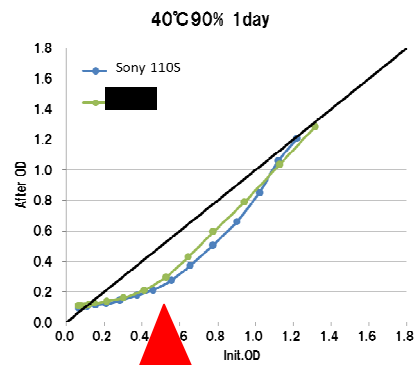
Print Media Comparison

(Sony vs 3rd Party Media)




Model name	SONY / UPP-110S	3 rd party 1 / 110S	3 rd party 2 / 110S
Overview		N/A	N/A
Description	 High Quality	High Quality	
Composition		Base: PP Layer composition : unknown	Base: PET Layer composition : unknown
Whiteness	85%		
Max density	 Approx 1.5	Approx 1.5	
Gross % before print	35	8	
Gross % after print	49	20	
Base material	PP(YUPO)	PP(YUPO)	PET
Paper end mark	Yes	Yes	No
dimensions (length)	Over 20m	19.94m	






Gross% is glossiness index. Higher Gross% indicates high glossiness and quality.

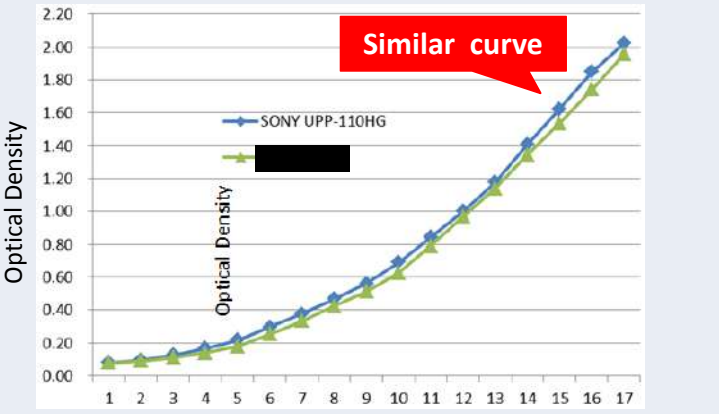
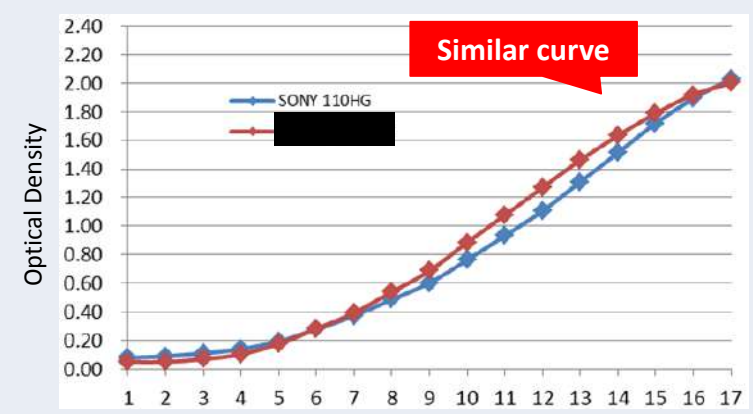
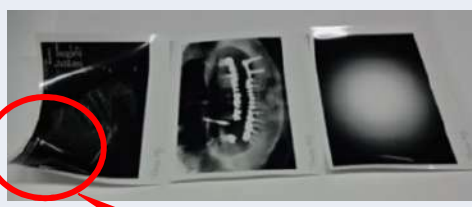
Model name	SONY / UPP-110S vs 3 rd party 1 / 110S	
γ curves	<p>Optical Density</p> <p>Test step pattern number 1(white) => 17 (black)</p>	<p>Sony's γ curve is optimized for use with Sony printers.</p> <p>Other Point 3rd party has high static electricity of print</p> <p>3rd party's γ curve is much different from Sony 110S and less optical density.</p> <p>RESULT! 3rd party's halftone has been lost from the original image compared to 110S.</p>
Print-out example	<p>Sony</p> <p>Good gradation</p>	<p>3rd Party</p>

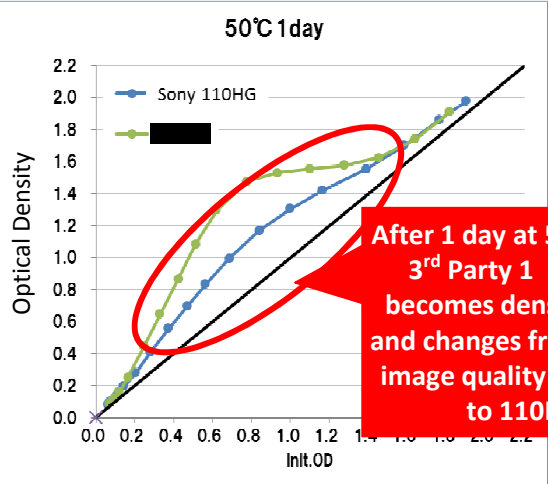
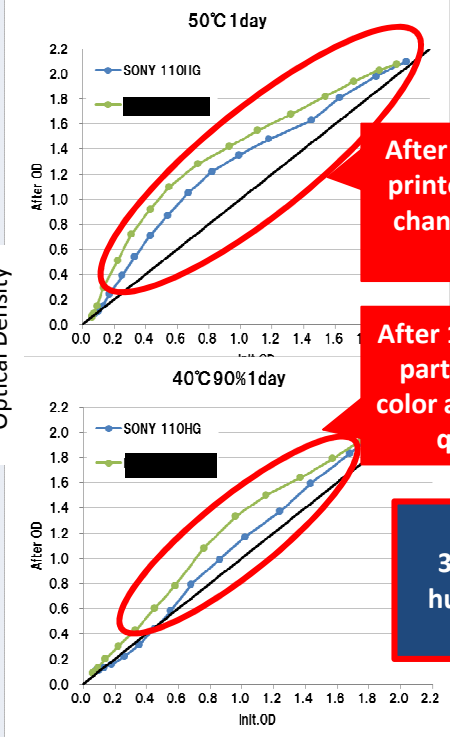
Model name	SONY / UPP-110S vs 3 rd party 110S
Stability	
	
	

RESULT! 3rd party 110S is lower heat resistance and lower light resistance than Sony 110S

Model name	SONY / UPP-110HD	3 rd Party 1 / 110HD	3 rd Party 2 / 110HD
Overview		N/A	N/A
Description	 High Density	High Density	High Density
Composition		Base: PP Layer composition : unknown	Base: PET Layer composition : unknown
Whiteness	75%	-	81%
Max density	Approx. 1.8	Approx. 1.8	Approx. 1.7
Gross % before print	58	65	27
after print	72	70	86
Base material	PP(YUPO)	PP(YUPO)	PET
Paper end mark	Yes	Yes	No
dimensions (length)	Over 20m	19.98m	-

Model name	SONY / UPP-110HG	3 rd party 1/ 110HG	3 rd Party 2 /110HG
Overview			 Actual package may vary
Description	 High Glossy	High Glossy	High Glossy
Composition	 Gloss Layer Protection coat-2 Protection coat-1 Thermal layer Synthetic paper	Base: PP Layer composition : unknown	Base: PET Layer composition : unknown
Whiteness	85%	-	86%
Max density	 Approx. 2.1	Approx. 2.0~2.1	Approx. 2.0
Gross % before print	97	85	66%
after print	98	80	92
Base material	PP(YUPO)	PP(YUPO)	PET
Paper end mark	Yes	Yes	No

Model name	SONY / UPP-110HG vs 3 rd Party 1 110HG	SONY / UPP-110HG vs 3 rd Party 2 -110HG
γ curves		
Example print outs	 <div data-bbox="990 1040 1435 1216" style="border: 2px solid red; padding: 5px; background-color: #003366; color: white;"> <p>RESULT! 3rd Party 1 has similar density curve, but less gross than Sony 110HG and occurs large curl.</p> </div>	<div data-bbox="1467 1040 2027 1216" style="border: 2px solid red; padding: 5px; background-color: #003366; color: white;"> <p>RESULT! 3rd Party 2 has similar density curve, but less and uneven gross than Sony 110HG, because white area is not glossy.</p> </div>

Model name	SONY / UPP-110HG vs 3 rd party 1 - 110HG	SONY / UPP-110HG vs 3 rd Party 2-110HG
Stability	 <p data-bbox="779 746 1102 970">After 1 day at 50 degrees, 3rd Party 1 printout becomes dense in color and changes from original image quality compared to 110HG.</p> <p data-bbox="488 1098 1012 1225">RESULT! 3rd Party's 110HG is lower heat resistance than Sony 110HG</p>	 <p data-bbox="1550 657 2042 817">After 1 day at 50 degrees, 3rd Party 2 printout becomes dense in color and changes from original image quality compared to 110HG.</p> <p data-bbox="1550 849 2042 1008">After 1 day at 40 degrees and 90%, 3rd party 2 printout becomes dense in color and changes from original image quality compared to 110HG.</p> <p data-bbox="1572 1040 2011 1200">RESULT! 3rd party 2 is lower heat and humidity resistance than Sony 110HG</p>

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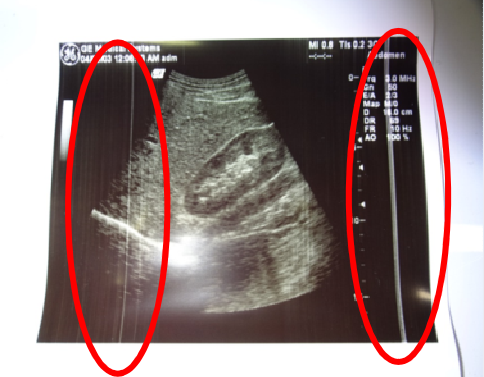


Model name	SONY / UPP-110HG	3 rd party 1 - 110HG	3 rd Party 2 -110HG
<p>This heat elements area should avoid to adhere deposits on.</p>  <p>Before printing</p>	 <p>No deposits</p>	 <p>Deposits adhere to thermal head of white line area.</p>	

03

(3) UPP-110HG vs 3rd Party Media

Thermal heads after printing 1 roll of sample

SONY

Model name	3 rd party 1 - 110HG	3 rd party 2 -110HG	
Print outs after printing 1 roll of sample	 <p data-bbox="555 903 1122 1034">Deposits that adhere to thermal head cause problems such as white vertical streaks in the print result.</p>	 <p data-bbox="1167 975 1603 1034">White vertical streaks in whole</p>	 <p data-bbox="1675 975 1995 1034">Scratches on surface</p>
<p data-bbox="1211 1086 1339 1118">RESULT!</p> <p data-bbox="577 1129 1973 1214">3rd party media causes head problem and white vertical streaks in your print results. Using 3rd party medias is absolutely certain to deliver a damaging blow to your print head.</p>			

Manufacturer	3 rd Party 1	3 rd Party 2
Cross view	 <p>45808211</p> <p>3rd Party 1</p>	 <p>J4211</p> <p>270114-A12E</p> <p>3rd party 2 Sony</p>
Outward appearance	 <p>3rd party 1</p>	 <p>3rd Party 2 Sony</p>

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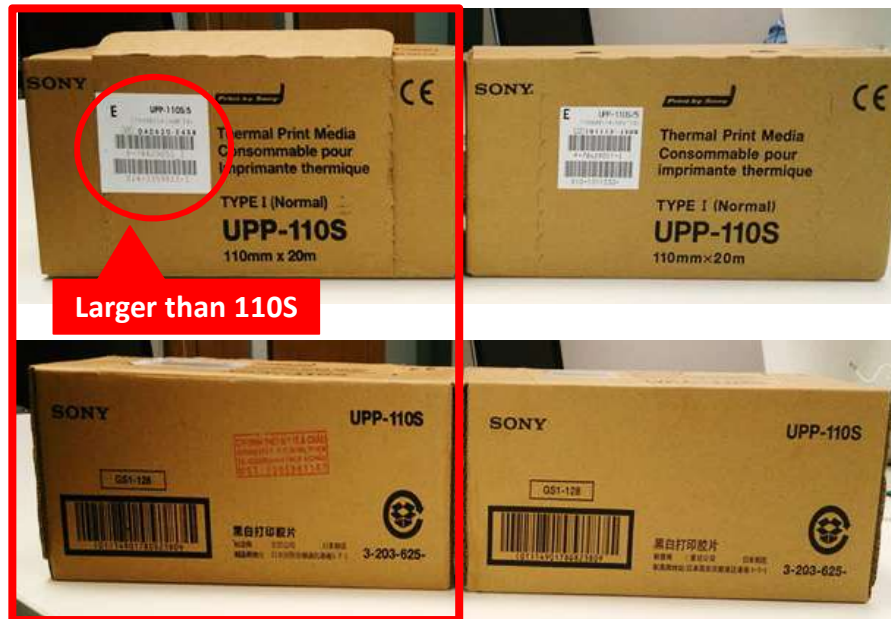
04

Tips To Identify Counterfeit (1) UPP-110S Fake Media



By Outer carton

One Of Example Obtained



Larger than 110S

FAKE

Sony



FAKE

Sony

[Caution needed]
Less difference on outer carton
between Sony and fake media

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04

Tips To Identify Counterfeit (1) UPP-110S Fake Media

SONY

By Inner package

One Of Example
Obtained

Thin. Too glossy. Wrinkling.

FAKE



Sony



*** Distribution Prohibited ***

By Finishing

One Of Example
Obtained

Sony



FAKE



Similar finishing, but yellowish and stained paper.

04

Tips To Identify Counterfeit (1) UPP-110S Fake Media

SONY

By Core of paper roll

One Of Example
Obtained

Sony



Printed Sony logo inside the core and Lot Number outside. Cut the both ends.

FAKE



Printed or stamped other texts inside the core without any lot number.

By Printing

One Of Example
Obtained

Halftone has been lost from the original image compared to 110S.



Bad tearing properties

04

Tips To Identify Counterfeit (2) UPP-110HG Fake Media

SONY

By Inner package

One Of Example
Obtained

Non-wrinkling

Sony



FAKE



Thin. Too glossy. Wrinkling.

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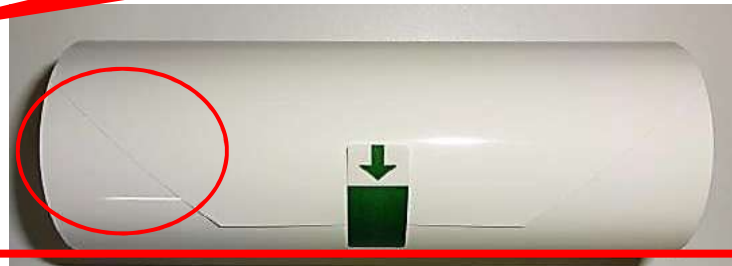
Outward appearance

One Of Example Obtained

Sony



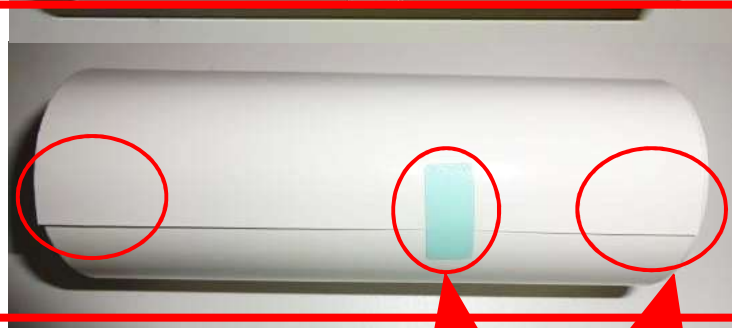
Printed Sony logo inside the core and Lot Number outside. Cut the both ends.



FAKE



Plastic core without any prints; Logo and Lot number.



Different seal

No trapezoidal cut

Electrostatic Charge Comparison Video

Q. Sometimes vertical white streaks appear in important print results.
Why does this happen?

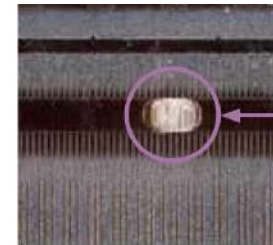


A. Friction between the print media and the print head during the printing process may cause the print media to become charged.

This static electricity destroys the print head elements, causing problems such as vertical stripes appearing in the print result.



Before printing



Destroyed heating element of printer head

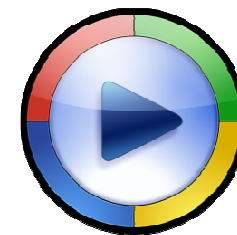
After printing

Let's see the Electrostatic Charge Comparison Video to understand 3rd party media's result => Go to the next page!

05

Electrostatic Charge Comparison Video

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Click here to
see the video

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