High Speed Drop-on-demand inkjet printer

PJ Series

New

In combination with UV-LED curing technology

On-demand production for short-run variable production to medium-run jobs.
Broader media choices without a need for pre-coating.
Numerous benefits from the implementation of UV-LED curing system.
More simplified and cost effective workflow.

Shiki

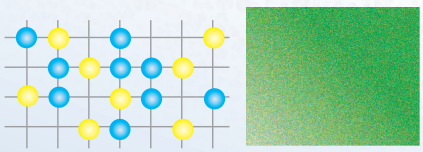
Print Head

Incorporated in the heart of SHIKI PJ series is the world's fastest Drop-on-demand (DOD) inkjet print head developed by Kyocera.
Being a global leader in the fine ceramic industry, Kyocera applied its proprietary piezoelectric ceramic technology to create a compact piezo actuator, which comprises the very critical element of this print head technology. Each head has 2,656 ink nozzles arranged in a 4.25-inch-wide print line, and offers 600 dpi x 600 dpi high resolution at the high speed.

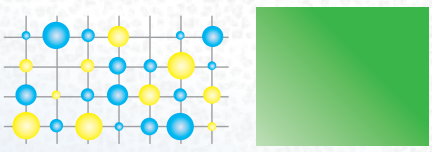
Different Ink Drop Sizes

Ink droplet sizes can be selected according to the substrate and the intended design. Variable droplet sizes are from 3pl to 13pl. Having variable drop sizes with its max. resolution of 600x600 dpi, help achieve sharp and high image quality.

＊As inkjet drops have a different appearance on different substrates, please test beforehand and choose the appropriate drop size for each substrate.



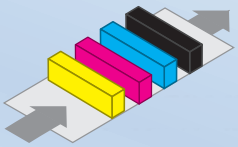
Conventional ink droplet



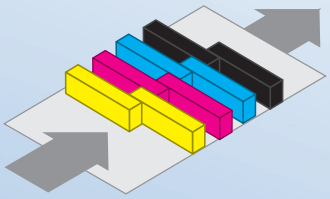
Variable ink droplet

Staggered Print Head Arrangement

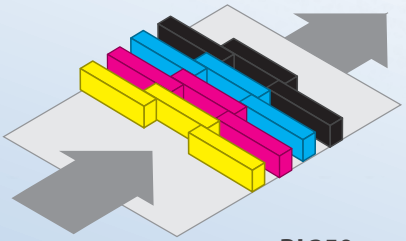
Its broad 4.25 –inch wide inkjet print head and simplified layout design allows SHIKI PJ series to achieve wider web width with fewer print heads.



PJ 120
Max. web width : 120mm
Max. print width : 108mm
1 print head per each color



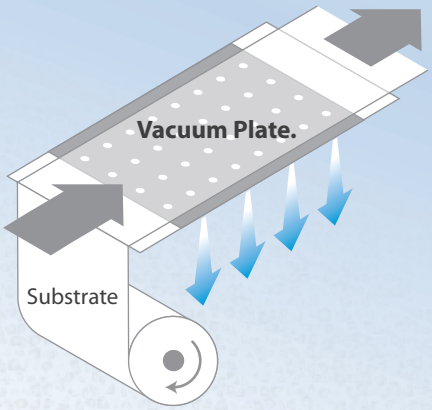
PJ 240
Max. web width : 240mm
Max. print width : 216mm
2 print heads per each color



PJ 350
Max. web width : 350mm
Max. print width : 324mm
3 print heads per each color

Vacuum Plate

The vacuum table is installed with absorption air allows easily misaligned light-weighted substrates to be fixed securely.



UV–LED Curing Technology

Kyocera's world's fastest UV–LED technology brings various benefits summarized in the right table such as high energy saving,lower operating costs, safer and friendly working environment etc.

UV–LED for pinning cure option

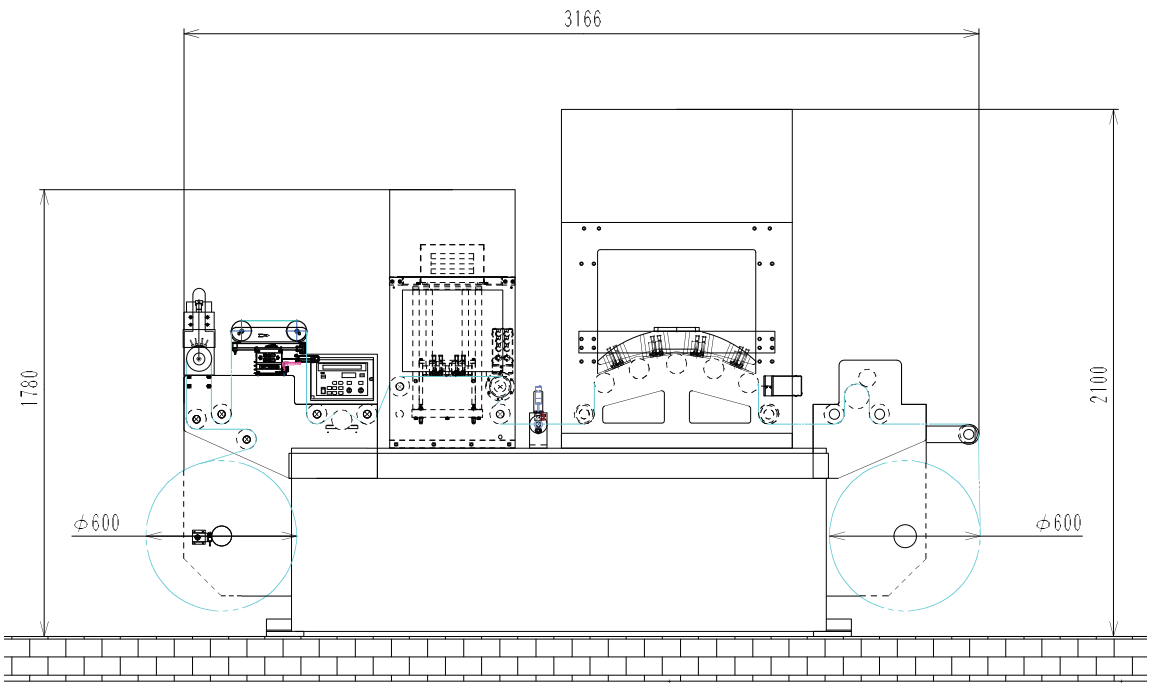
In addition to the standard UV–LED drying system above, we can also provide a pinning cure option.

In pinning option, the smaller UV–LED are mounted between each inkjet head and each color to be partially cured immediately after being jetted, hence no time for the ink to be spread. The result is a reduction in dot gain, and realization of a sharper more vibrant color image.

Options and Finishing Equipments

Optional equipments such as corona treating equipment, UV flexo varnishing unit,
rotary die-cut unit, backside digital printing unit, and laminating unit etc can be also added according to your request.

PJ250A (White CMYK) Layout



UV–LED Curing Technology

Conventional UV		UV–LED system
High	Energy Consumption	Low

The UV–LED system will enable significant reductions of 50 to 70% in electricity consumption, compared with the conventional UV ink-drying systems that use UV lamps.

Ozon generation	Environmentally friendliness	No Ozon generation

No ozone generation: environment friendly and eliminates need for exhaust ventilation ducting and related installation work which will lead to a cost reduction.

High	Heat Generation	Low

Lower heat or No IR generation, which means fewer adverse effects on heat sensitive materials such as films and thermal papers.

1,000 hours	Expected lamp life	15,000 hours

Longer operational life of UV–LED lamps =approx. 15,000 hours,
which is **15 times longer than** the conventional UV lamps.

A few minutes	Warm-up Time	Zero

Instant light on/off= no latency time.
Unlike the conventional UV lamps which require a warm-up phase of a few minutes to light up, the LED lamps can turn on instantly when it is needed,
which will contribute to a longer operational life of the UV–LED lamps.
Plus, you can choose the area of irradiation which will contribute to another energy saving.

Bulky	Size	Compact

Compact size : reduced installation space.

Multiple peaks	UV–LED spectrum	Single UV band

The depth of UV curing is a function of wavelength.
Due to a longer wavelength emission of 385nm,
it allows the ink to get cured at deeper depth.

Technical Specifications

PJ Series

Print technology
Piezo Single pass inkjet technology
(Drop on Demand)

Print Resolution
600 dpi x 600 dpi (1,200 nominal)

Max. Speed
Up to 50 meters / min.

Paper Width and Print Width

model	Paper Width	Print Width
PJ 120	120mm	108mm
PJ 240	240mm	216mm
PJ 350	350mm	324mm

Inks
UV curable Cyan, Magenta, Yellow, and Black

Substrate Type
Standard self-adhesive label stock such as coated and uncoated paper,art wood paper, and plastic films (such as PET, BOPP, PE etc), foiling materials,
and gloss or matte paper stock etc.

Web handling
Roll to roll

Environment
Optimal temperature range : 20~30˚C

UV-LED Drying System KVL-G3 Series

UV Light Box

model	KVL-S05E-G3	KVL-S09E-G3	KVL-S09E-G3S
LED wave length	385nm		
Irradiation area	110×48 mm	220×48 mm	220×48 mm
Expected Lamp Life	15,000 hours		
Cooling method	Water cooled		
Size	252×83×170 mm	360×83×170 mm	360x83x170 mm
Weight	2.7kg	3.7kg	4.7kg

UV Light Controller

model	KVL-S05E-G3	KVL-S09E-G3	KVL-S09E-G3S
Drive method	Constant current		
Power consumption	1.5kw	2.7 kw	3.9 kw
Irradiation width	—	3 steps (5,7,9 inch)	3 steps (9,11,13 inch)
Interiock	Temp. error, Flow-meter error LED error		
Size	322×548×482mm	322×698×482mm	360x698x522mm
Weight	32kg	40kg	55kg