

# FPA-5550iX i-line Stepper for Display, Image Sensor & FPGA Fabrication



## Wide-Field, High-Resolution i-line Stepper for Large Device Fabrication

FPA-5550iX [50iX] Steppers provide high-resolution imaging across a large exposure area and compatibility with a range of advanced functions. 50iX Steppers offer a large 50 x 50 mm exposure field allowing users to improve imaging performance and productivity by helping to avoid stitching of adjacent shots to expand field size.

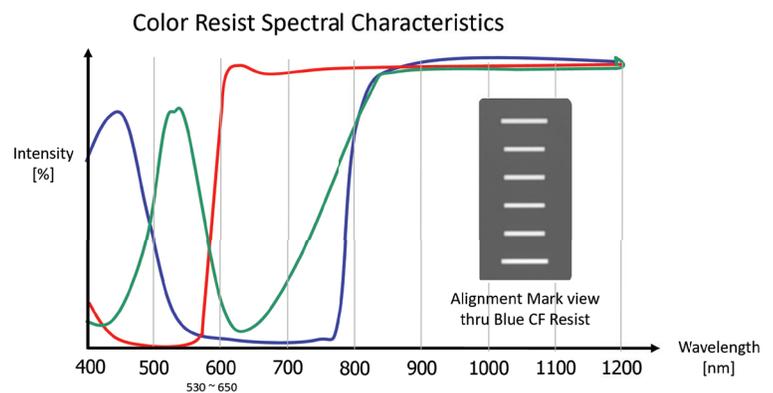
Originally designed for Color Filter (CF) fabrication, the 50iX can be extended to provide high-resolution patterning for production of full-field CMOS Image Sensors (CIS), Field Programmable Gate Arrays (FPGA), Advanced Packaging, display and other large device applications.

## FPA-5550iX FEATURES

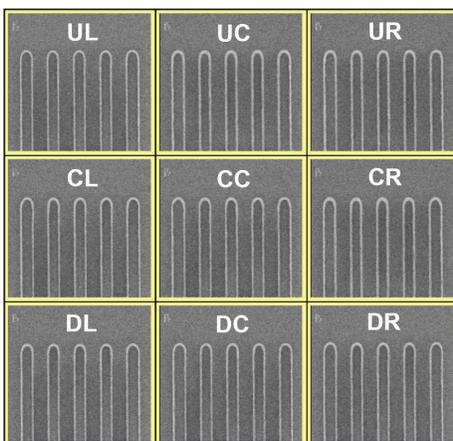
- Exposure Field 50 x 50 mm (max  $\Phi$  70.7 mm)
- Stepper Alignment Options enable overlay process optimization for Color Filter (CF) and Backside Illuminated (BSI) Processes
- Canon Built-In Metrology (CANOMAP)

## KEY OPTIONS

- Wide Band Off-Axis Scope (WB-OAS)
- Oxygen Concentration Control System (OCCS)
- Die-by-Die Overlay Compensation (EAGA)
- Resist Outgas Exhaust System
- Pellicle Particle Checker
- PC Remote Console
- GEM-compliant online software



FPA-5550iX alignment wavelength options enable measurement through red, blue and green color filter resists



FPA-5550iX Steppers feature a large exposure field and 500 nm resolution capability

## SPECIFICATIONS

Technology	i-line Stepper (365 nm)
Resolution	$\leq$ 500 nm
Overlay	$\leq$ 50 nm
Numerical Aperture	0.28 – 0.37
Lens Reduction Ratio	2:1
Exposure Field	50 x 50 mm
Substrate Size Options	300 mm
Dimensions (W x D x H)	2.3 x 3.34 x 2.7 m

# Canon Lithography Systems

Canon Photolithography equipment is designed to help provide exceptional quality, performance, and cost of ownership for your wafer imaging applications.

Canon FPA (Fine Pattern Aligner) Series Nanoimprint, i-line and Deep Ultraviolet (DUV) lithography systems are used in the fabrication and heterogeneous integration of high-tech devices including integrated circuits, hard disk read/write heads, microelectromechanical systems (MEMS) devices, image sensors, displays, power devices and light emitting diodes (LED).

## LITHOGRAPHY PRODUCTS & TARGET APPLICATIONS

Lithography Products	Technology	Resolution	Lens Red. Field Size [mm]	Substrate Options [mm]	MRAM	Logic & MPU/GPU	Medical	HDD & SCM	Power & Automotive	Waveguide & RF	Advanced Packaging	Optics & Photonics	MEMS, Sensors & IoT	PC & Mobile	5G & Data Centers	Wearables	AR/VR & Display	LED, MicroLED	Artificial Intelligence
FPA-1200NZ2C	Nanoimprint Lithography	≤15 nm	1:1 26 x 33	300	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FPA-8000iW	i-line (365 nm) Stepper	≤ 0.8 μm	2:1 55 x 55	510 x 515			✓				✓	✓	✓	✓	✓	✓	✓	✓	✓
FPA-3030i6	i-line (365 nm) Stepper	≤ 350 nm	5:1 22 x 22	≤ 200			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
FPA-3030iWa	i-line (365 nm) Stepper	≤ 0.8 μm	2:1 52 x 52	≤ 200			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FPA-3030EX6	KrF (248 nm) Stepper	≤ 150 nm	5:1 22 x 22	≤ 200			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
FPA-5520iV LF2	i-line (365 nm) Stepper	≤ 0.8 μm	2:1 54 x 68	300	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FPA-5550iZ2	i-line (365 nm) Stepper	≤ 350 nm ≤ 280 nm (2/3 Ann.)	4:1 26 x 33	200 300	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FPA-5510iX	i-line (365 nm) Stepper	≤ 0.5 μm	2:1 50 x 50	300			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FPA-6300ES6a	KrF (248 nm) Scanner	≤ 100 nm ≤ 90 nm (2/3 Ann.)	4:1 26 x 33	200 300	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
FPA-6300ESW	KrF (248 nm) Scanner	≤ 130 nm	3.125:1 33 x 42.2	200 300			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
MS-001	Overlay Metrology	---	---	300	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

✓ Compatible with application

All options may not be available on all models. Contact Canon for details.



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