

CANON FPA-5000ES3 12”

Description:

- Country of Origin: Japan
- Year Manufactured: 2001
- Power: 200V 50/60Hz 3 Phase
- Configurations:
 - Max Sigma: 0.85
 - Conventional (Lens NA): 0.73
 - Annular: Ratio 0.3/0.6; 0.58/0.9; 0.53/0.75
 - Resolution (nm) for $\frac{2}{3}$ annular: 130
 - Total Focus Deviation (nm): 150
 - Stepping (nm): 17
 - Distortion (nm): 20
 - CD Variation (nm): 16
 - Illumination Uniformity (%): $\leq 1.2\%$
 - Dose Control (%)*: 1.5%

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Regular quarterly PM check items and result:

Number	Item	Command	Check	Adj/Ofs	Results	Spec	Judgement:
1	Auto Calibrations note: values are the difference from previous	RYORG	x	Renew	Xave = 0.153um; Yave = -0.066um	ave ≤ 1.0um	Same as before
		SRMOC	x	Renew	Xave = -0.107um; Yave = -0.007 um	ave ≤ 2.0um	Same as before
		TFM	x	Renew	Focus = -0.004um ;Tilt-X=0.150ppm ppm	Focus ≤ 0.1um; Tilt ≤ 5ppm	Same as before
		SKEW	x	Renew	Mean = -0.129 ppm	Mean ≤ 3.0ppm	Same as before
		BLC	x	Renew	X = 0.107um; Y = -0.009um	≤ 1.0um	Same as before
2	Uniformity check		x	Measure only	std mode 1 Uniformity = 0.225%	≤ 1.0%	Same as before
			x		std mode 13 Uniformity = 0.456%	≤ 1.0%	Same as before
			x		special mode 1 Uniformity = 0.709%	≤ 1.0%	Same as before
			x		special mode 3 Uniformity = 0.318%	≤ 1.0%	Same as before
			x				
3	Light Integrator comp with ext joulemeter Ophir meter set at 1J range, LOW threshold, Calibrated Nov 2023	UCJC	x	Measure only (using new Ophir light meter)	joulemeter reading: 15.422 J/m2 (input= 10 J/m2)	N/A	Same as before
					joulemeter reading: 15.846 J/m2 (input= 10 J/m2)	N/A	Same as before
					joulemeter reading: 10.045 J/m2 (input= 10 J/m2)	N/A	Same as before
					joulemeter reading: 10.470 J/m2 (input= 10 J/m2)	N/A	Same as before
4	Light Integrator measurement comp	IL (LIMC)	x	Measure only	std mode 1 Intensity = 18901.3	≥ 15000W/m ²	Same as before
					std mode 13 Intensity = 19905.97	N/A	Same as before
					special mode 1 Intensity = 12033.96	≥ 11000W/m ²	Same as before
					special mode 3 Intensity = 13228.3	N/A	Same as before
5	Light Integrator Accuracy	SERC	x	N/A	Linearity = 0.1695	< ± 0.5%	Same as before
					Total accuracy = 0.31%	< ± 1.2%	Same as before
6	System parameter and CAM backup	N/A	x	N/A	Syspara / Job / Reticle / CAM backed up	backup in CF card	Same as before
7	Cymer laser total pulse number	CEL	x	N/A	5727039921		Same as before
8	Synchronous Accuracy (WF 1)	AUXSYNC	x	Check	Xave = 7nm; Xstd = 21m; Yave = 9nm; Ystd = 26nm	ave ≤ 7nm ; Std ≤ 25nm	Same as before
9	Wafer Flatness check(WF 1)	AUXWF	x	Check	Range = 1.02um	Range ≤ 1.5um	Same as before
10	Orthogonality and Mag Check (WF 18)	AUXXYSA	x	Check	Mag x = 0.06ppm ; Mag y = -0.03ppm ; Ortho = 0.16ppm	≤ 0.1ppm	Same as before

Extra test for stage and lens condition:

							Canon CPO specification:		
11	Scan Distortion	Standard illumination Mode 1	Dx		105 nm	≤ 17 nm	Out of spec		
			Dy		109.2 nm	≤ 17 nm	Out of spec		
		Standard illumination Mode 2 Special illumination mode 2	Dx		108.2 nm	≤ 17 nm	Out of spec		
			Dy		105.7 nm	≤ 17 nm	Out of spec		
		12	Stepping Accuracy	X1-X			18.9 nm	≤ 17 nm	Out of spec
							61.9 nm	≤ 17 nm	Out of spec
X2-X					37.6 nm	≤ 17 nm	Out of spec		
					79.8 nm	≤ 17 nm	Out of spec		
		X3-X			14.2 nm	≤ 17 nm	Out of spec		
					57.3 nm	≤ 17 nm	Out of spec		
		Y1-X			18.5 nm	≤ 17 nm	Out of spec		
					13.9 nm	≤ 17 nm	Out of spec		
		Y2-X			17.5 nm	≤ 17 nm	Out of spec		
					13.9 nm	≤ 17 nm	Out of spec		
		Y3-X			24.8 nm	≤ 17 nm	Out of spec		
					14.7 nm	≤ 17 nm	Out of spec		

13 Facilities check

check C-oil level is Good, flow
check brine level is Good, flow

35.5
42.6

Pressure: 0.443Mpa status light 8 flashing
Pressure: 0.113Mpa

Scanner status check

Atmospheric	1024.73	hPa
Use of Halogen Lamp	79782	HRS
Use of Helium-Neon Laser	78583	HRS