
















# Annex 1

## Digital light Processing (DLP) printer, operation software and parameter







Model (Picture)	Printer Manufacturer, Model	Light source	Pixel size x,y	Light intensity	Operation Software	Parameter data set*	Curing time	Slicing	Recommended orientation angle (degree)
	Aidite Cameo CPD-100	405 nm	±30 µm	4.3 mW/cm <sup>2</sup>	Aidite Dental	EZPRINT Temp	2.1 s	50 µm	0-90
	Asiga Max	385 nm	±62 µm	6.1 mW/cm <sup>2</sup>	Composer 1.2.11	Detax_Freeprint temp UV_3.3	1.8 s	50 µm	0-90
	Asiga Max 2	385 nm	±62 µm	7.0 mW/cm <sup>2</sup>	Composer 2.0.8	Detax_Freeprint temp 385_5	1.5 s	50 µm	0-90
	Asiga Pico 2	385 nm	±39 µm	20 mW/cm <sup>2</sup>	Composer 1.2.11	Detax_Freeprint temp UV_3.3	0.6 s	50 µm	0-90
	Asiga PRO 2	385 nm	±39 µm	5.7 mW/cm <sup>2</sup>	Composer 1.2.11	Detax_Freeprint temp 385_5	2.0 s	50 µm	0-90
	Asiga PRO 4K	385 nm	±65 µm	7.0 mW/cm <sup>2</sup>	Composer 1.2.11	Detax_Freeprint temp 385_5	1.5 s	50 µm	0-90
	Asiga Ultra	385 nm	±50 µm	6.6 mW/cm <sup>2</sup>	Composer 2.0.8	Detax_Freeprint temp 385_5	1.6 s	50 µm	0-90
	Formlabs Form 4B	405 nm	±50 µm	7.0 mW/cm <sup>2</sup>	PreForm V3.44.0.471	detax Freeprint temp V01	2.1 s	50 µm	0-90
	Heygears UltraCraft A2D	385 nm	±75 µm	2.1 mW/cm <sup>2</sup>	Materialise Magic Version 23	Detax Temp UV	1.7 s	50 µm	0-90
	Ivoclar PrograPrint PR5	385 nm	±49 µm	16 mW/cm <sup>2</sup>	PrograPrint CAM 11.10.1	Detax FREEPRINT temp	0.6 s	50 µm	0-90
	Microlay Versus	385 nm	±65 µm	4.3 mW/cm <sup>2</sup>	Microform 1.0.3.7	DETAX Freeprint Temp 385 50 microns v5.3	2.0 s	50 µm	0-90
	Miicraft Alpha	385 nm	±68 µm	6.0 mW/cm <sup>2</sup>	Utility 6.4.4	DETAX Freeprint temp	2.0 s	50 µm	0-90
	Miicraft Ultra Series	385 nm	±65 µm	5.7 mW/cm <sup>2</sup>	Utility 6.3.0	Detax_Freeprint temp UV_50	1.0 s	50 µm	0-90
	Rapidshape ONE	385 nm	±34 µm	3.5 mW/cm <sup>2</sup>	Print Studio 1.2.	DETAX Freeprint-temp 385	1.5 s	50 µm	0-90
	Rapidshape D10+/D20+/D30+/D40+	385 nm	±34 µm	2.0 mW/cm <sup>2</sup>	Netfabb 2020	Detax freeprint-temp uv	2.8 s	50 µm	0-90

\*The set of parameters includes all relevant material- and printer specific information



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	Rapidshape D70+/D90+	385 nm	±23 µm	5.0 mW/cm <sup>2</sup>	Netfabb 2020	Detax freeprint-temp uv	1.8 s	50 µm	0-90
	Rapidshape Pro20 (Dental)/Pro30 (Dental)	385 nm	±34 µm	2.0 mW/cm <sup>2</sup>	Netfabb 2020	DETAX Freeprint-temp 385	2.8 s	50 µm	0-90
	Rayshape Edge E2	405 nm	±34.4 µm	5.0 mW/cm <sup>2</sup>	ShapePanel V1.0.09	DETAX FREEPRINT temp	3.0 s	50 µm	0-90
	Shining 3D AccuFab L4D	405 nm	±50 µm	2.0 mW/cm <sup>2</sup>	AccuWare	DETAX FREEPRINT temp-0.05	3.8 s	50 µm	0-90
	W2P SolFlex 250 UHD	385 nm	±50 µm	5.0 mW/cm <sup>2</sup>	SolFab Slicing	Detax FREEPRINT temp 385	1.92 s	50 µm	0-90
	Way2Production SolFlex Series	385 nm	±50 µm	8.0 mW/cm <sup>2</sup>	Netfabb 2020	Freeprint temp 385	1.2 s	50 µm	0-90

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## Cleaning Equipment

Cleaning unit Manufacturer, Model	Cleaning process
Ivoclar PrograPrint Clean	Clean the parts with isopropyl alcohol (purity $\geq$ 98 %) for 3 minutes. Then thoroughly clean the openings, cavities and gap areas with compressed air. The main cleaning is performed in a separate vessel with fresh isopropyl alcohol (purity $\geq$ 98 %) for 3 minutes. Prior to post-exposure, check the openings, cavities and gap areas for residues. Then blow off with compressed air.
Rapidshape RS wash	Use the following settings: DETAX Freeprint-temp uv Prior to post-exposure, check the openings, cavities and gap areas for residues. Then blow off with compressed air.
Ultrasonic bath Bandelin Sonorex	Clean the parts with isopropyl alcohol (purity $\geq$ 98 %) for 3 minutes. Then thoroughly clean the openings, cavities and gap areas with compressed air. The main cleaning is performed in a separate vessel with fresh isopropyl alcohol (purity $\geq$ 98 %) for 3 minutes. Prior to post-exposure, check the openings, cavities and gap areas for residues. Then blow off with compressed air.

## Light curing Equipment

Light Curing unit Manufacturer, Model	Curing process
Asiga Cure	Use the following settings: Detax_Freeprint temp 385_6
Dentalfarm Photopol	2 x 3 min, progressive + N <sub>2</sub> , turn around components after 3 min
Heygears UltraCraft PCU 3.0	5 min under water
Ivoclar PrograPrint Cure	Post curing A: Wavelength = 405 nm; Intensity = 100 %; Duration = 120 s Post curing B: Wavelength = 460 nm; Intensity = 100 %; Duration = 120 s
NK Optik Otoflash G171	2 x 2000 flashes under inert gas, turn around components after 2000 flashes
NK Optik Otoflash 250/500	4000 flashes under inert gas @15 Hz
Rapidshape RS cure	Use the following settings: DETAX Freeprint-temp uv
Rapidshape RS cure XL	Use the following settings: DETAX Freeprint-temp uv

