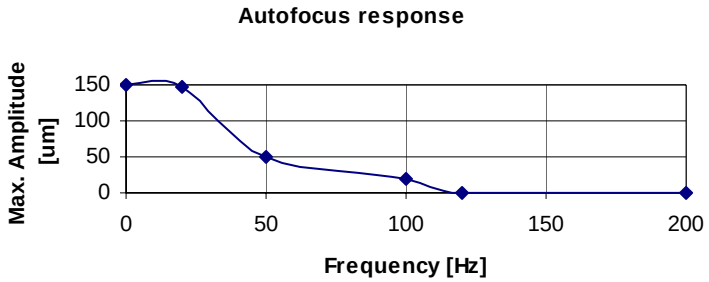
Thermal II Exposure Head
3200 DPI Performance Specification

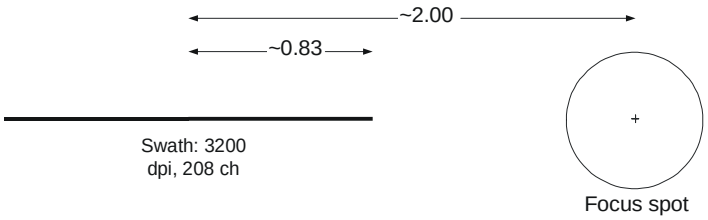
		Specification
Data	Maximum data rate	197 Mbit/sec[1]
	Number of channels	208 channels
Imaging	Power on plate	≥17W[2]
	Resolution	3200/1600 dpi
	Write Laser wavelength	820 to 840 nm
	Spot size (traversing direction) [3]	7.9 μm
	Spot size (Main scan direction) [4]	< 2 μm
Non-image times	Laser ready time	< 10 seconds
	Focus learn time	< 12 drum revolutions
	Stroke flatten time	< 60 seconds
	Beam power servo time	0.5 msec[5]
Auto Focus	Focus range	± 150 μm
	Magnification error over Focus range	< ± 300 ppm
	Focus Bandwidth	See graph in footnotes[6]
	Focus accuracy[7]	± 5 um
	Focus beam position[8]	~2.0 mm from swath center
	Range finder range	±175 μm with valid magnitude or error; ±500 μm with valid signal and direction of error, but clamped error magnitude
Environmental	Temperature	15°C to 40°C[9]
	Humidity	5% to 90% RH
	Sealing	IP64
Other	Power measurement accuracy	± 4%
	Stroke flatten accuracy	± 2%
	Contrast ratio[10]	<8%

Notes

[1] Worst case, only achievable with C version board sets (Shipping Feb/March 2000). B version boards are limited to ~80 Mbit/sec. Worst case is 1x1 pixel features, laser at end of life, 40°C environment.
[2] After stroke flatten. The current can be increased to achieve 20W at the cost of laser lifetime. Our laser vendor expects that this will reduce the laser lifetime by around 20% but does not make any commitments on this.
[3] Non gaussian, FWHM (Full Width @ Half Maximum)
[4] Gaussian FWHM.
[5] The beam power servo is locked during the dead time over the clamp. All channels can be switched off during this time (this is a configurable setting).
[6] The graph below shows tracking response of auto-focus servo to bumps in the media surface.



[7] The accuracy quoted is typical for common media but can degrade on media with highly specular reflectivity or very low reflectivity.
[8] The present configuration is shown below (dimensions in mm):



[9] Presently there are some difficulties meeting the low temperature end of the specification when plotting at low power (typically < 10W and under 20°C). Under these conditions the laser may not come up to it's normal operating setpoint of 25°C and image quality may suffer.
[10] Contrast ratio is defined as:

$$CR[\%] = \frac{P_{Leakage}}{P_{Spot_full}}.100$$

where P_{Spot_full} is the power returned by the spot full measurement command and $P_{leakage}$ is the total power on plate when all channels are switched off .