# AOT-YVO-*xxx*Q

***Specification includes:-***

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|---|---|
| Max rep-rate: | 100kHz, 50kHz or 25kHz |
| Internal clock triggering: | 25kHz, 12.5kHz and 6.25kHz. Also 100kHz, 50kHz for higher rep-rate units (nominal) |
| External triggering: | TTL, 50Ohm input |
| Jitter to external trigger: | 1ns, or less |
| Pulse duration (FWHM): | 1.25ns (nominal) @ < 5kHz to 2.25ns (nominal) @ 100kHz |
| Wavelength: | 1064nm |
| Bandwidth: | 1nm, or less |
| Polarisation: | > 100:1 plane polarised |
| Spatial mode: | TEMoo, better than 1.25x diffraction limited |
| Beam waist size (2ω): | 0.2mm (nominal) |
| Beam divergence (2θ): | 7.0mrad (nominal) |
| Beam ellipticity: | < 15% |
| Max average power: | 750mW @ 25kHz<br>1200mW @ 50kHz<br>1400mW @ 100kHz |
| Max pulse energy: | 35uJ at < 5kHz |
| Operating environment: | Ambient 15-30$^0$C and above dew point<br>Head case < 30$^0$C, on heat sink if necessary |
| Power stability: | 5% RMS or better |

***Configuration and Services***

The AOT-YVO-*xxx*Q laser head is ~ 200(W) x 65(H) x 320(L) mm, and includes space for (optional) 'drop-in' 532nm, 355nm or 266nm AOT harmonic modules. The optical beam is nominally 30mm off the base. The PSU/control unit is either a 2U 19'' rack unit or a bench (laboratory) unit ~ 257(W) x 147(H) x 263(D). The laser head is connected to the PSU/control unit via an umbilical cable nominally 2m in length. The external services required are single-phase 110-250VAC 50/60Hz. Power consumption is < 50W.

*Notes*

1. Specifications are subject to change by AOT without notice
2. In model designation *xxx* = rep-rate ie AOT-YVO-50Q operates to (max) 50kHz
3. Timing jitter is SD at max rep-rate (reduces to ~ 200ps at low rep-rates)
4. Beam waist and divergence change with output power due to changes in the thermal load
5. Stability measurements made over +/- 2degrees dynamic temperature range with measurement
6. Specifications apply over a temperature range of 15-30$^o$C in a non-condensing environment
7. The laser head temperature should be maintained below 30$^o$C, by attaching to a heat sink if necessary
8. Other models and options – information on application to AOT