AOT-YAG-10Q

Specification includes:-

Max rep-rate:	10kHz
Internal clock triggering:	10kHz, 5kHz, 2.5kHz and 1.25kHz (nominal)
External triggering:	TTL, 50Ohm input
Jitter to external trigger:	0.5ns, or less
Pulse duration (FWHM):	1.5ns (nominal) @ 2kHz to 3ns (nominal) @ 10kHz
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:	< 10%
Max average power:	750mW @ 10kHz
Max pulse energy:	80uJ at < 2kHz
Operating environment:	Ambient 15-30^{0}C and above dew point Head case < 30^{0}C, on heat sink if necessary
Power stability:	5% RMS or better

Configuration and Services

The AOT-YAG-10Q 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. Timing jitter is SD at max rep-rate (reduces to ~ 200ps at low rep-rates)
3. Beam waist and divergence change with output power due to changes in the thermal load
4. Stability measurements made over +/- 2degrees dynamic temperature range with measurement
5. Specifications apply over a temperature range of 15-30^{o}C in a non-condensing environment
6. The laser head temperature should be maintained below 30^{o}C, by attaching to a heat sink if necessary
7. Other models and options – information on application to AOT