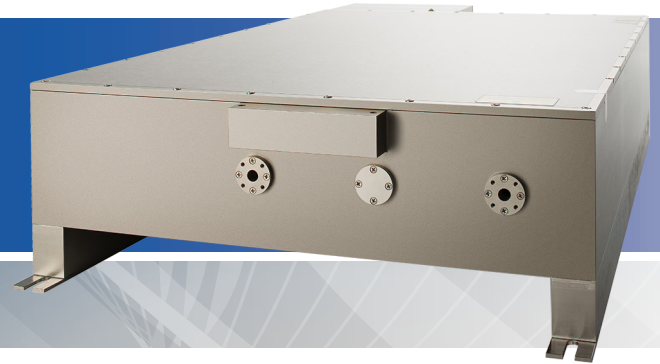


# AOPico™ Series

## Industrial Picosecond Lasers



### Features & Benefits

- Lowest Cost of Ownership in the Industry
- Excellent Beam Quality of M2 < 1.3
- Available in IR, Green and UV
- Up to 45W Average Power
- Pulse Durations of 7 ps
- Highly Reliable Design
- Burst Mode Option

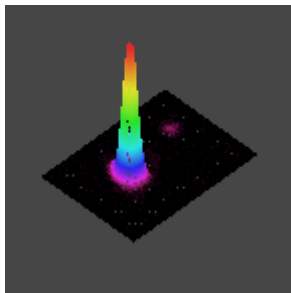
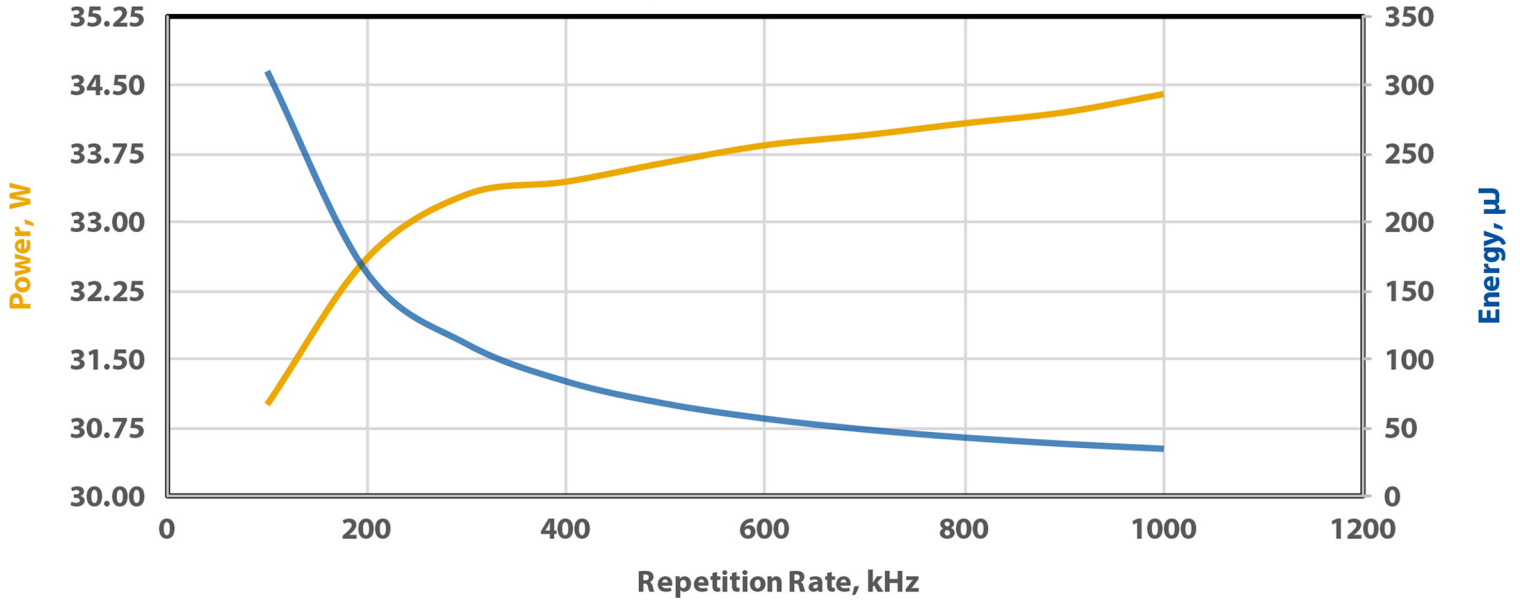
### Applications

- Thin-Film Ablation
- Medical Device Manufacturing
- Polymer Processing/Machining
- Semiconductor/PV Processing/Wafer Scribing
- High-Precision, High-Speed Micro-machining
- Brittle Material Cutting, Drilling, Dicing & Sub-Surface Marking

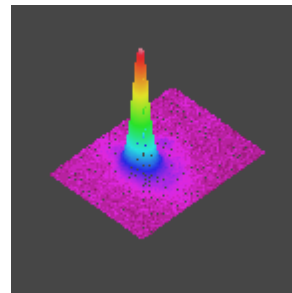
| SPECIFICATIONS*                           | AOPico 1064              |        |         | AOPico 532             |        |         | AOPico 355               |       |         |
|---|--------------------------|--------|---------|------------------------|--------|---------|--------------------------|-------|---------|
|   | 10-100                   | 25-200 | 45-1000 | 5-100                  | 12-200 | 20-1000 | 3-100                    | 6-200 | 10-1000 |
| Wavelength (nm)                           | 1064                     | 1064   | 1064    | 532                    | 532    | 532     | 355                      | 355   | 355     |
| Average Power (Watts)                     | 10                       | 25     | 45      | 5                      | 12     | 20      | 3                        | 6     | 10      |
| Energy (µJ)                               | 100                      | 125    | 45      | 50                     | 60     | 20      | 30                       | 30    | 10      |
| Specified Repetition Rate (kHz)           | 100                      | 200    | 1000    | 100                    | 200    | 1000    | 100                      | 200   | 1000    |
| Repetition Rate (kHz)                     | Single Shot to 1000      |        |         |                        |        |         |                          |       |         |
| Pulse Width (ps)                          | 7 ± 2                    |        |         |                        |        |         |                          |       |         |
| Beam Quality (M²)                         | <1.3                     |        |         |                        |        |         |                          |       |         |
| Beam Roundness (%)                        | >85                      |        |         |                        |        |         |                          |       |         |
| Beam Diameter (mm)                        | ~1.0                     |        |         | ~0.6                   |        |         | ~0.5                     |       |         |
| Beam Divergence (mRad)                    | <1.3                     |        |         | <0.7                   |        |         | <0.35                    |       |         |
| Point Stability (µrad/°C)                 | <50                      |        |         |                        |        |         |                          |       |         |
| Polarization Ratio                        | 100:1 Linear, Horizontal |        |         | 100:1 Linear, Vertical |        |         | 100:1 Linear, Horizontal |       |         |
| Pulse-to-Pulse Stability (% RMS)          | <2                       |        |         |                        |        |         |                          |       |         |
| Average Power Stability (% over 12 hours) | <3                       |        |         |                        |        |         |                          |       |         |
| Cold Start Warm-Up (mins.)                | <30                      |        |         |                        |        |         |                          |       |         |
| Standby Warm-Up (mins.)                   | <20                      |        |         |                        |        |         |                          |       |         |
| Operational Temperature Range (°C)        | 15 to 30                 |        |         |                        |        |         |                          |       |         |
| Operation Humidity Range (%)              | 20 to 80 non-condensing  |        |         |                        |        |         |                          |       |         |
| Storage Temperature Range (°C)            | -20 to 50                |        |         |                        |        |         |                          |       |         |
| Storage Humidity Range (%)                | 20 to 80 non-condensing  |        |         |                        |        |         |                          |       |         |
| Input Voltage (VAC)                       | 90 to 260                |        |         |                        |        |         |                          |       |         |
| Line Frequency (Hz)                       | 50 or 60                 |        |         |                        |        |         |                          |       |         |
| Communication                             | RS-232                   |        |         |                        |        |         |                          |       |         |
| Cooling                                   | Water                    |        |         |                        |        |         |                          |       |         |

**AOPico™ Series**  
**Industrial Picosecond Lasers**

**Typical Performance AOPico 1064-25-200**  
**Power and Energy as a Function of Repetition Rate**



532 BEAM PROFILE\*



1064 BEAM PROFILE\*

## Dimensions & Weight

| DIMENSIONS       | DIMENSIONS, in (mm)           | WEIGHT, lbs (kg) |
|------------------|-------------------------------|------------------|
| Laser Head       | 25 x 15 x 7 (585 x 381 x 179) | 70 (32)          |
| Laser Controller | 19 x 17 x 7 (482 x 432 x 178) | 30 (13.6)        |
| Umbilical        | 100 (2.5)                     |                  |

**COMPLIANCE:** CDRH, ROHS, CE

\*Advanced Optowave Corporation follows a policy of continuous product improvement. Specifications are subject to change without notice. Advanced Optowave Corporation offers a limited warranty for all Femtosecond IR/GR laser systems. For full details on warranty coverage, or for further product information, please contact us.

