

Arktis Laser Product Datasheet

LPS-1064 AOM Q-Switched DPSS Laser System



Series Specifications:

| | |
|--------------------|------------|
| Nominal Wavelength | 1064 nm |
| Output Type | Q-Switched |
| Laser Source Type | DPSS |

Overview:

The LPS-1064 Series of Diode-Pumped Solid-State (DPSS) AOM Q-Switched Lasers are ideal for applications requiring high peak power and a fast pulse frequency at 1064 nm. The embedded AOM gives the user direct control over the output pulses, enabling a specified frequency or even a single pulse to be emitted.

These lasers are commonly used for materials processing, marking, Raman Spectroscopy, biological experimentation and a broad spectrum of other applications.

Key Features:

- AOM q-switch allows for active control of pulses
- Air cooled - no need for water cooling or external chiller
- Lightweight, compact design
- Efficient DPSS technology runs on standard AC power (85 - 264 V, 47 - 63 Hz)
- >10,000 hours continuous maintenance-free operating life
- FDA CDRH Compliant Class IV enclosure
- 48-hour replacement coverage available for an additional fee on specific models

Package Includes:

- Laser Head
- Driver/Power Supply
- Power Cable
- BNC Connector (LabSpec models only)
- Keys, Safety Interlock
- Hard-shell Carrying Case

Specifications:

This spec sheet has been generated specifically for part number PA6-U, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to PA6-U have been highlighted below in **red + bold**.


| | | | |
|--|---------------------------|-----------------------------|---|
| Output Power (W) | 1, 2 | 3, 5 | 8, 10, 12, 15, 18, 20 |
| Single Pulse Energy (µJ) | 100, 200 | 300, 500 | 300, 350, 400, 500, 600, 700 |
| Optimal Pulse Frequency (Hz) | 10000 | 10000 | 30000 |
| Output Power Stability (%RMS/4h) | <1, <3, <5, <10 | <3, <5, <10 | <3, <5, <10 |
| Central Wavelength (nm) | 1063.2 | | |
| Wavelength Tolerance (+/- nm) | 1 | 1 | 1 |
| Divergence (mrad, full angle) | <1.5 | <2 | <1.5 |
| Beam Dimensions (mm, 1/e ²) | 2 | 2.5 | 2 |
| Warm-up Time (minutes) | 10 | 10 | 10 |
| Avg. Pulse Duration (ns) | 8 | 10 | 25 |
| Approx. Timing Jitter (+/- ns) | 10 | 10 | 10 |
| Approx. Trigger-Pulse Latency (µs) | 200 | 200 | 200 |
| Approximate Peak Power (W) | 10000, 20000 | 30000, 40000 | 10000, 13000, 15000, 20000, 25000, 30000 |
| Polarization Ratio | | | >100 |
| Operating Temperature Range (°C) | 15 to 35 | 15 to 35 | 15 to 35 |
| Max. TTL Modulation Freq. (Hz) | 200,000 | 200,000 | 200,000 |
| Modulation Input Signal | 0-5 VDC | 0-5 VDC | 0-5 VDC |
| Max. Power Input Duty Cycle | 100% | 100% | 100% |
| Standard Warranty (months) | 12 | 12 | 12 |
| MTTF (operational hours) | 10000 | 10000 | 10000 |
| Weight of Product or Laser Head (kg) | 2.6 | 6.1 | 10.2 |
| Beam Height from Base Plate (mm) | 68.2 | 93.5 | 113 |
| Dimensions of Product or Laser Head (mm) | 240 (l) x 99 (w) x 94 (h) | 346 (l) x 140 (w) x 125 (h) | 420 (l) x 142 (w) x 144 (h) |

CW: All specifications are based on performance at full output power and after the specified warmup period. Output characteristics may change if the laser is run at a different power level.

Q-Switched: Specifications are based on the laser pulsing at the specified design frequency. Output characteristics may change if the laser is run at a different frequency.

Power Supply Options:

These lasers are available with several different power supply options. The model that you have selected is highlighted below, and any other options are shown for easy reference.

| | Power Supply Type: | AN | AZ | AW |
|---|--------------------------|-----------------------------|-----------------------------|-----------------------------|
|  | Input Power | 85v to 264v | 85v to 264v | 85v to 264v |
| | Power Supply Weight (kg) | 6.2 | 12.4 | 6.88 |
| | Dimensions (mm) | 334 (l) x 300 (w) x 123 (h) | 376 (l) x 485 (w) x 133 (h) | 334 (l) x 300 (w) x 123 (h) |

*Power supply may not be exactly as shown, see dimensional drawings on next 2 pages.

*Dimensions for fiber-integrated (I_) include laser head packaged inside.







Regulatory Classification:

The model you have selected (PA6-U) requires the following safety label(s):



Accessories:

The most popular accessories for model PA6-U are shown below. For additional details regarding these or other accessories please see our website or contact us directly.

| Part Number | Description | |
|--|---|---------------------|
|  ACFMIRHXA | FC/PC Fiber Coupler/Collimator for IR wavelengths (1000 to 1300 nm) (installed and aligned) 11mm diameter input lens Full Details: www.arktislaser.com/ACF | |
|  ACSMIRHXA | SMA-905 Fiber Coupler/Collimator for IR wavelengths (1000 to 1300 nm) (installed and aligned) 11mm diameter input lens Full Details: www.arktislaser.com/ACS | |
|  ACALBNWXX | Carrying Case-104 Holds Lab/OEM N or W size Standard/Labspec laser Full Details: www.arktislaser.com/ACA | Included With Laser |
|  AFF2002XX | Armored Fiber With FC/PC Connectors 200um Core Multimode 2m length Full Details: www.arktislaser.com/AFF | |
|  AFS2002XX | Armored Fiber With SMA 905 Connectors 200um Core Multimode 2 m length Full Details: www.arktislaser.com/AFS | |
|  AGFKTP59X | LSG-KTP-NF-6 Fit-Over Safety Goggles 532/808/1064nm Output: OD 6+ at 190-534/740-1064 nm CE Certified Full Details: www.arktislaser.com/AGF | |

FOR MORE INFORMATION PLEASE CONTACT:

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E&OE: Data included in this sheet may be subject to change without notice.

Please confirm critical specifications with our staff prior to ordering.