VLASE Series is a Solid State, Laser Marking product Family dedicated to General Manufacturing, Electronics, Automotive and Aerospace industry for Direct Part Marking on high reflectivity materials, heat sensitive parts and high stability thermoplastic components.

Based on our consolidated Solid State resonator architecture VLASE Series is available in a variety of different power levels and in three wavelengths to cover a wide range of application types and materials, even on hard-to-mark materials.

**APPLICATIONS**

**Automotive**
- Coating removal and Paint stripping for NIGHT & DAY application
- High Contrast DPM for traceability, Quality Control, Testing & Sorting on high reflectivity materials.

**Electronics**
- DPM for traceability to thermal sensitive, like silicon wafers,
- WLCSP, memory cards, ICs or high reflectivity materials like copper, gold and silver
- Branding and high resolution product identification
Quick Installation and Setup

VLASE Series of solid state laser markers combines a state-of-the-art Solid State laser source with a high flexibility and easy setup embedded controller, providing to machine builders, system integrators and end users a compact, full features controller, with embedded 100-240 VAC power supply, diode module, TEC cooler, and drivers.

- Embedded 90-240 VAC power supply.
- Embedded 4 independent step motors controller dramatically simplifies management of rotary indexers, x-y tables, z axis etc.
- I/O connections, fiber delivery and IEC power inlet are located on back panel for easy integration, as well as dedicated M12 connectors for Photocell and Encoder.
- Front panel now offer main laser commands key and enable, USB port an new improved air cooling system with removable dust filter, that enhance operative temperature range up to 40°C @ full power.
- Simplified access to Laser Diode Module for fiber installation and maintenance
- Fail-Safe, redundant interlock system, fully compliant with EN 60825.1
- Completely sealed, bending free, long lifetime laser diode module.
- Full on screen diagnostic.

Flexible programming control

LIGHTER Suite, with its Intuitive and easy-to-learn interface, simplifies the development of a complete and cost effective Laser Marking Station for OEM and Machine builders.

VLASE Series is thought to be used in both a STAND ALONE MODE with built-in control and software resources, and in a MASTER-SLAVE mode with a with supervising computer for advanced network-oriented Laser Marking Applications.

Main VLASE Series features are:
- Advanced Graphical Layout
- Local and Remote laser diagnostic
- Local and Remote I/O & axis control
- Local and Remote laser test & setup
- Local and Remote ActiveX
- Ethernet protocol for easy integration in PLC and industrial environments
- Marking On Fly capabilities

<table>
<thead>
<tr>
<th>Wavelength [nm]</th>
<th>VL-IR 10</th>
<th>VL-IR 15</th>
<th>VL-IR 20</th>
<th>VL-GR 4</th>
<th>VL-GR 10</th>
<th>VL-UV 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1064</td>
<td>1064</td>
<td>1064</td>
<td>1064</td>
<td>532</td>
<td>532</td>
<td>395</td>
</tr>
<tr>
<td>Nominal Power [W]</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>4</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Repetition Rate Range [KHz]</td>
<td>10 ÷ 200</td>
<td>15 ÷ 200</td>
<td>20 ÷ 200</td>
<td>20 ÷ 100</td>
<td>20 ÷ 100</td>
<td>20 ÷ 100</td>
</tr>
<tr>
<td>Pulse Width [ns]</td>
<td>15@10KHz</td>
<td>12@15KHz</td>
<td>8@20KHz</td>
<td>14@50KHz</td>
<td>10@50KHz</td>
<td>8@25KHz</td>
</tr>
<tr>
<td>Max Pulse Energy [mJ]</td>
<td>0.48@10KHz</td>
<td>0.65@15KHz</td>
<td>0.55@20KHz</td>
<td>0.18@20KHz</td>
<td>0.31@20KHz</td>
<td>0.12@30KHz</td>
</tr>
<tr>
<td>Peak power [kW]</td>
<td>32@10KHz</td>
<td>55@15KHz</td>
<td>65@20KHz</td>
<td>13@25KHz</td>
<td>28@20KHz</td>
<td>14@25KHz</td>
</tr>
</tbody>
</table>

Marking capabilities

- Standing, Rotary axis, On the fly (marking in motion)
- Up to 4 mechanical axis driving capabilities (stepper motor)
- Up to 10 digital inputs and 10 digital output fully programmable dedicated connectors Encoder and Photocell

Interface

- Ethernet, RS 232, USB

Optical Fiber

- Detachable – 3 meters standard- 5 meters OPT

Aiming Beam

- Semiconductor Laser – 630 – 670 nm

Power Supply

- 100–240 VAC 50/60Hz – 600 W max

Cooling System

- Air cooled

Temperature Range

- 5°C to 40°C (41°F to 104°F)

All laser sources described in this product guide are Class 4 laser sources. Laser interaction with organic or inorganic material can cause TOXIC FUMES/PARTICLES. The OEM laser components described in this product guide is for sale solely to qualified manufacturers, who shall provide interlocks, indicators and other appropriate safety features in full compliance with applicable national and local regulations.
# VLASE Series

## VLASE Series (WAVELENGTH)

New VLASE Family is available in three wavelength to satisfy all a wide range of application types and materials, where high peak power, short pulse width and high beam quality is required.

<table>
<thead>
<tr>
<th>VL-IR (Infrared)</th>
<th>VL – GREEN</th>
<th>VL – UV (Ultra Violet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPSS Laser markers @ 1064 nm</td>
<td>DPSS Laser markers @ 532nm</td>
<td>DPSS Laser marker @ 355 nm</td>
</tr>
<tr>
<td>High peak power, short pulse Infrared laser markers available in 10, 15 and 20W power level.</td>
<td>High peak power, high efficiency, intracavity SHG (second harmonic Generation) laser markers available in tow power size: 4W and 10W</td>
<td>High peak power, low lifetime, THG (Third Harmonic Generation) laser marking product with emission @ 355 nm</td>
</tr>
</tbody>
</table>

## APPLICATIONS

**Excellent beam quality, VL-IR is the general purpose laser marker for wide range of materials.**

High peak power and short pulse width ensures low thermal footprint and reduced HAZ (Heat Affected Zone) assures stable and precise marking on non additivated thermoplastic polymers (such as ABS, PP, PES, PET, PVC), on coated materials or low absorption materials.

**Green emission laser offers significant advantages in marking applications with materials such as plastics that do not interact with the infrared wavelength, as well as with semiconductors such as silicon (e.g. wafer marking) or high reflectivity metals like copper, gold & silver.**

**Excellent marking quality, very fine spot size, for “cold marking” application, with very low thermal footprint for ablative damage free marking applications on various materials, including : sapphire, glass, diamond, silicone, PE, HDPE (high Density Polyethylene), ceramic, alumina, and other sensitive materials.**

- **Faucets Marking – Nickel coated Solid Brass**
  Accurate color change of nickel coating, nickel protective coating is not removed.

- **Night & Day**
  Automotive dashboard pushbutton, black painted.
  Accurate coating removal without any damage of the bulk structure

- **High contrast marking on high reflectivity materials, Copper**

- **HDPE Marking**
  High contrast marking on high stability materials, HDPE for medical application and devices.

- **Glass Marking**
  Cracks free glass marking and engraving
### MODEL SELECTION AND ORDER INFORMATION

<table>
<thead>
<tr>
<th>ORDERING CODES</th>
<th>MODEL</th>
<th>FULL DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>985110038</td>
<td>VL 1109-1042 DPSS IR System</td>
<td>NEW VLASE IR10: 1064 Solid State Marker 10W w/out F-theta</td>
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<tr>
<td>985110039</td>
<td>VL 1109-1342 DPSS IR System</td>
<td>NEW VLASE – IR10: 1064 Solid State Marker 10W with F 160S</td>
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<tr>
<td>985110040</td>
<td>VL 1109-1442 DPSS IR System</td>
<td>NEW VLASE – IR10: 1064 Solid State Marker 10W with F 160L</td>
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<td>985110041</td>
<td>VL 1159-1042 DPSS IR System</td>
<td>NEW VLASE – IR15: 1064 Solid State Marker 15W w/out F-theta</td>
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<td>NEW VLASE – IR15: 1064 Solid State Marker 15W with F 160S</td>
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<tr>
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<tr>
<td>985110036</td>
<td>VL 1209-1042 DPSS IR System</td>
<td>NEW VLASE – IR20: 1064 Solid State Marker 20W w/out F-theta</td>
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<tr>
<td>985110044</td>
<td>VL 1209-1342 DPSS IR System</td>
<td>NEW VLASE – IR20: 1064 Solid State Marker 20W with F 160S</td>
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<tr>
<td>985110045</td>
<td>VL 1209-1442 DPSS IR System</td>
<td>NEW VLASE – IR20: 1064 Solid State Marker 20W with F 160L</td>
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<tr>
<td>985110046</td>
<td>VL 2044-1042 DPSS GREEN</td>
<td>NEW VLASE – GREEN 4 Solid State Marker w/out F-theta</td>
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<tr>
<td>985110047</td>
<td>VL 2044-1342 DPSS GREEN</td>
<td>NEW VLASE – GREEN 4 Solid State Marker with F-theta 160S</td>
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<tr>
<td>985110048</td>
<td>VL 2104-1042 DPSS GREEN</td>
<td>NEW VLASE – GREEN 10 Solid State Marker w/out F-theta</td>
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<tr>
<td>985110049</td>
<td>VL 2104-1342 DPSS GREEN</td>
<td>NEW VLASE – GREEN 10 Solid State Marker with F 160S</td>
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<tr>
<td>985110050</td>
<td>VL 3034-1042 DPSS UV</td>
<td>NEW VLASE – UV 3 Solid State Marker w/out F-theta</td>
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<tr>
<td>985110051</td>
<td>VL 3034-1842 DPSS UV</td>
<td>NEW VLASE – UV 3 Solid State Marker with f=103 Telecentric</td>
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</tbody>
</table>

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