

Matrix 355

Solid-State, Q-Switched Laser

The new Matrix UV platform offers power level up to 10W. All control electronics are housed in the fully air-cooled laser head design. Utilizing Coherent's proven Permalign and PureUV technology the Matrix offers unbeaten field lifetime and lowest cost of owner ship.

Designed for demanding UV applications in tough environments, the new Matrix offers Pulse on demand and pulsed synchronized output at a wide operational trigger frequency range.

Customers benefit from Coherent's world wide available service support and contract offerings, resulting in highest uptime requirements.



FEATURES

- 355 nm Pure UV engine
- Permalign for proven reliability
- THG crystal shifter for unmatched field life-time
- Compact platform for easy integration
- Fully air-cooled at elevated environment temperatures

APPLICATIONS

- Product coding, Identification, and Marking
- Marking-on-the-fly (MOTF)
- Precision Markings in Medical and Pharmaceutical Markets
- Rapid Prototyping (SLA)
- Micromachining
- Shallow markings
- Annealing

Specifications	Matrix 355-5	Matrix 355-10
Average Power ¹ (W)	5 at 50 kHz	10 at 50 kHz
Pulse Repetition Rate (kHz)	up to 300	
Pulse Duration ¹ (ns)	<30	
Pulse-to-Pulse Stability ¹ (%) (rms)	4	
Beam Parameters (nominal)	2.5 mm and <0.25 mrad	
Circularity (%)	>85	
Spatial Mode	TEM ₀₀	
M ²	<1.3	
Output Power Stability (%) (8h/±3°)	<2	
Maximum Heat Load (W)	<200 / 140 typical	
Static Alignment	±0.2 mm, ±2 mrad	
Maximum Warm-up Times from Cold Start from Warm Start	<20 minutes <5 minutes	
Environmental Specifications		
Temperature Operating Non-Operating	15°C to 40°C (45°C derated output) -20°C to 60°C	
Altitude Operating Non-Operating	0 to 10,000 ft. 0 to 45,000 ft.	
Relative Humidity (%) (non-condensing) Operating Non-Operating	0 to 80 0 to 80	
Input Voltage Requirements		
Input Power Requirements Input Voltage (VDC) Input Power Power Supply (VA)	48 maximum <500	
External Control	Ethernet, RS-232 interface, TTL QS control	
Relative Humidity (%) (non-condensing) Operating Non-Operating	0 to 80 500 0 to 80 ≤350	

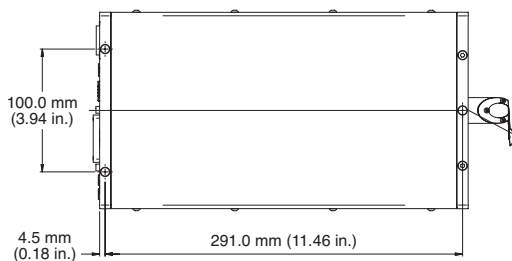
Notes:

1. At specified repetition rate.

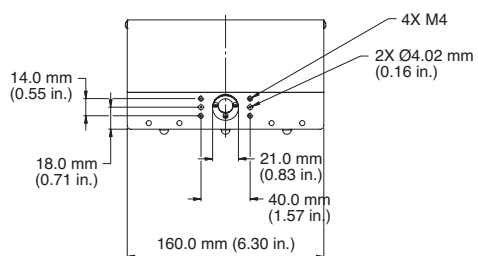
MECHANICAL SPECIFICATIONS

Matrix 355

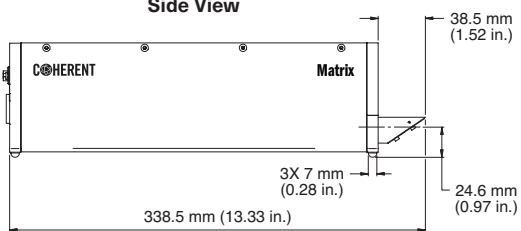
Bottom View



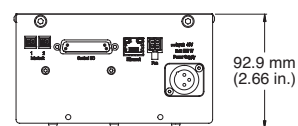
Front View



Side View



Rear View



Top View

