

High Power Mid-IR DPSSL Module

DPM-25 (Tm:YAG)

- Ultra-Stable High Power Mid-IR Laser
- Highly Efficient Diode Pumping
- Ideal for Fiber Coupling into $\sim 150 \mu\text{m}$
- No High-Voltage Required
- Reduced Waste Heat
- Maintenance Free



Product Description

The world's most powerful diode-pumped Tm:YAG laser module in this size is available for industrial and medical applications. The average output power of up to 25 W and repetition rates of up to 500 Hz allow controlled and at the same time precise treatments.

Specifications

Optical Parameters

Wavelength	2020 nm
Average Output Power (max)	25 W
Pulse Energy (max)	225 mJ
Pulse Repetition Rate	up to 500 Hz
Pulse Duration	60 to 350 μs
Average Current (max)	7.5 A
Mode of Operation	Pulsed
Beam Quality	$M^2 < 15$
Efficiency (optical-optical)	$\sim 10 \%$
Divergence (half angle)	$< 15 \text{ mrad}$
Beam Diameter	1.6 mm
Beam Shape (focus)	top hat like

Cooling Requirements

Coolant	Distilled Water with Algaecide and Corrosion Inhibitor
Coolant Temperature	15 to 25 $^{\circ}\text{C}$
Coolant Flow Rate	$> 4 \text{ lpm}$
Coolant Pressure	(2 - 5) bar
Required Cooling Power	$\geq 350 \text{ W @ } 25 \text{ }^{\circ}\text{C}$ Environment Temperature

Mechanical Dimensions

W x D x H	120 x 96 x 75 mm
Emission Height	47.5 mm
Weight	1.5 kg

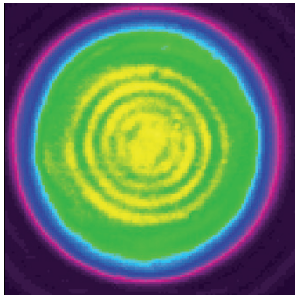
DPM-25 (Tm:YAG)

Specifications (continued)

Electrical Parameters

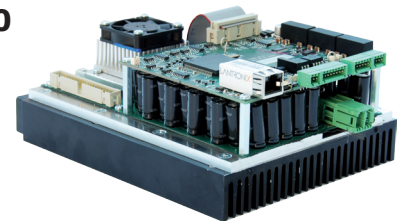
Diode Forward Voltage	~ 36 V
Diode Forward Current	150 A Pulsed
Average Power Consumption (max)	< 300 W
max Ripple / Overshoot	< 5 %

Beam Profile



FACTBOX INTEGRABLE LASER DIODE DRIVER LDD-36200

Recommended for use with DPM-25 (Tm:YAG) laser module



Specifications

Output Current	up to 200 A
Rise Time (10 - 90%)	< 20 μ s
Efficiency	> 80 %
Input Voltage	24 VDC
Mechanical Dimensions	200 x 150 x 85 mm (W x D x H)

Subject to change without notice

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