

# High Power Mid-IR DPSSL Module

## DPM-20 (Er:YAG)

- Ultra-Stable High Power Mid-IR Laser
- Highly Efficient Diode Pumping
- Ideal for Fiber Coupling into  $\sim 200 \mu\text{m}$
- No High-Voltage Required
- Reduced Waste Heat
- Maintenance Free



## Product Description

The world's most powerful diode-pumped Er:YAG laser module in this size is available for industrial and medical applications. The average output power of up to 20 W and repetition rates of up to 2 kHz allows controlled and at the same time precise treatments.

## Specifications

### Optical Parameters

	High Power
Wavelength	2940 nm
Average Output Power (max)	20 W
Pulse Energy (max @ 100 Hz)	150 mJ
Pulse Repetition Rate	up to 2 kHz
Pulse Duration	1 to 400 $\mu\text{s}$
Average Current (max)	25 A
Mode of Operation	Pulsed
Beam Quality	$M^2 < 20$
Efficiency (optical-optical)	$\sim 10 \%$
Divergence (half angle)	$< 25 \text{ mrad}$
Beam Diameter	1.6 mm
Beam Shape (focus)	top hat like

### Cooling Requirements

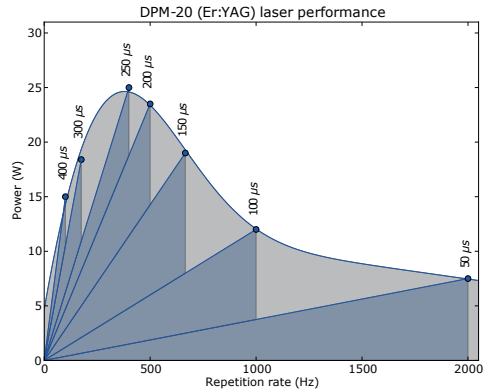
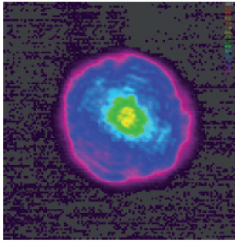
Coolant	Distilled Water with Algaecide and Corrosion Inhibitor
Coolant Temperature	20 to 25 $^{\circ}\text{C}$
Coolant Flow Rate	$> 4 \text{ lpm}$
Coolant Pressure	(2 - 5) bar
Required Cooling Power	$\geq 540 \text{ W @ } 25 \text{ }^{\circ}\text{C}$ Environment Temperature

### Mechanical Dimensions

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

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Beam Profile

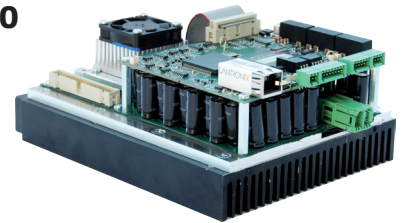


## Electrical Parameters

Diode Forward Voltage	~ 20 V
Diode Forward Current	max 250 A Pulsed
Average Power Consumption (max)	< 450 W
max Ripple / Overshoot	< 5 %

## FACTBOX CUSTOMIZED LASER DIODE DRIVER LDD-20300

Recommended for use with DPM-20 (Er:YAG) laser module



## Specifications

Output Current	up to 300 A
Rise Time (10 - 90%)	< 20 μs
Mechanical Dimensions	200 x 150 x 85 mm (W x D x H)
Additional Features	Safety circuit and communication interface



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