

# High Power Mid-IR DPSSL Module

## DPM-100 (Tm:YAG)

- Ultra-Stable High Power Mid-IR Laser
- Highly Efficient Diode Pumping
- Ideal for Fiber Coupling into  $\sim 300 \mu\text{m}$
- No High-Voltage Required
- Reduced Waste Heat
- Maintenance Free



## Specifications

### Optical Parameters

|                              |                         |
|------------------------------|-------------------------|
| Wavelength                   | 2020 nm                 |
| Average Output Power (max)   | 100 W                   |
| Pulse Energy (max)           | 1.0 J                   |
| Pulse Repetition Rate (max)  | 500 Hz                  |
| Pulse Duration               | 60 to 300 $\mu\text{s}$ |
| Average Current (max)        | 5 A                     |
| Mode of Operation            | Pulsed                  |
| Beam Quality                 | $M^2 < 50$              |
| Efficiency (optical-optical) | $\sim 30 \%$            |
| Divergence (half angle)      | $< 50 \text{ mrad}$     |
| Beam Diameter                | 1.6 mm                  |
| Beam Shape (focus)           | top hat like            |

### Cooling Requirements

|                        |   |
|------------------------|---|
| Coolant                | Distilled Water with Algacide and Corrosion Inhibitor                       |
| Coolant Temperature    | 15 to 25 $^{\circ}\text{C}$   |
| Coolant Flow Rate      | $\geq 6 \text{ lpm}$  |
| Coolant Pressure       | (2 - 5) bar   |
| Required Cooling Power | $\geq 750 \text{ W @ } 25 \text{ }^{\circ}\text{C}$ Environment Temperature |

### Mechanical Dimensions

|                 |                   |
|-----------------|-------------------|
| W x D x H       | 120 x 120 x 75 mm |
| Emission Height | 47.5 mm           |
| Weight          | 1.7 kg            |

### Electrical Parameters

|                                 |                      |
|---------------------------------|----------------------|
| Diode Forward Voltage           | $\sim 120 \text{ V}$ |
| Diode Forward Current           | 150 A Pulsed         |
| Average Power Consumption (max) | $< 650 \text{ W}$    |
| max Ripple / Overshoot          | $< 5 \%$             |

**3m.i.k.r.o.n.**<sup>TM</sup> technology is provided by

Pantec Engineering AG | Industriering 21 | 9491 Ruggell | Liechtenstein  
Tel: +423 377 13 33 | Fax: +423 377 13 34 | 3um@pantec.com  
www.pantec-medicallaser.com | www.3mikron.com