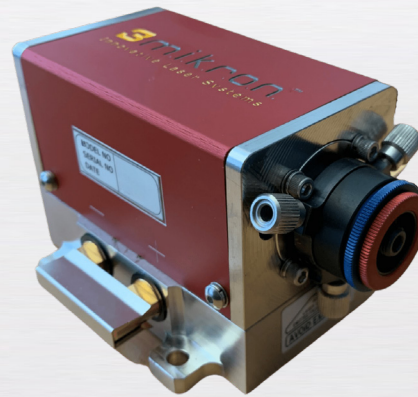


# High Power Er:YAG Module

- Compact monolithic laser system
- Highly efficient diode pumping
- Fiber-coupled version available
- No high-voltage required
- Reduced waste heat
- Maintenance free
- Process variability



## Specifications

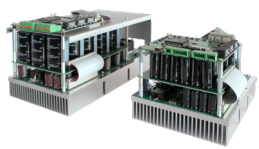
DPM-80 (Er:YAG) free

Optical Parameters	
• Wavelength	2940 nm
• Average Output Power (max)	80 W
• Pulse Energy (max)	3.5 J
• Pulse Repetition Rate	up to 1 kHz
• Pulse Duration	(40 - 1000) $\mu$ s
• Average Current (max)	7.5 A
• Mode of Operation	Pulsed
• Efficiency (optical-optical)	> 10 %
• Beam Shape (focus)	Top Hat like
• Free Beam Quality	$M^2 < 50$
• Free Beam Diameter	1.6 mm
• Free Divergence (half angle)	< 50 mrad
Cooling Requirements	
• Coolant	Distilled Water with Algacide and Corrosion Inhibitor
• Coolant Temperature	(20 - 25) °C
• Coolant Flow Rate	$\geq 6$ lpm
• Coolant Pressure	(3 - 5) bar
• Required Cooling Power	$\geq 780$ W @ 25 °C Environment Temperature
Electrical Parameters	
• Diode Forward Voltage	$\sim 120$ V
• Diode Forward Current (max)	300 A Pulsed
• Average Power Consumption	< 1000 W
Mechanical Dimensions	
• Dimension (L x W x H)	(90 x 78 x 59) mm <sup>3(1)</sup>
• Weight	1 kg
• Emission Height	38.1 mm

<sup>(1)</sup> Dimensions for bare modules

## Laser Diode Drivers

The LDD series are economic QCW laser diode driver modules designed to provide high current pulses to drive 3m.i.k.r.o.n.<sup>TM</sup> laser modules in various applications. The drivers deliver output currents up to 300 A and pulse widths variable from 50  $\mu$ s up to 1000  $\mu$ s operation <sup>(3)</sup>. Up to 1000 W average output power is available with the supplied heatsink. Several safety features are integrated to protect both laser module and laser driver.

Laser Diode Driver	DPM-80 (Er:YAG) LDD-140300	
• Output Current	up to 300 A	
• Rise Time (10 - 90%)	< 20 $\mu$ s	
• Mechanical Dimensions (W x D x H)	(265 x 150 x 210) mm <sup>3</sup>	
• Additional Features	Safety circuit and communication interface	

## Test and Evaluate



The 3m.i.k.r.o.n.<sup>TM</sup> evaluation kits are ready-to-use and straightforward laboratory systems for first feasibility studies in research environment. The evaluation kits are available with different kinds of laser sources (see front page), shortens the development time, enables flexibility and a fast demonstration of feasibility. The test systems are delivered with your requested laser source, a laser control system and a cooling system for laboratory use only.

Please contact us for more information on rental or purchase conditions: [info@pantec-biosolutions.com](mailto:info@pantec-biosolutions.com)

## 3m.i.k.r.o.n.<sup>TM</sup> Applications

Medical	Industrial
• Aesthetics / Dermatology	• Material Processing (Drilling, Cutting, Melting, Welding, Evaporation)
• Dentistry	• Analytics
• ENT	• Security
• Lithotripsy	• Defense
• Minimally-Invasive Surgery	
• Orthopedics	
• etc.	

## More Services



Customized laser sources  
Optical and mechanical design  
Contract development and manufacturing  
Medical device consulting (IP research, Medical CE, ...)

