olaS Dpss Nd:YAG Laser Module CW at 1064nm

Powered by OSRAM

Features:

- Innovative – Excellent TEM00 beam mode optimized ability (Optimized efficiency > 70%)
- Reliable – Highest Quality module as the Laser Bars are package by original **OSRAM** Germany Factory
- Water & Dust Proof – Laser Bars are fully package and sealed.
- Low maintenance cost – Simply assembly (easy single diode replacement)
- Powered by **OSRAM**

Applications

- Laser engraving applications
- Laser cutting applications
- Laser welding applications
- Laser resource applications

Safety Advices

Depending on the mode of operation, these devices emit highly concentrated non visible infrared light which can be hazardous to the human eyes and skin. Products which incorporate these devices have to follow the safety precautions in IEC 60825-1 “Safety of laser products”.

type	Wavelength	Ordering Code
DPSS Nd:YAG LASER MODULE S50-3	**1064nm**	
DPSS Nd:YAG LASER MODULE S40-2	**`1064nm**	

Other types are available on request.

Main module characteristics

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Emission wavelength	λ	1064			nm
Module type		S40-2	S50-3		
Nd:YAG rod size	D*L	2*55	3*55		mm
Output power at operating point(CW mode)	P	>40	>50		W
Efficiency	η	>25%	>30%		%
Threshold current	It	9	9		A
Operating current	Io		34	39	A
Operating voltage	Vo	9.2	10.8	11	V
Coolant temperature	Top	+15	+25	+30	°C
Coolant water required	Distilled water				
Coolant flow	∂V / ∂t	6	8	10	l/min
Storage temperature	Tstg	+5	+25	+55	°C

Note:

1) Values refer to standard operating conditions of 50 W output power, 25 °C coolant temperature and 8 l/min coolant flow.
2) Laser output in a short cavity (165 ± 5 mm, flat HR/flat 80%R OC) CW oscillator.
3) Required voltage at the pump head stated without consideration for inefficiencies in the electrical system. Your DC power supply should be oversized by 30% to allow for these inefficiencies, Reverse voltage has to be excluded.
4) Do not exceed the recommended beginning of life current specified on the module test report.

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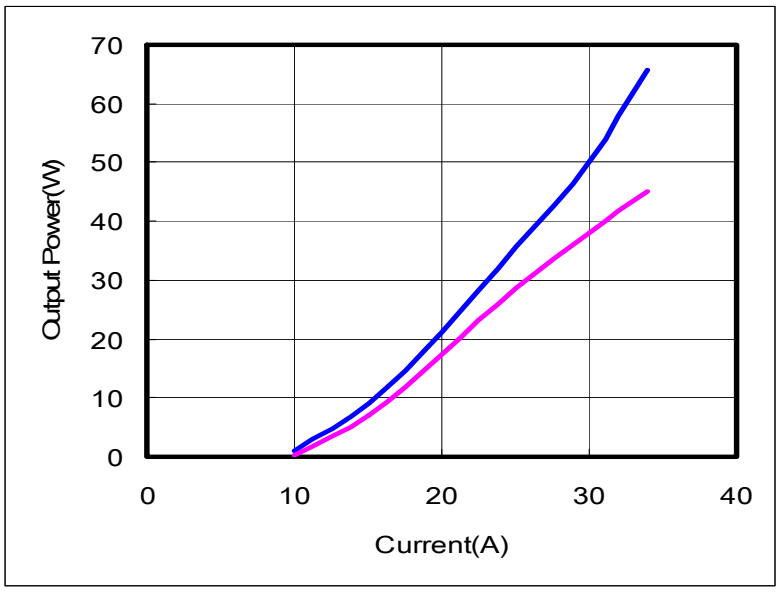
Output power (Standard 165mm cavity)

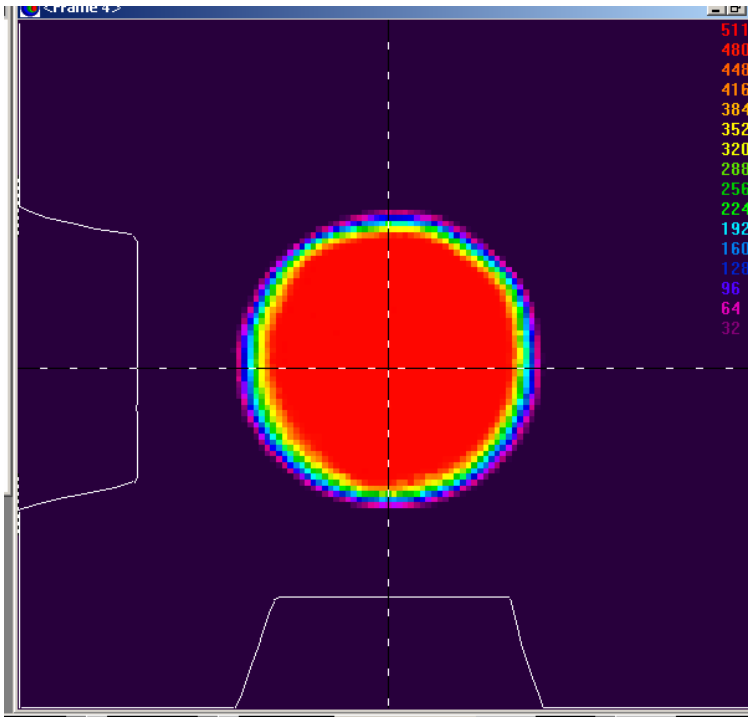


Note: Blue curve: S50-3 (3mm Rod, output power >50W)

Mauve curve: S40-2 (2mm Rod, output power >40W)

Note: Curves is typical beginning of life performance curve.

Relay Image of Fluorescence



2mmX55mm Rod, Nd:YAG S40-2

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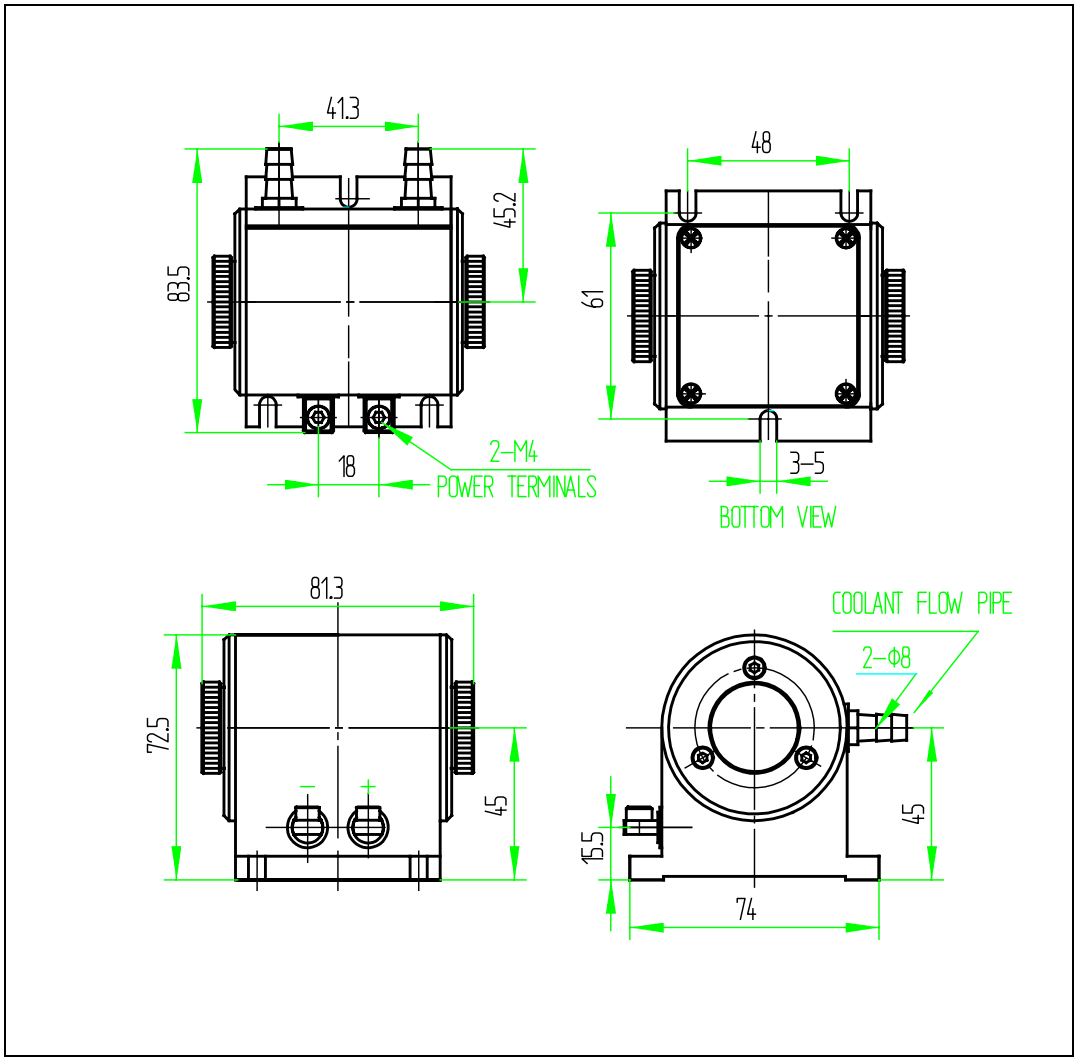
Package Outlines Dimensions



Dimensions are specified as follows: mm

Notes:

Exit height of optical output beam is 45 mm referring to bottom side of package base plate.

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The information describes the type of component and shall not be considered as assured characteristics.
Terms of delivery and rights to change design reserved. Due to technical requirements components may contain dangerous substances. For information on the types in question please contact our Sales Organization.
Packing
Please use the recycling operators known to you. We can also help you – get in touch with your nearest sales office. By agreement we will take packing material back, if it is sorted. You must bear the costs of transport. For packing material that is returned to us unsorted or which we are not obliged to accept, we shall have to invoice you for any costs incurred.
Components used in life-support devices or systems must be expressly authorized for such purpose!