

## Worldwide Distributors

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info@lot-oriel.it  
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### Singapore/Malaysia

**PhotoniTech Pte Ltd**  
Tel.: +65-65 70 33 86  
Fax: +65-62 33 91 71  
csales@photonitech.com  
www.photonitech.com

### Benelux

**Applied Laser Technology (ALT)**  
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Tel.: +81-352 85 08 61  
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Tel.: +86-571 88 22 51 51  
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### For Life Science Applications

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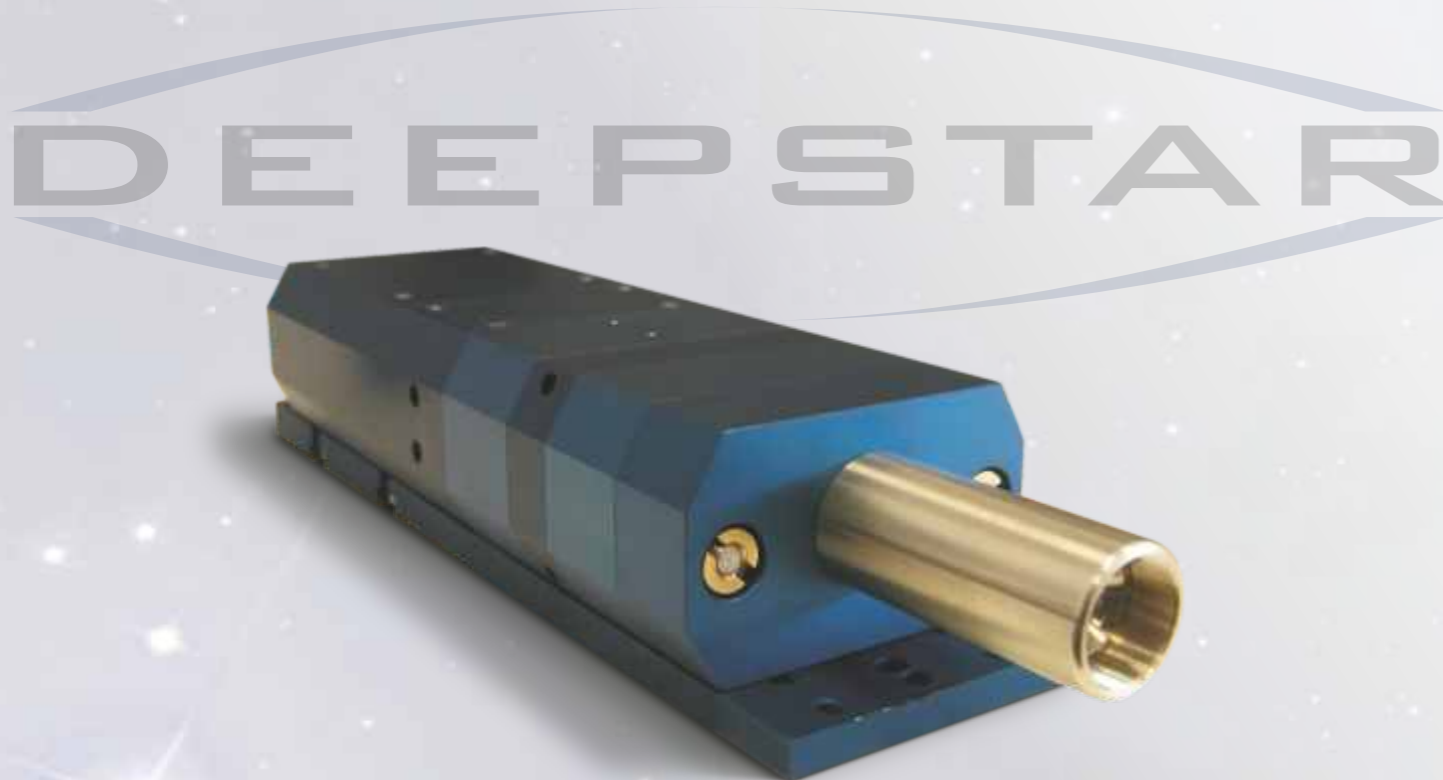
# There's a name for real 100% Modulation Omicrons Deepstar® Laser Diode Module



## Diode Lasers with High-Speed modulation and 100% modulation depth

Omicron's **DEEPSTAR**® temperature stabilised diode lasers of the LDM-Series offer high-speed modulation up to 100 MHz and real 100% modulation depth.

For the first time, the **DEEPSTAR**® analogue and digital modulated laser diode modules offer a real 100% modulation depth of >>2.500.000:1. Especially developed for fluorescence excitation and all other applications where absolutely no remaining light is allowed in "modulation zero"-state, these lasers are the ideal light source for e.g. Confocal Laser Scanning Microscopy and Flow Cytometry. With their "ultra-deep" analogue modulation of more than 15 MHz and digital modulation of more than 150 MHz and with rise- and falltimes of below two nanoseconds, these lasers are suitable for high-speed applications that were formerly only possible by using CW lasers and AO-modulators. The lasers offer an RS-232 interface for laser control and an industrial standard supply voltage of 24VDC. The analog and digital signal inputs can be configured in voltage and impedance, so adaption to existing signal sources can be done easily. The modular principle of the LDM Series laserheads offers a lot of options like single-mode fiber coupling with an efficiency of upto 75%, collimation optics for 1 to 15mm beam diameter, focussing objectives down to below one micron and many more.



Wavelengths & Powers  
(other wavelengths and powers  
on request)

Beam diameter  
(other diameters on request)

Beam quality M<sup>2</sup>

Astigmatism (corrected)

Beam ellipticity

Polarisation

Power stability

Noise 0Hz-100MHz

Modulation speed

Modulation input signals

Rise and fall time

Modulation depth

Supply voltage

Features

Options

### Blue- /Greenphoton® TA

#### Single-Mode (SM):

375nm / 20mW, 70mW  
395nm / 120mW  
405nm / 55mW, 120mW, 250mW  
415nm / 120mW  
425nm / 120mW  
445nm / 50mW, 100mW  
457nm / 100mW  
460nm / 100mW  
473nm / 20mW, 80mW, 100mW  
488nm / 20mW, 60mW, 80mW  
100mW, 150mW, 200mW  
515nm / 25mW

#### Multi-Mode (MM):

375nm / 200mW (M<sup>2</sup> = 7...8)  
405nm / 400mW (M<sup>2</sup> = 5...6)  
445nm / 500mW (M<sup>2</sup> = 2...3)

1.25mm (1/e<sup>2</sup>) +/- 0.25mm  
(MM beam diameter may vary)

< 1.2 (SM)  
< 6 (MM)

< 0.2\*ZR

< 1.1:1 (SM)

> 100:1 vertical

< 0.5% / h

< 0.5% peak <> peak (CW)

Analogue: up to 15MHz @ -3dB  
Digital: > 150MHz

Analogue: 0...1V / 50 Ohm (15MHz) or  
Analogue: 0...5V / 10 kOhm (> 5MHz)  
Digital: 0...1V / 50 Ohm with prog. Trigger-Level (> 150MHz) or  
Digital: 0...5V / 200 Ohm with prog. Trigger-Level (> 100MHz)

Analogue: < 25ns  
Digital: < 1ns

> 2.500.000:1

24VDC, 2 Amp.

Safety interlock  
RS-232 Interface

LDM.COL - collimator objective  
LDM.FOC - customized focussing objective  
LDM.FASY:XXX - fibre coupling unit  
LDM.AAC - Automatic Aging Compensation  
LDM.24VPSU - worldwide power supply unit  
LDM.MON - high-speed light monitoring

### Redphoton® TA

#### Single-Mode (SM):

635nm / 5mW  
637nm / 150mW  
639nm / 40mW  
643nm / 150mW  
658nm / 130mW  
670nm / 15mW  
685nm / 35mW  
705nm / 40mW  
730nm / 40mW  
785nm / 120mW  
808nm / 200mW  
830nm / 200mW  
852nm / 150mW  
980nm / 150mW  
1016nm / 100mW  
1060nm / 100mW

#### Multi-Mode (MM):

638nm / 250mW  
(others on request)

1.25mm (1/e<sup>2</sup>) +/- 0.25mm  
(MM beam diameter may vary)

< 1.2 (SM)  
< 6 (MM)

< 0.2\*ZR

< 1.1:1 (SM)

> 100:1 vertical

< 0.5% / h

< 0.5% peak <> peak (CW)