

# sparrow

OEM one-diode laser module series

## Datasheet

Nichia NDG7D75

### Absolute Maximum Ratings

Item	Condition	Symbol	Rating	Unit
Forward Current	$T_{Case}=25^{\circ}C$	$I_f$	2300	mA
Allowable Reverse Current	$T_{Case}=25^{\circ}C$	$I_r$	85	mA
Raw Diode Operating Temperature*	-	$T_{Case}$	0 to +60	$^{\circ}C$
Raw Diode Storage Temperature*	-	$T_{Storage}$	-40 to +85	$^{\circ}C$

Operation outside these conditions may damage the device. Operation at maximum ratings influence lifetime.

**Attention: Use an appropriately sized heatsink and mount module with supplied thermal compound.**

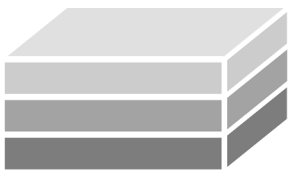
\* Temperature measured at diode backplate

### Optical and Electrical Characteristics

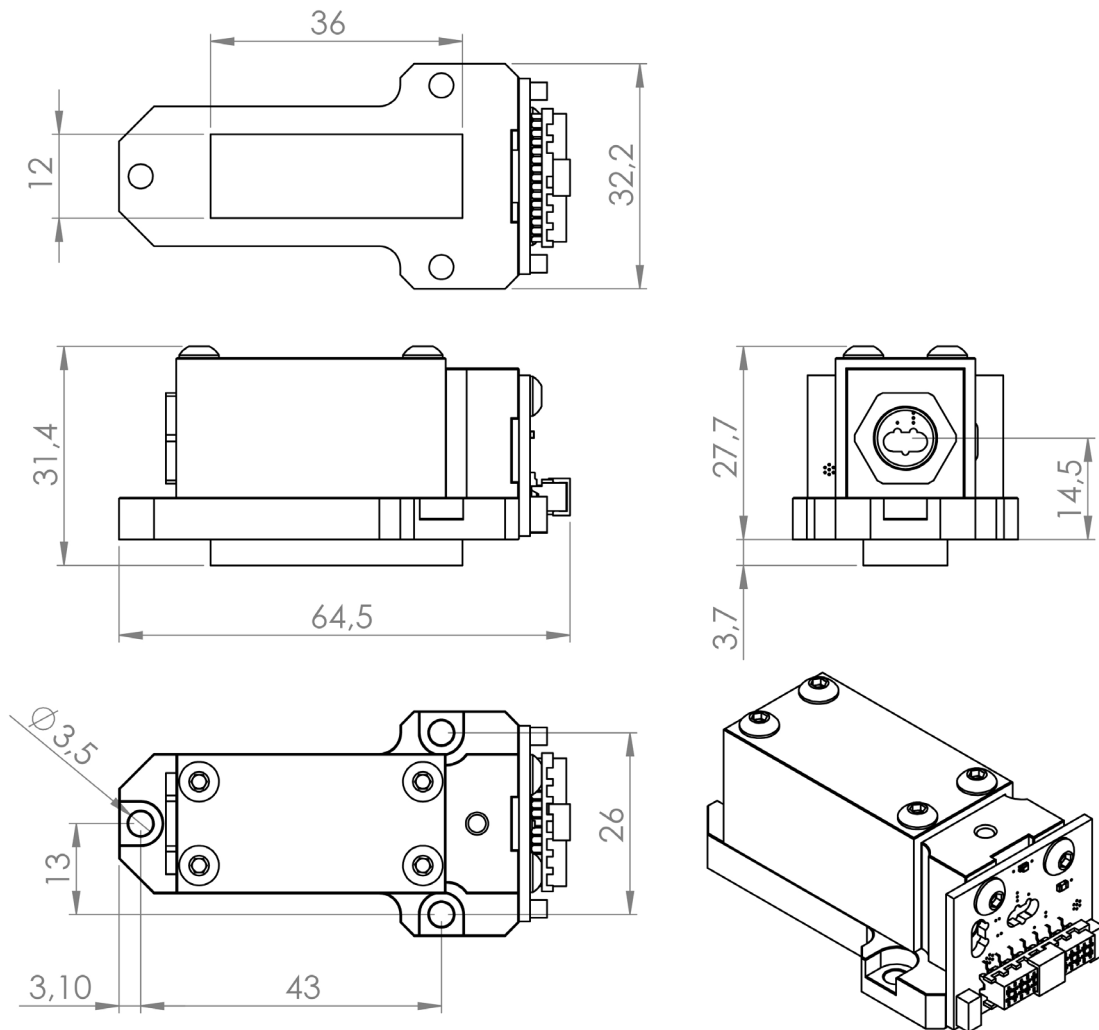
Item	Condition	Symbol	Min.	Typ.	Max.	Unit
Optical Output Power	$I_f=1.9A$	$P_o$	-	1400	-	mW
Optical Output Power	Pulsed * <sup>1</sup>	$P_o$	-	-	-	mW
Dominant Wavelength	$I_f=1.9A$	$\lambda_d$	518	525	532	nm
Threshold Current	CW	$I_{th}$	150	280	500	mA
Operating Current	CW	$I_{op}$	-	1900	-	mA
Operating Current	Pulsed * <sup>1</sup>	$I_p$	-	-	-	A
Operating Voltage	$I_f=1.9A$	$U_{op}$	4.0	4.7	5.5	V
Slope Efficiency	CW	$\eta$	0.5	1.0	1.4	W/A
Raw Diode Beam Divergence (1/e <sup>2</sup> )	$I_f=1.9A$	$\theta_{  }$	5	8.2	25	deg
	$I_f=1.9A$	$\theta_{\perp}$	30	40	50	deg
Beam Size	Without Correction	-	-	0.6 x 2.7	-	mm
Beam Size	With Correction	-	-	3.1 x 2.7	-	mm
Beam Divergence (full angle)	Without Correction	-	-	3.5	-	mrad
Beam Divergence (full angle)	With Correction	-	-	0.85	-	mrad
Heatsink Temperature Range * <sup>2</sup>	With TEC ( $T_c=25^{\circ}C$ )	T	-20	-	70	$^{\circ}C$
Power Consumption * <sup>2</sup>	Without TEC	$P_{el}$	-	9	-	W
Power Consumption * <sup>2</sup>	With TEC	$P_{el}$	-	50	-	W

\*<sup>1</sup> Pulse Condition: Pulse frequency  $\geq 50Hz$ , Duty  $\leq 33\%$

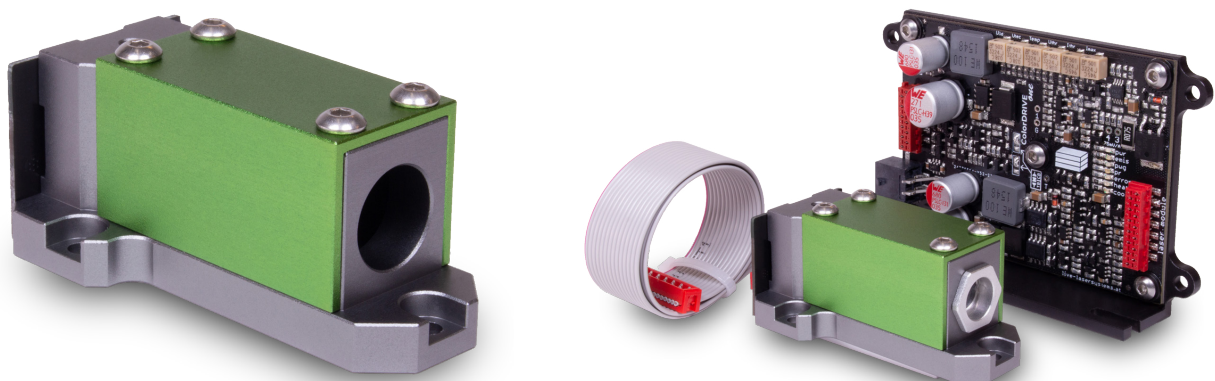
\*<sup>2</sup> with ColorDRIVE one,  $V_{in} = +10$  to  $24V_{DC}$



## Technical Drawings



## Images



## Contact

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