

sparrow

OEM one-diode laser module series

Datasheet

Nichia NDB7675

Absolute Maximum Ratings

Item	Condition	Symbol	Rating	Unit
Forward Current	$T_{Case}=25^{\circ}C$	I_f	1700	mA
Allowable Reverse Current	$T_{Case}=25^{\circ}C$	I_r	85	mA
Raw Diode Operating Temperature*	-	T_{Case}	0 to +50	$^{\circ}C$
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.

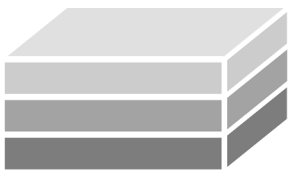
* Temperature measured at diode backplate

Optical and Electrical Characteristics

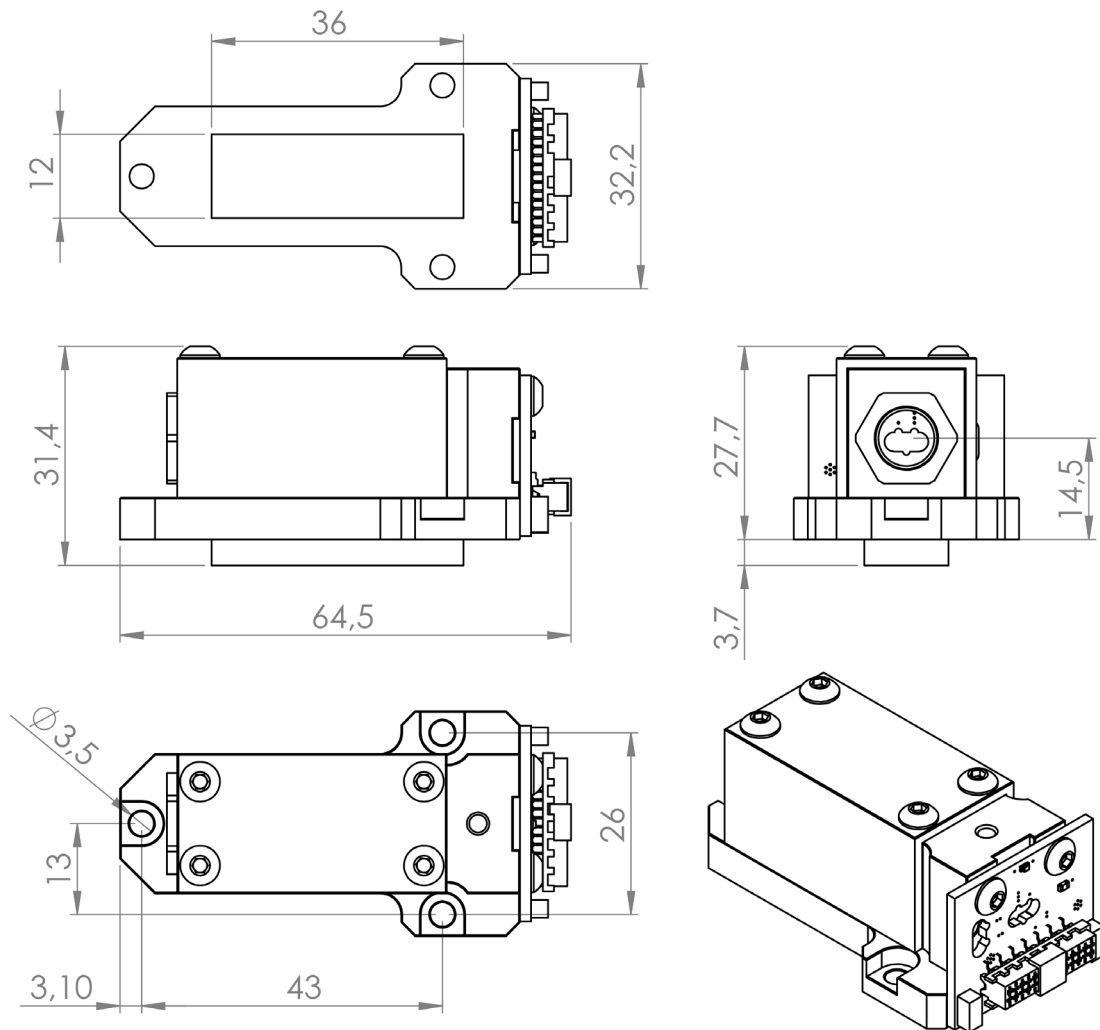
Item	Condition	Symbol	Min.	Typ.	Max.	Unit
Optical Output Power	$I_f=1.4A$	P_o	1100	1400	-	mW
Optical Output Power	Pulsed * ¹	P_o	-	-	-	mW
Dominant Wavelength	$I_f=1.4A$	λ_d	455	462	470	nm
Threshold Current	CW	I_{th}	50	-	220	mA
Operating Current	CW	I_{op}	-	1400	-	mA
Operating Current	Pulsed * ¹	I_p	-	-	-	A
Operating Voltage	$I_f=1.4A$	U_{op}	3.8	-	5.6	V
Slope Efficiency	CW	η	0.9	-	1.7	W/A
Raw Diode Beam Divergence (1/e ²)	$I_f=1.4A$	$\theta_{ }$	5	14	25	deg
	$I_f=1.4A$	θ_{\perp}	35	44	50	deg
Beam Size	Without Correction	-	-	tbd.	-	mm
Beam Size	With Correction	-	-	tbd.	-	mm
Beam Divergence (full angle)	Without Correction	-	-	tbd.	-	mrad
Beam Divergence (full angle)	With Correction	-	-	tbd.	-	mrad
Heatsink Temperature Range * ²	With TEC ($T_c=25^{\circ}C$)	T	-20	-	80	$^{\circ}C$
Power Consumption * ²	Without TEC	P_{el}	-	7	-	W
Power Consumption * ²	With TEC	P_{el}	-	48	-	W

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

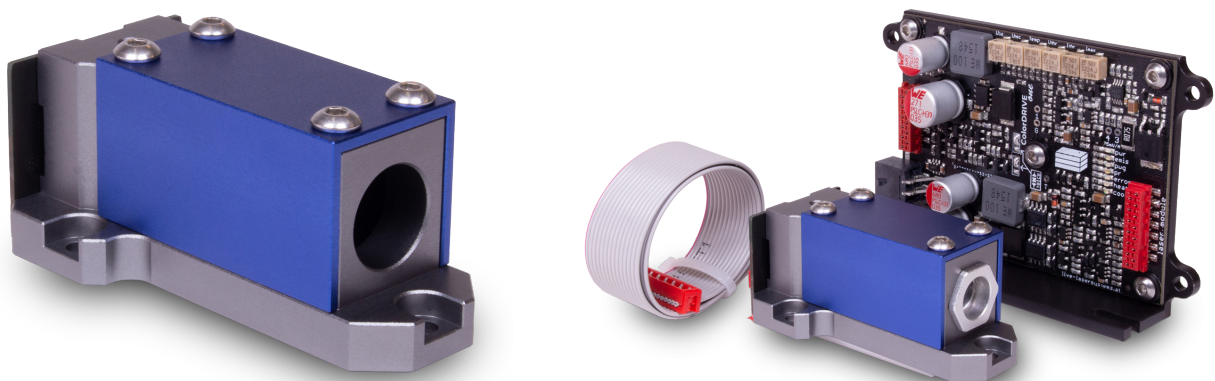
*² with ColorDRIVE one, $V_{in} = +10$ to $24V_{DC}$



Technical Drawings



Images



Contact

LIVE Lasersystems, Arnethgasse 80, 1160 Vienna, Austria +43 (0) 1 944 2883 info@live-lasersystems.at