LIVE LASERSYSTEMS
Development   Production   Service   Rental

sparrow
OEM one-diode laser module series

Datasheet

Nichia NUBM44

Absolute Maximum Ratings

Item	Condition	Symbol	Rating	Unit
Optical Output Power	T_{Case}=25°C	$P_{Optical}$	6000	mW
Allowable Reverse Current	T_{Case}=25°C	I_r	85	mA
Raw Diode Operating Temperature*	-	T_{Case}	0 to +65	°C
Raw Diode Storage Temperature*	-	$T_{Storage}$	-40 to +85	°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.
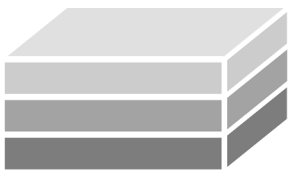* Temperature measured at diode backplate
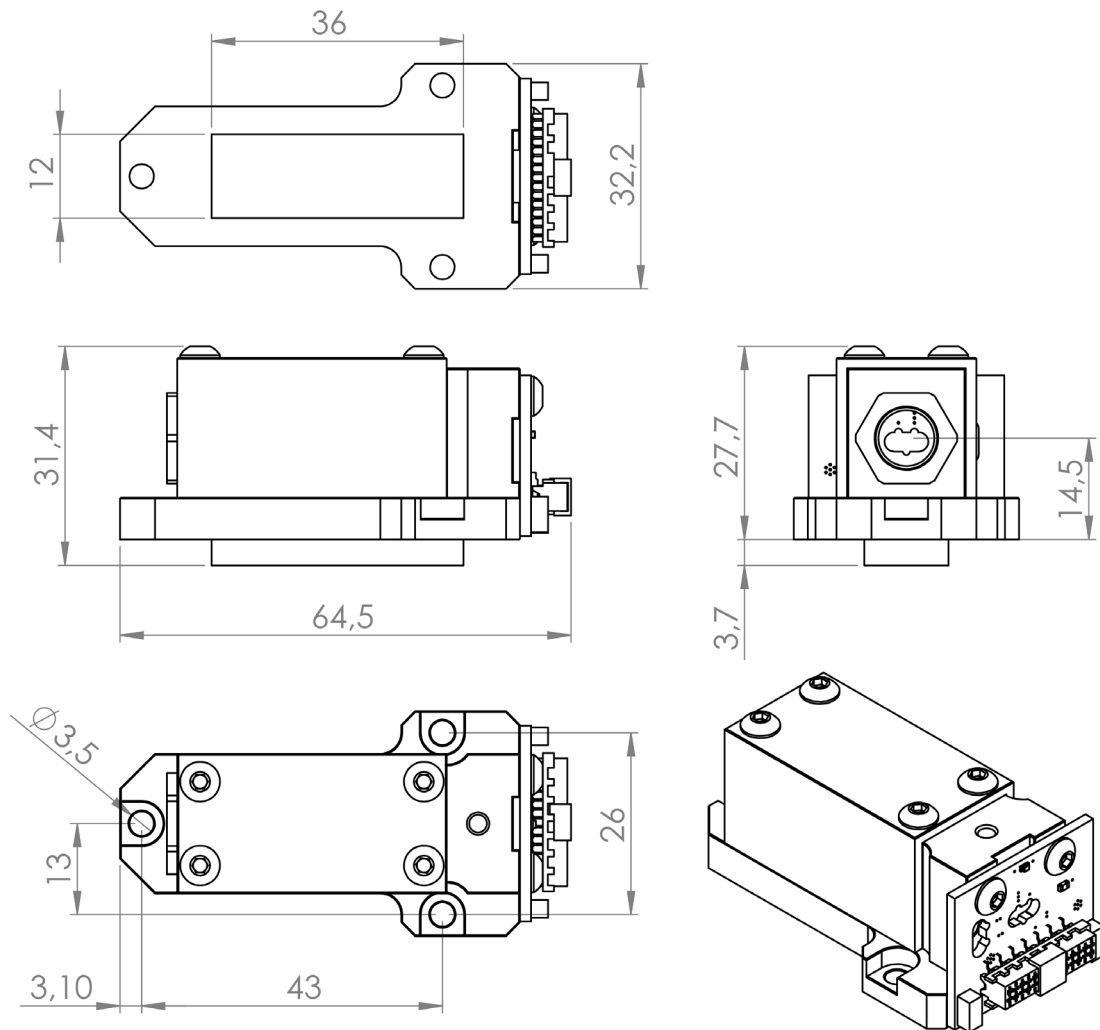
Optical and Electrical Characteristics

Item	Condition	Symbol	Min.	Typ.	Max.	Unit
Optical Output Power	I_f=3.0A	P_O	-	5000	-	mW
Optical Output Power	Pulsed *[1]	P_O	-	-	-	mW
Dominant Wavelength	I_f=3.0A	λ_d	438	445	455	nm
Threshold Current	CW	I_{th}	250	-	450	mA
Operating Current	CW	I_{op}	-	3.0	4.2	A
Operating Current	Pulsed *[1]	I_p	-	-	-	A
Operating Voltage	I_f=3.0A	U_{op}	3.6	-	4.8	V
Slope Efficiency	CW	η	-	1.8	-	W/A
Raw Diode Beam Divergence (FWHM)	I_f=3.0A	$\theta_{||}$	5	10	25	deg
	I_f=3.0A	$\theta_{\perp}$	35	46	55	deg
Beam Size	Without Correction	-	-	1.2 x 2.9	-	mm
Beam Size	With Correction	-	-	3.7 x 2.9	-	mm
Beam Divergence (full angle)	Without Correction	-	-	6.0	-	mrad
Beam Divergence (full angle)	With Correction	-	-	1.6	-	mrad
Heatsink Temperature Range *[2]	With TEC (T_C=25°C)	T	-20	-	70	°C
Power Consumption *[2]	Without TEC	P_{el}	-	10	-	W
Power Consumption *[2]	With TEC	P_{el}	-	51	-	W

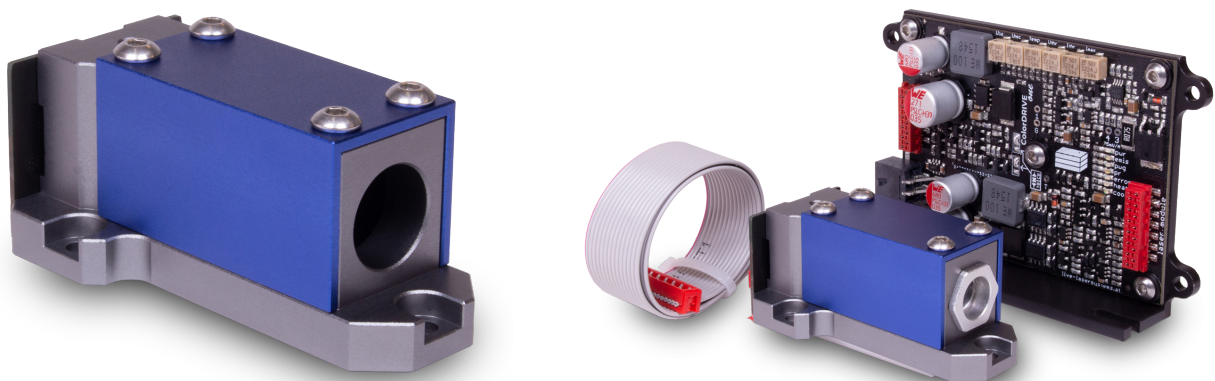*[1] Pulse Condition: Pulse frequency ≥ 50Hz, Duty ≤ 33%
*[2] with ColorDRIVE one, V_{in}= +10 to 24V_{DC}

Technical Drawings

Images

Contact

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