LIVE LASERSYSTEMS
Development Production Service Rental

sparrow
OEM one-diode laser module series

Datasheet

Nichia NDG7475

Absolute Maximum Ratings

Item	Condition	Symbol	Rating	Unit
Forward Current	T_{Case}=25°C	I_f	1800	mA
Allowable Reverse Current	T_{Case}=25°C	I_r	85	mA
Raw Diode Operating Temperature*	-	T_{Case}	0 to +50	°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=1.5A	P_O	-	1000	-	mW
Optical Output Power	Pulsed *1	P_O	-	-	-	mW
Dominant Wavelength	I_f=1.5A	λ_d	510	520	525	nm
Threshold Current	CW	I_{th}	-	300	-	mA
Operating Current	CW	I_{op}	-	1500	-	mA
Operating Current	Pulsed *1	I_p	-	-	-	A
Operating Voltage	I_f=1.5A	U_{op}	-	4.6	-	V
Slope Efficiency	CW	η	-	0.83	-	W/A
Raw Diode Beam Divergence (1/e²)	I_f=1.5A	$\theta_{\parallel}$	5	11	25	deg
	I_f=1.5A	$\theta_{\perp}$	35	46	55	deg
Beam Size	Without Correction	-	-	0.7 x 2.7	-	mm
Beam Size	With Correction	-	-	3.3 x 2.7	-	mm
Beam Divergence (full angle)	Without Correction	-	-	2.8	-	mrad
Beam Divergence (full angle)	With Correction	-	-	0.6	-	mrad
Heatsink Temperature Range *2	With TEC (T_C=25°C)	T	-20	-	75	°C
Power Consumption *2	Without TEC	P_{el}	-	8	-	W
Power Consumption *2	With TEC	P_{el}	-	49	-	W

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

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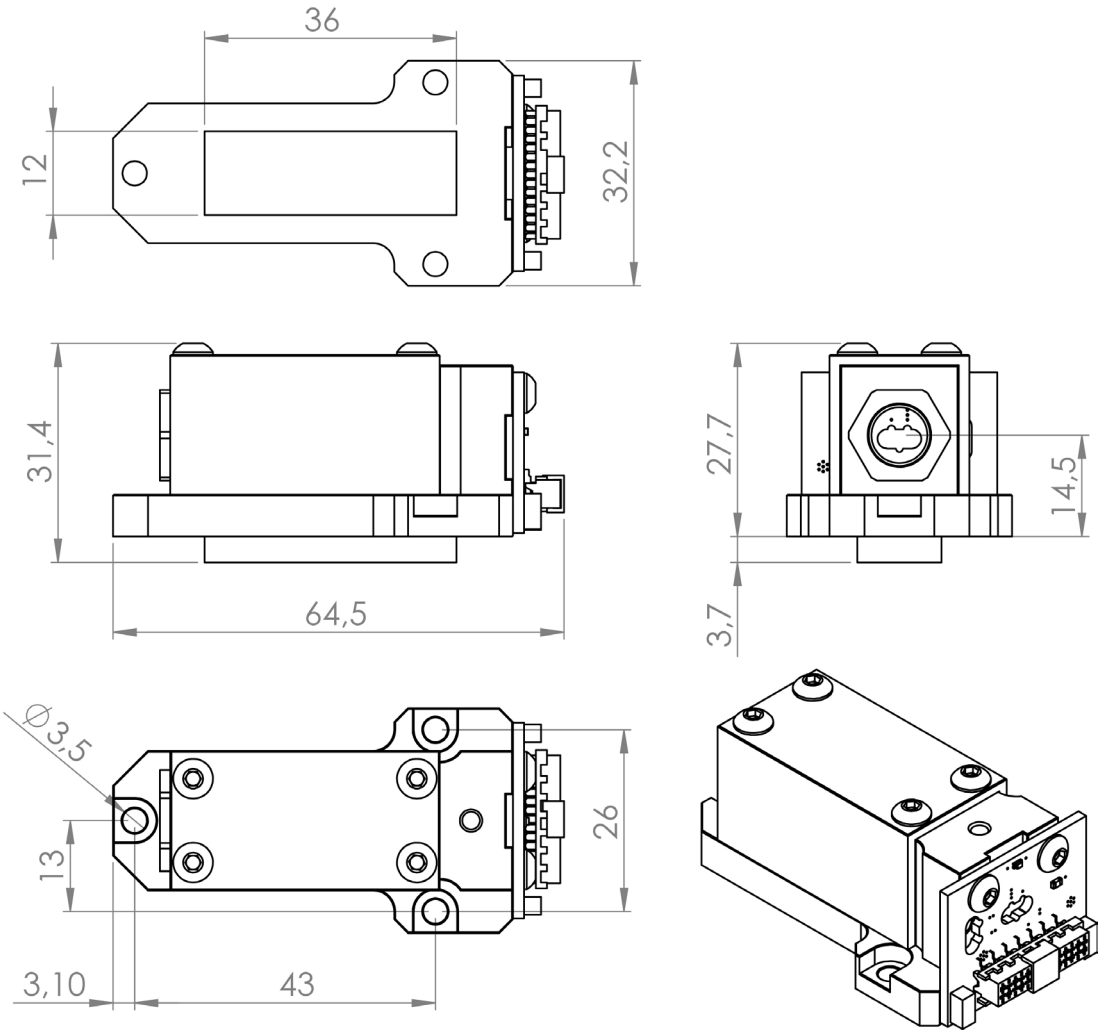
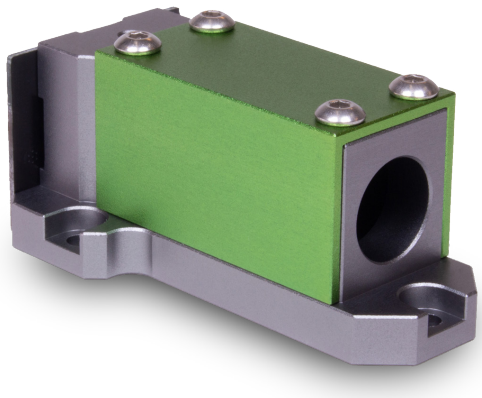
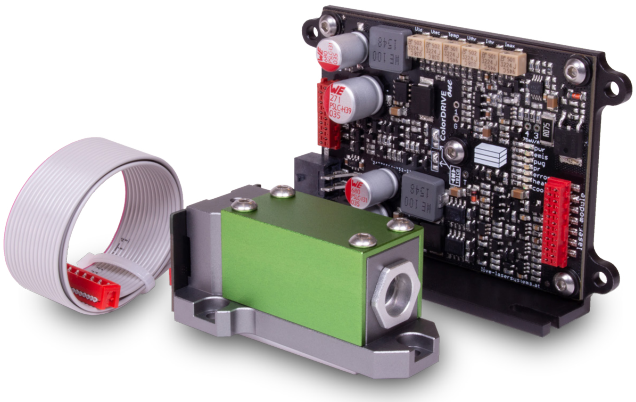
Technical Drawings



Images





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