

sparrow

OEM one-diode laser module series

Datasheet

Sharp GH0523AD2G

Absolute Maximum Ratings

Item	Condition	Symbol	Rating	Unit
Forward Current	$T_{Case}=25^{\circ}C$	I_f	850	mA
Allowable Reverse Voltage	$T_{Case}=25^{\circ}C$	V_r	2	V
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.

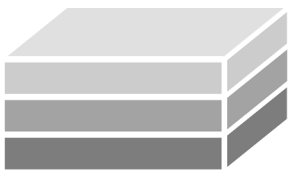
* Temperature measured at diode backplate

Optical and Electrical Characteristics

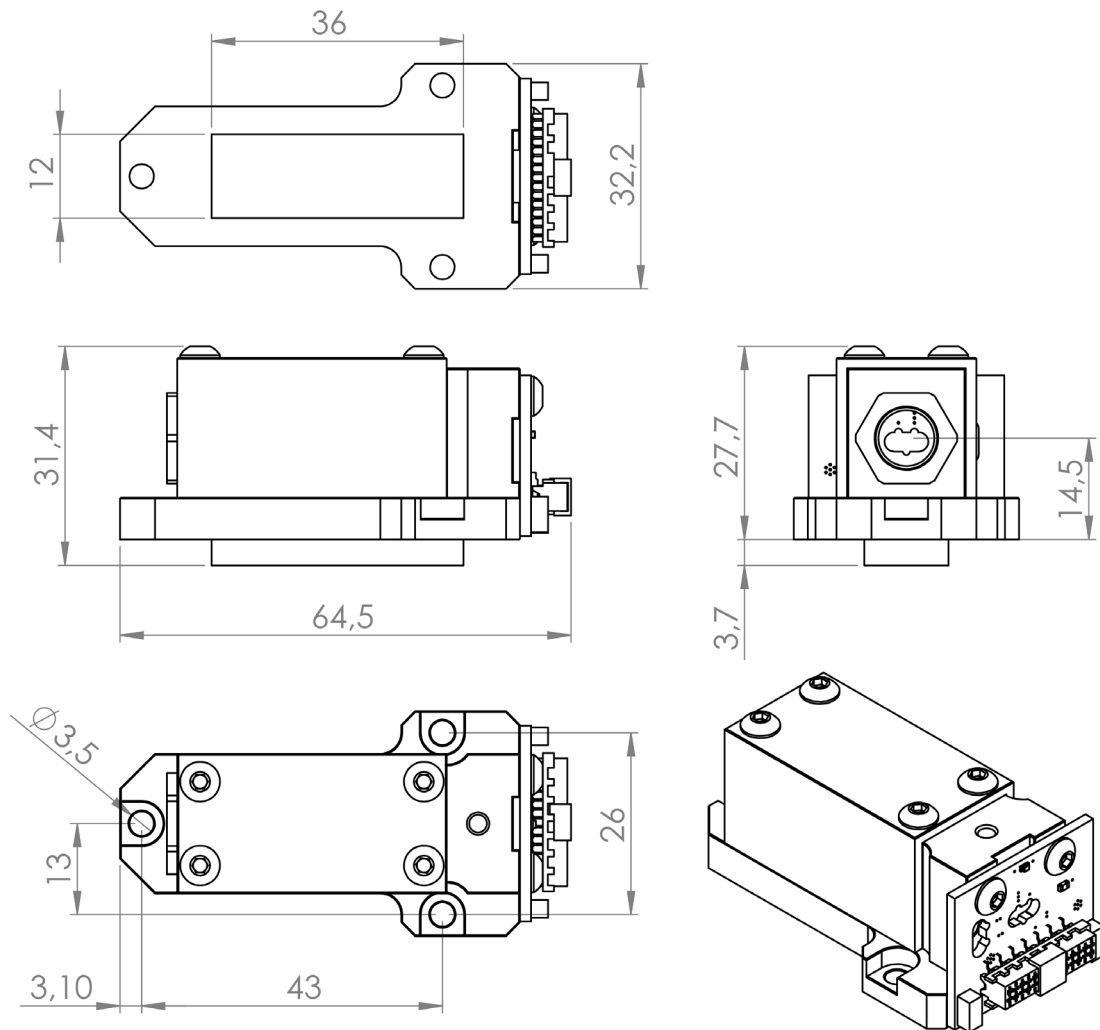
Item	Condition	Symbol	Min.	Typ.	Max.	Unit
Optical Output Power	n/a	P_o	-	300	-	mW
Optical Output Power	Pulsed * ¹	P_o	-	-	-	mW
Dominant Wavelength	n/a	λ_d	510	520	530	nm
Threshold Current	CW	I_{th}	-	100	400	mA
Operating Current	CW	I_{op}	-	500	840	mA
Operating Current	Pulsed * ¹	I_p	-	-	-	A
Operating Voltage	n/a	U_{op}	-	5.2	6.3	V
Slope Efficiency	CW	η	0.45	0.75	-	W/A
Raw Diode Beam Divergence (FWHM)	n/a	$\theta_{ }$	3	7	11	deg
	n/a	θ_{\perp}	17	23	29	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	-	90	$^{\circ}C$
Power Consumption * ²	Without TEC	P_{el}	-	3	-	W
Power Consumption * ²	With TEC	P_{el}	-	44	-	W

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

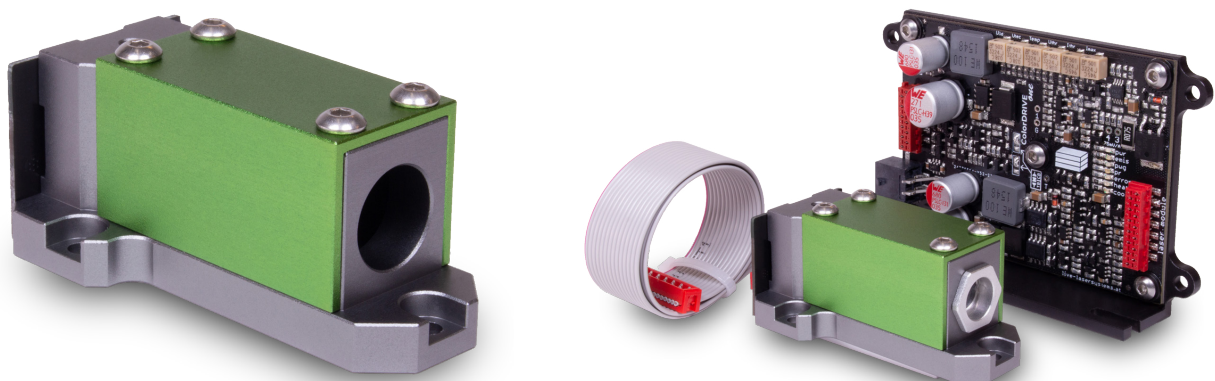
*² with ColorDRIVE one, $V_{in} = +10$ to $24V_{DC}$



Technical Drawings



Images



Contact

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