Green Laser Module

DLX-9456-02 *(Under development)*

Built in thermo electric control

Features

- Structure : Diode pumped solid-state green lasers (with thermo electric control)
- Lasing wavelength : 532nm
- Output power : 10mW
- Operating temperature : −10 to 50℃



Applications

- Leveler
- Laser marker

Absolute maximum ratings *) [Tc = 25℃]

Parameter	Symbol	Ratings	Unit
Supply voltage	V_{CC}	+3.5	V
Reverse voltage(supply)	V_{RCC}	−0.2	V
Input signal voltage	V_{IN}	+3.5	V
Reverse voltage(signal)	V_{RIN}	−0.2	
Operating temperature	T_{opr}	−10 to ＋50	℃
Storage temperature	T_{stg}	−15 to ＋70	℃

*) No do be dewy.

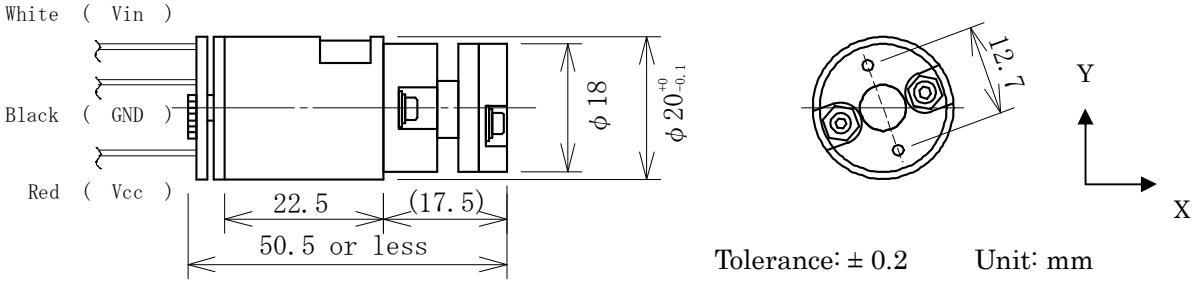
Specifications 1) 2) [Tc = 25℃]

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Wavelength	λ_P		531	532	533	nm
Output power	P_o		-	10	-	mW
Power stability 3)	ΔP_o	T_{opr}= −10 to +50 ℃	−10	-	+10	%
M^2	M^2				1.2	
Beam diameter 5)	$2w_r$	Δl = 5 m 4)	2.0	-	3.0	mm
Beam divergence 5)	$2\theta_r$			0.3	0.4	mrad
Beam ellipticity	E_r	Δl = 5 m 4)			1.2	

1) Initial values 2) Each value is measured by using our measuring instrument 3) 8 Hour/ @0 to 50Hz

4) Δ l: The distance from laser beam window 5) X axial direction

External Appearance Dimension



Tolerance: ± 0.2 Unit: mm

Note: Product specifications are subject to change without notice.

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Ratings

Parameter		Symbol	Ratings	Unit
Source Voltage		V_{CC}	2.4 to 3.3	V
Input signal voltage	H level (Laser ON)	V_{IH}	(V_{CC}-0.4) to V_{CC}	V
	L level (Laser OFF)	V_{IL}	0 to 0.4	V
Input impedance		R_I	10 ± 1	kΩ
Current consumption		Iop	200 to 400 [1)] 1150 max [2)]	mA

1) Tc=25℃ at regular operation 2) A moment after Vcc turn on

Input / Output lead pin assignment

Pin No.	Symbol	Line color	Explanation		Min	Typ	Max	Unit
1	V_{CC}	Red	Supply input		2.4	3.0	3.3	V
2	GND	Black	GND		-	0	-	V
3	V_{in}	White	ON/OFF signal input	H level (Laser ON)	Vcc-0.4	-	Vcc	V
				L level (Laser OFF)	0	-	0.4	V

Pulse Drive

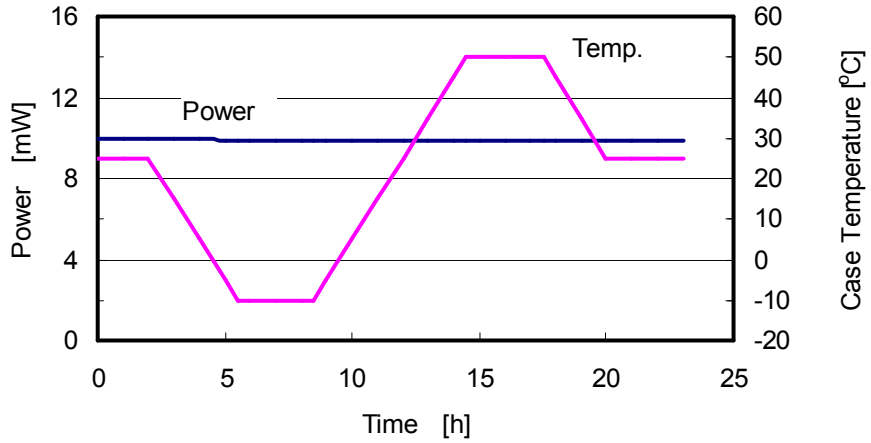
(1) Please input following rectangular wave signal to V_{in} at pulse operation.

(2) The average output power when the pulse drive becomes about 60% of the CW output power regardless of the value of input ON-DUTY.

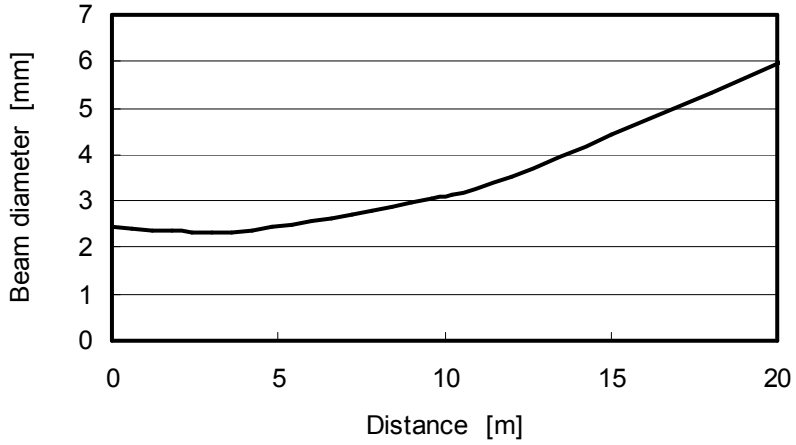
Parameter	Min	Typ	Max	Unit
Frequency	8	10	12	KHz
ON-Duty	65	-	75	%
H level	Vcc-0.4	-	Vcc	V
L level	0	-	0.4	V

Typical characteristics (Reference)

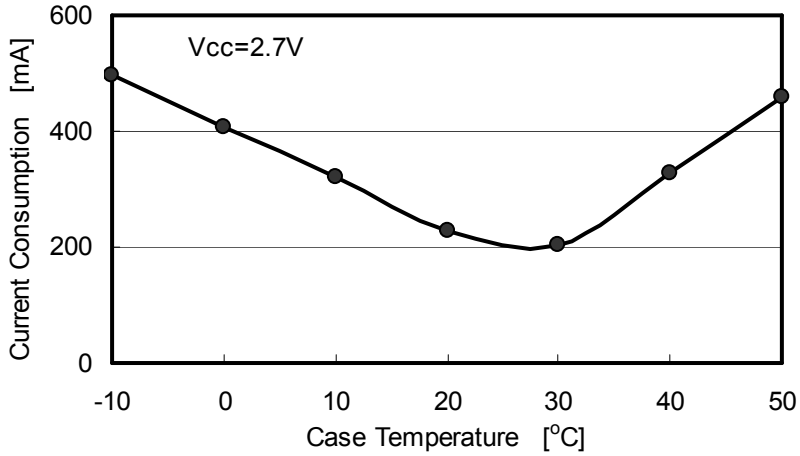
Power stability vs. Case temperature



Beam diameter vs. Distance

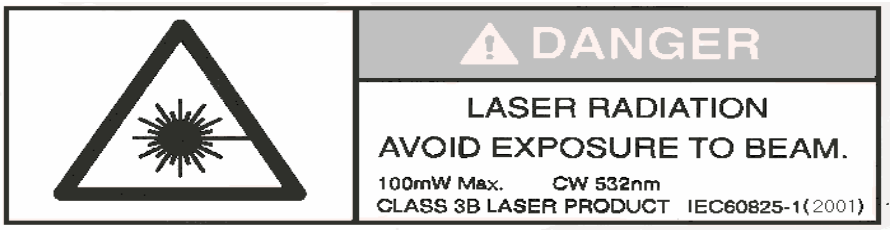


Current consumption vs. Case temparature



Cautions

(1) This laser product is classified into 3B. In the case of using, please refer to IEC60825-1:2001.



(2) Be sure to provide a heat sink (ex. Al $^{W}40\times^{L}40\times^{t}20mm^{3}$ or more) for a laser diode when using it.

(3) Do not pull the cables.

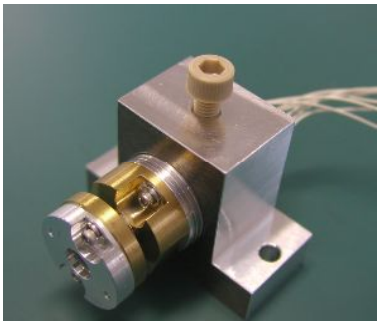
(4) Do not touch the circuit board.

(5) Do not disassemble.

(6) Do not touch the surface of the window glass.

(7) Do not drop the product or subject it to other mechanical shocks.

Installation example of a heat sink



About RoHS instruction

This product has suited the RoHS instruction.