

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°C

Applications

- Leveler
- Laser marker



Absolute maximum ratings *) [Tc = 25°C]

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	°C
Storage temperature	T _{stg}	-15 to +70	°C

*) No do be dewy.

Specifications 1) 2)

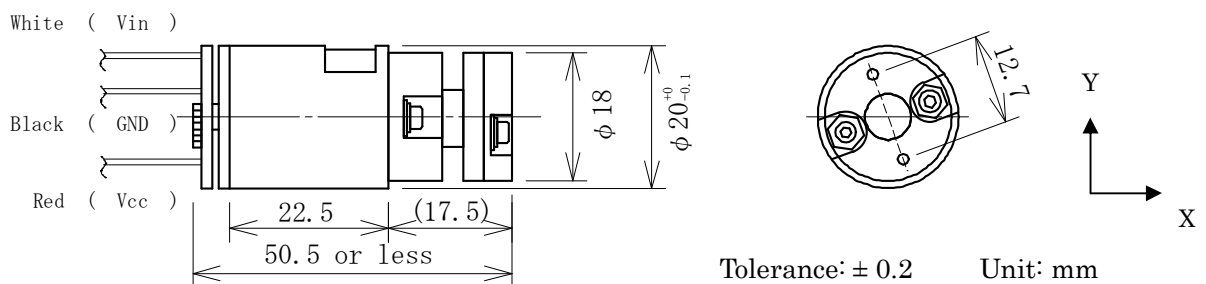
[Tc = 25°C]

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 °C	-10	-	+10	%
M ²	M ²				1.2	
Beam diameter 5)	2w _r	$\Delta l = 5 \text{ m}^4$	2.0	-	3.0	mm
Beam divergence 5)	2 θ_r			0.3	0.4	mrad
Beam ellipticity	E _r	$\Delta l = 5 \text{ m}^4$			1.2	

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

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

External Appearance Dimension



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		I _{op}	200 to 400 ¹⁾ 1150 max ²⁾	mA

1) T_c=25°C at regular operation 2) A moment after V_{cc} 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)	V _{cc} -0.4	-	V _{cc}	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	V _{cc} -0.4	-	V _{cc}	V
L level	0	-	0.4	V

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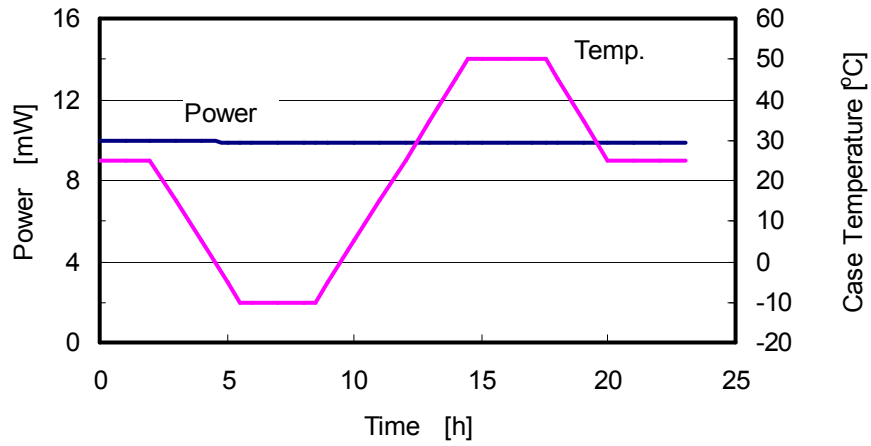
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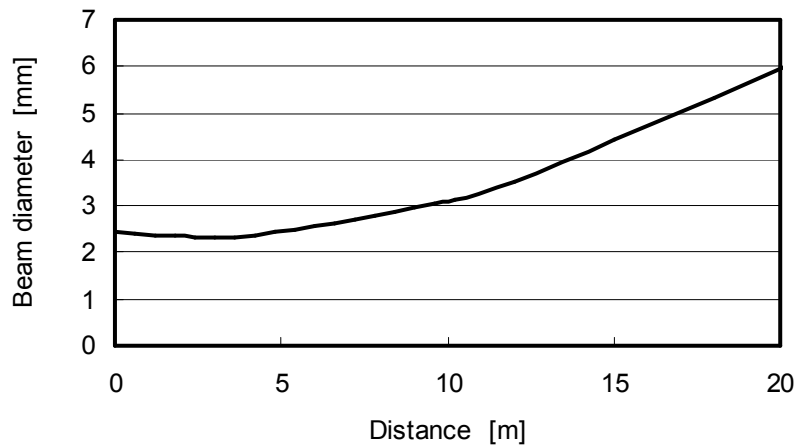
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Typical characteristics (Reference)

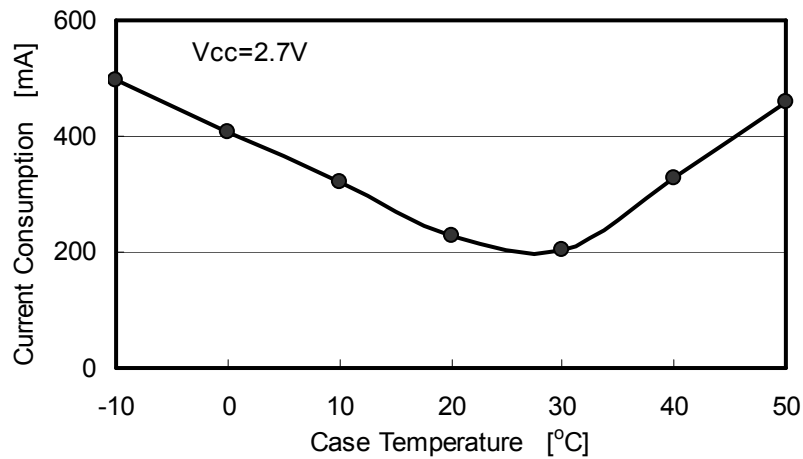
Power stability vs. Case temperature



Beam diameter vs. Distance

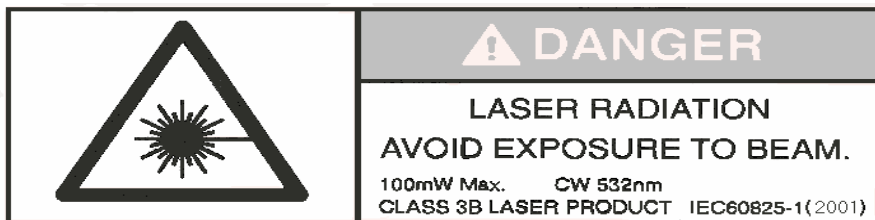


Current consumption vs. Case temperature



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 $W40 \times L40 \times t20mm^3$ 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.