

HL45023TG - 445nm / 80mW -

GaN Blue High Power Laser Diode

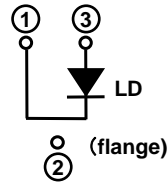
Target
Rev.0
5. Nov. 2010

Applications

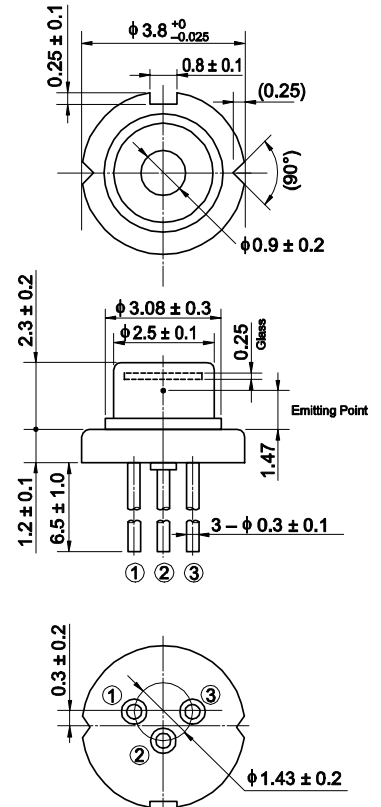
- Pico projector
- Various light source

Internal circuit

HL45023TG



Outline



Features

- Optical output power: $P_o=55\text{mW(CW)}$
- Blue lasing : $\lambda_p=445\text{nm}$
- Low operating current: $I_{op}=90\text{mA Typ.}$
- Low operating voltage: $V_{op}=5.0\text{V Typ.}$
- Small package: $\phi 3.8\text{mm}$
- Single transverse mode oscillation

Absolute Maximum Ratings($T_c=25^\circ\text{C}$)

Item	Symbol	Ratings	Unit
Optical output power	P_o	80	mW
LD Reverse Voltage	$V_{R(LD)}$	2	V
Operating Temperature	T_{opr}	-10 ~ +70	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40 ~ +85	$^\circ\text{C}$

Optical and Electrical Characteristics($T_c=25^\circ\text{C}$)

Item	Symbol	Min.	Typ.	Max.	Unit	Test condition
Threshold current	I_{th}	-	30	50	mA	-
Operating current	I_{op}	-	90	130	mA	$P_o=55\text{mW}$
Operating voltage	V_{op}	-	5.0	6.0	V	$P_o=55\text{mW}$
Lasing Wavelength	λ_p	440	445	460	nm	$P_o=55\text{mW}$
Beam divergence Parallel to the junction	$\theta_{//}$	5	8.5	13	$^\circ$	$P_o=55\text{mW}$
Beam divergence Perpendicular to the junction	θ_{\perp}	13	18	23	$^\circ$	$P_o=55\text{mW}$

Note : This type is underdevelopment. Therefore, this data sheet may be changed without any notice.

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1. The laser light is harmful to human body especially to eye no matter what directly or indirectly. The laser beam shall be observed or adjusted through infrared camera or equivalent.
2. This product (without violet laser diode) contains gallium arsenide (GaAs), which may seriously endanger your health even at very low doses. Please avoid treatment which may create GaAs powder or gas, such as disassembly or performing chemical experiments, when you handle the product. When disposing of the product, please follow the laws of your country and separate it from other waste such as industrial waste and household garbage.
3. Definition of items shown in this CAS is in accordance with that shown in Opto Device Databook issued by OPJ unless otherwise specified.

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