


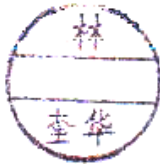
## APPROVAL SHEET

(承认书)

**ITEM: AD-52501 V1**

版本 (Version) : ADPL-515

日期 (Date) : 2013-03-02

Prepared By (制订)	Confirmed By (确认)	Approved By (承认)
		
Date (日期)	Date (日期)	Date (日期)

## GREEN LASER DIODE

AD-52501 V1

ADPL-515

### 520nm/50mW Green Laser Diode

### Dimension

#### ◆ Features

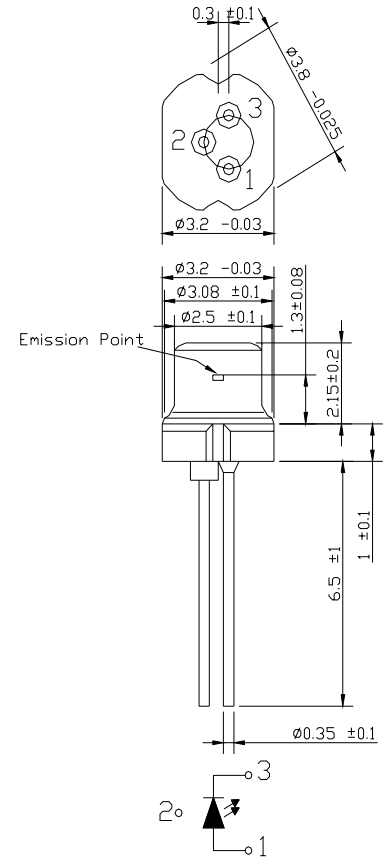
- Efficient radiation source for CW & PULSED mode operator
- Single transverse mode semiconductor laser diode
- High modulation bandwidth
- Miniaturized TO38 ICut package
- Laser diode isolated against package

#### ◆ Applications

- Metrology
- Laser shows
- Biomedical applications
- Laser projection

#### ◆ Absolute maximum ratings

Parameter	Symbol	Condition	Rating	Unit
Light output power	$P_0$	CW	50	mW
Reverse voltage (LD)	$V_R$	-	2	V
Case Temperature	$T_C$	-	0~+60	°C
Storage temperature	$T_S$	-	-40~+85	°C



#### ◆ Electrical and optical characteristics

(TC=25°C)

Parameter	Symbol	Min	Typ.	Max.	Unit	Condition (CW)
Peak wavelength	$\lambda$	515	520	530	nm	$P_0 = 50\text{mW}$
Threshold current	$I_{th}$	-	45	75	mA	
Operating current	$I_{op}$	-	150	160	mA	
Operating voltage	$V_{op}$	-	7.0	8.0	V	
Parallel divergence angle		4.0	7.0	11.0	deg	$P_0 = 50\text{mW}$
Perpendicular divergence angle		16.0	22.0	25.0	deg	
Polarization	$P_{gr}$	20:1	-	-		
Modulation Frequency	$f$	>100	-	-	MHz	
Thermal resistance (junction to case)	$R_{th}$	-	38.0	-	K/W	

#### ●Precautions

- \* Do not operate the device above maximum ratings. Doing so may cause unexpected and permanent damage to the device.
- \* Take precautions to avoid electrostatic discharge (ESD) and / or momentary power spikes. A change in the characteristics of the laser or premature failure may result.
- \* The laser diode must be operated with a suitable power supply with minimized electrical noise.
- \* Proper heat sinking of the device assures stability and lifetime. Always ensure the maximum operating temperatures are not exceeded.
- \* Cause diode heat is dissipated only by the base plate of the diode's. A proper heat conducting interconnection between the diodes base plate and heat sink must be maintained.
- \* Observing visible or invisible laser beams with the human eye directly, or indirectly, can cause permanent damage. Use a camera to observe the laser.
- \* No laser device should be used in any application or situation where life or property is at risk in event of device failure.
- \* Specifications are subject to change without notice. Ensure that you have the laser specification by contacting us prior to purchase or use of the product.
- \* **Products which incorporate these devices have to follow the safety precautions found in IEC 60825-1 "safety of laser products".**

\*For reference only. Contents above are subject to change without notice.