BLUE-VIOLET LASER DIODE

DL-LS5017

Tentative

Ver.4 Jun. 2006

Features

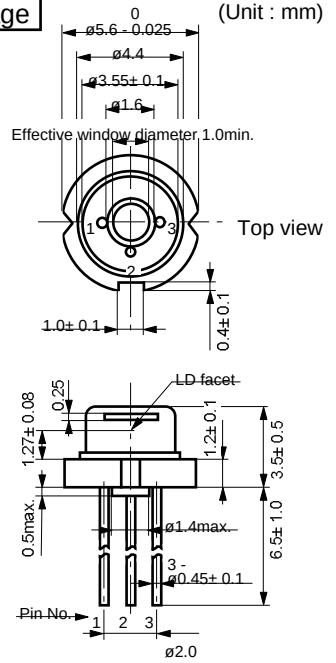
- Short wavelength : 405 nm (Typ.)
- Light Output: 60mW CW
- Low threshold current : Ith = 40 mA (Typ.)
- Package : ø5.6 mm

Applications

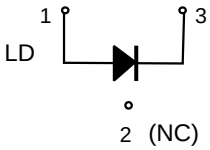
Industrial Use

Package

Tolerance : ± 0.2
(Unit : mm)



Pin Connection



Absolute Maximum Ratings

(Tc=25°C)

Parameter		Symbol	Ratings	Unit
Light Output	CW	Po (CW)	65	mW
Reverse Voltage	Laser	VR	2	V
Operating Temperature		Topr	0 to +50	°C
Storage Temperature		Tstg	-40 to +85	°C

Electrical and Optical Characteristics 1) 2)

(Tc=25°C)

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current		Ith	CW	-	40	60	mA
Operating Current		Iop	Po=60mW	-	90	120	mA
Threshold Voltage		Vth	CW	-	4.6	5.6	V
Operating Voltage		Vop	Po=60mW	-	5.2 4)	6.2	V
Lasing Wavelength		Lp	Po=60mW	395	405	415	nm
Beam Divergence 3)	Perpendicular	Qv	Po=60mW	16	20	24	°
	Parallel	Qh	Po=60mW	6	8	14	°
Off Axis Angle	Perpendicular	dQv	-	-3	-	3	°
	Parallel	dQh	-	-2	-	2	°
Differential Efficiency		SE	-	0.8	1.2	-	mW/mA

1) Initial values 2) All the above values are evaluated with Tottori Sanyo's measuring apparatus
3) Full angle at half maximum 4) Operating Voltage of this laser is higher than conventional laser(5.5V)

Note : The above product specification are subject to change without notice.

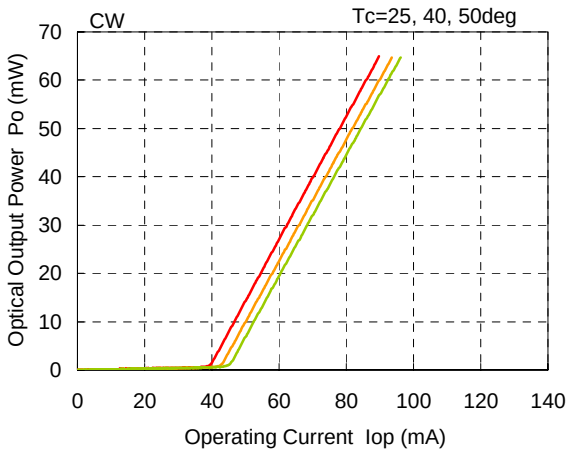
Tottori SANYO Electric Co., Ltd. Photonics Business Unit
5-318, Tachikawa, Tottori 680-8634 Japan TEL : +81-857-21-2137 FAX : +81-857-21-2161

Characteristics Data for DL-LS5017

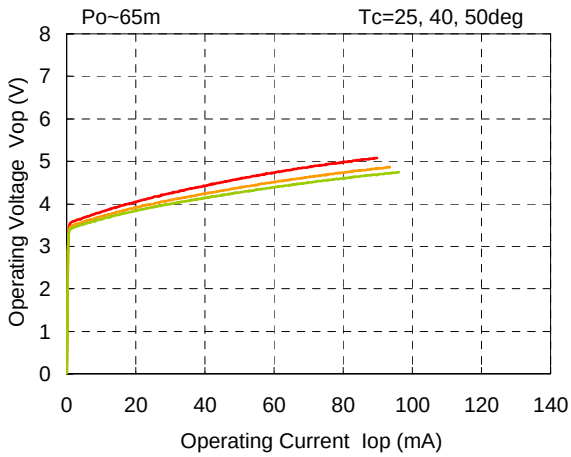
Reference Data

CONFIDENTIAL

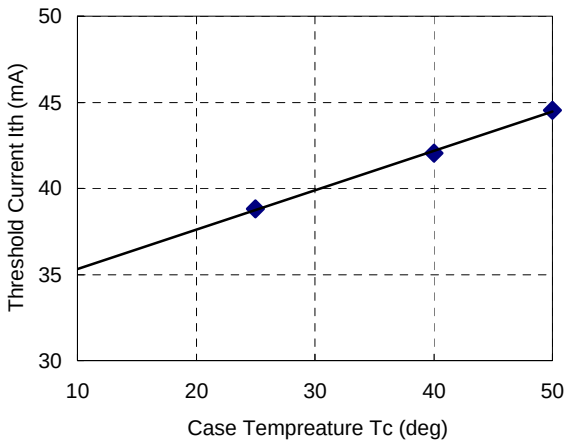
Optical Output Power vs. Operating Current



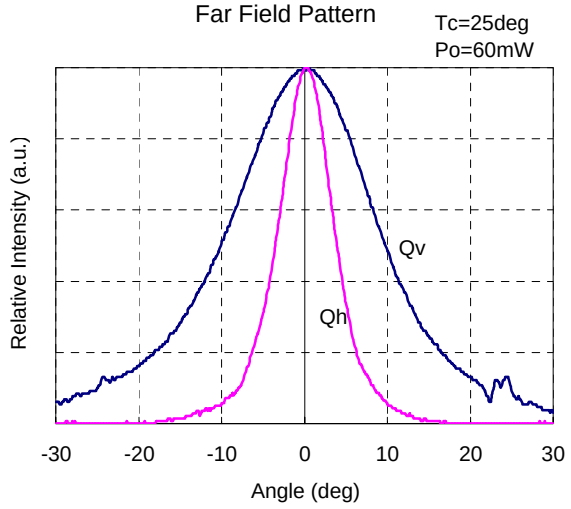
Operating Voltage vs. Operating Current



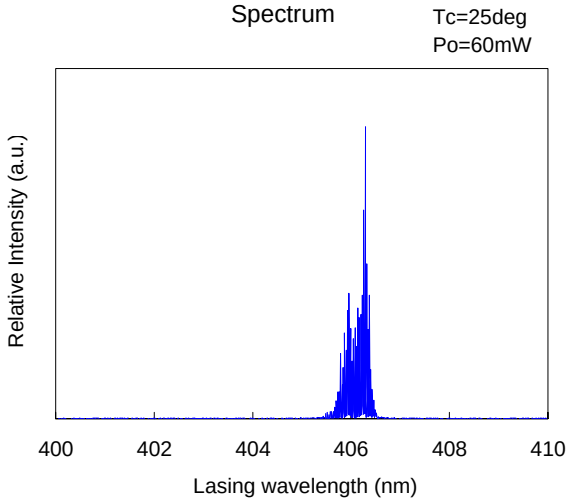
Threshold current vs. Case Tempreature



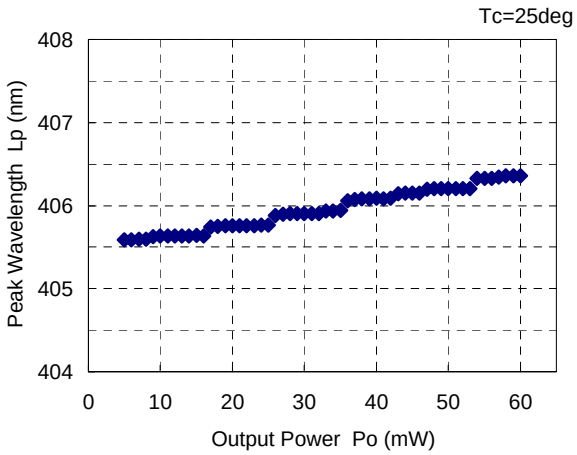
Far Field Pattern



Spectrum



Peak Wavelength vs. Output Power



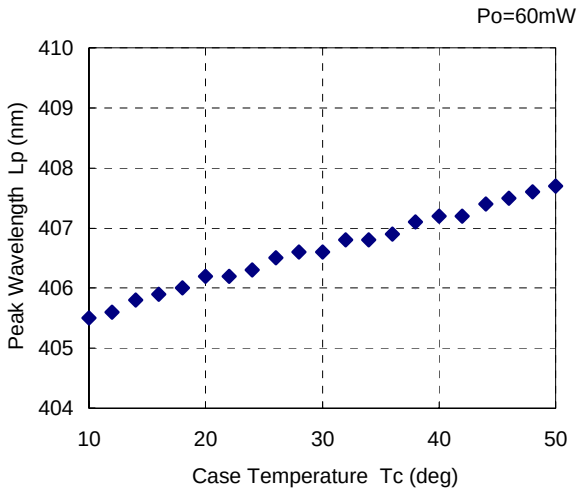
*Those are typical data for customers reference and may not represent all products.

Characteristics Data for DL-LS5017

Reference Data

CONFIDENTIAL

Peak Wavelength vs. Case Temperature



*Those are typical data for customers reference and may not represent all products.

BLUE-VIOLET LASER DIODE

SANYO

Precautions for Use

1. Voltage of our blue-violet laser diode is 4-6V, which is higher than 1.8-3V of the other laser diodes. Take care of operating voltage when you design an APC circuit.

2. An assemby line has to be protected from static electricity or surge current.
   Use an earth-band or the like when handling blue-violet laser diodes.

3. Output light from our blu-violet laser diode is very reactive and harmful to a human eye. Avoid looking at the output light directly or even indirectly through a lens while oscilating.
   Parts exposed to the output light such as a lens or body should be made from material strong for ultraviolet damage.

4. Don't use our blue-viole laser diode with a built-in monitor photodiode for an application which requires power controll with high accuracy.

5. Reselling, disassembling, or reverse engineering of a blue-violet laser diode is prohibited.

6. Our laser diode is not intended for use in applications where extremely high reliability is required, or human life is directly involved, e.g. life-support systems or cars.

7. We are not liable to any undesirable result caused by a misuse or inappropriate use.

Export Control

1. Our laser diode is subject to the export control regulations (of foreign exchanges and foreign trading). When exporting laser diodes (including service), care should be taken to insure that any necessary procedures are complied with.

2. Laser diodes should be destroyed in cases when they are not be used to avoid infringing on export.

3. Use in military applications is prohibited.

Please ask our sales staff for more details if necessary.

Tottori SANYO Electric Co., Ltd. Photonics Business Unit
5-318, Tachikawa, Tottori 680-8634 Japan TEL : +81-857-21-2137 FAX : +81-857-21-2161