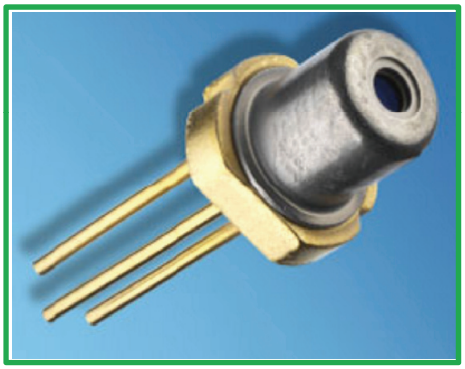
Blue Laser Diode

Part No: LD-450-80-70-E-9



Features

※ Short wavelength: λ=450nm(Type)
※ Operating mode: CW & Pulse
※ Transverse mode: Single
※ Package: TO-38(Φ3.8mm)
※ High modulation bandwith

Applications

※ Laser projection
※ Instrumenttaion
※ Holograhpy
※ Metrology
※ Biomedical Applications

Absolute Maximum Rating at Tc=25℃

Items	Symbols	Values	Unit
Optical Output Power	Po	50	mW
Laser Diode Reverse Voltage	V	2	V
Operating Temperature	Topr	+10~+70	℃
Storage Temperature	Tstg	-40~+85	℃

Electrical and Optical Characteristics at Tc=25℃

Items	Symbols	Min	Type	Max.	Unit	Condition
Optical Output Power	Po	-	50	80	mW	CW
Threshold Current	Ith	-	30	60	mA	CW
Operating Current	Iop	-	80	120	mA	Po=50mW
Slope Efficiency	SE	0.8	1.3	-	mW/mA	Po=50mW
Operating Voltage	Vop	-	5.5	6.5	V	Po=50mW
Lasing Wavelength	λ	440	450	460	nm	Po=50mW
Spectral Width(FWHM)	△λ	-	2	-	nm	Po=50mW
Beam Divergence	//	4	7	15	°	Po=50mW
	⊥	15	21	25	°	Po=50mW
Beam Angle	△//	-	-	±2	°	Po=50mW
	△⊥	-	-	±3	°	Po=50mW
Modulation Frequency	F	-	>100	-	MHz	Po=50mW

OPELUS TECHNOLOGY CORPORATION
E-mail: sales@opelus.com
http://www.opelus.com

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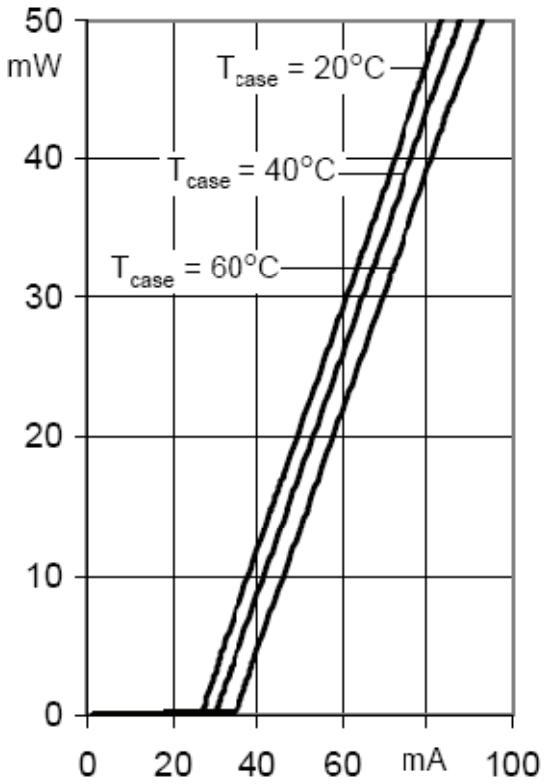
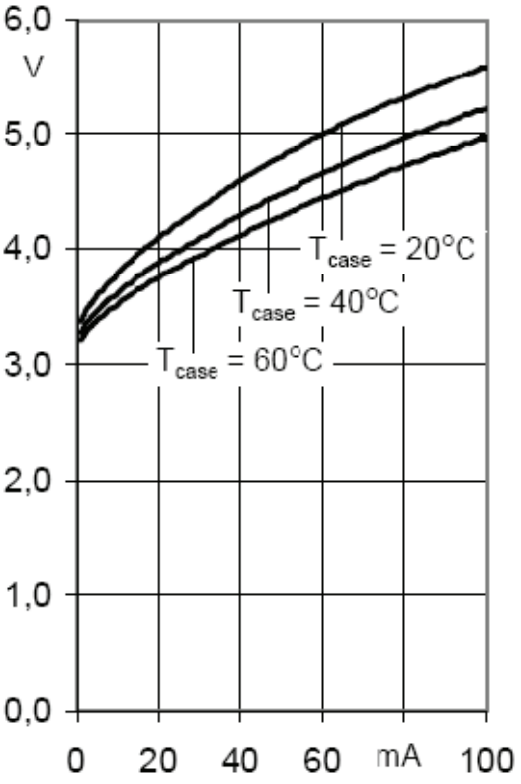
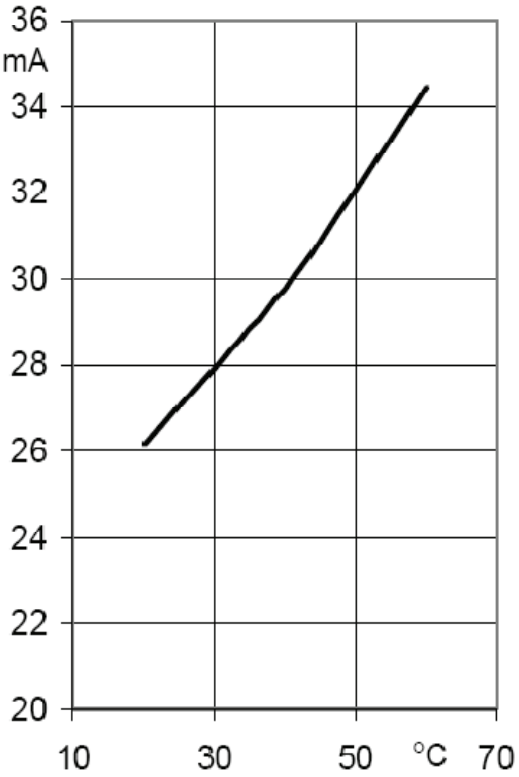
Optical Output Power
Po=*f*(Iop)



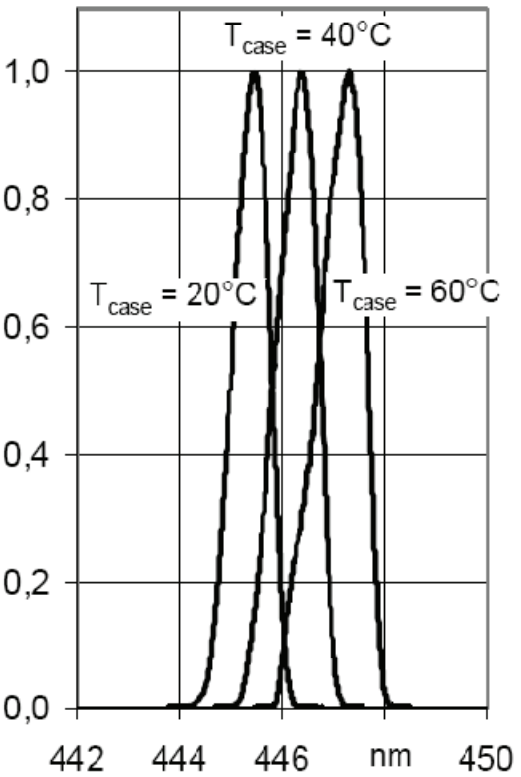
Operating voltage
Vop=*f*(Iop)



Threshold Current
Ith=*f*(Tcase)



Emission Wavelength
λ=*f*(Tcase)



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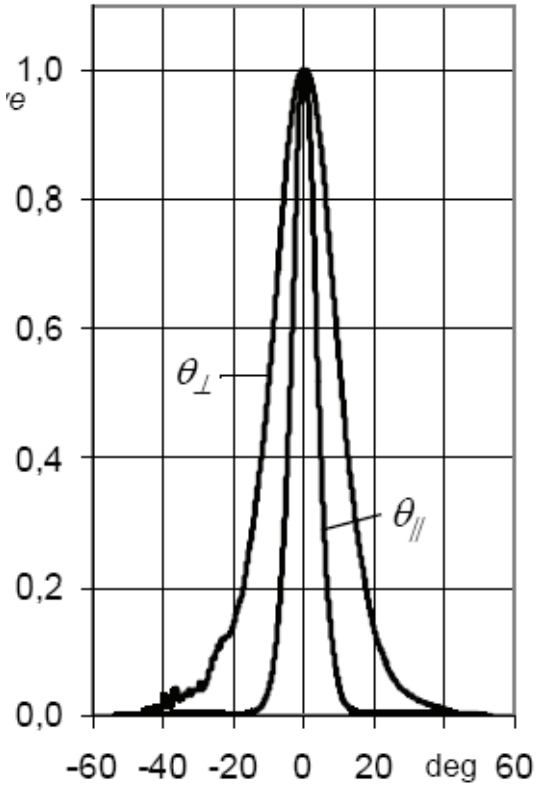
Beam Angle

Tcase=25℃



Notes

1) Operation above the maximum conditions can damage the laser diode or reduce its lifetime.
2) The laser diode is very sensitive to electrostatic discharge(ESD). Proper precautions must be taken.
3) In order to maintain the lifetime of the laser diode proper heat managenment is essential
4) These devices emit highly concentrated visible light which can be hazardous to the human eye.

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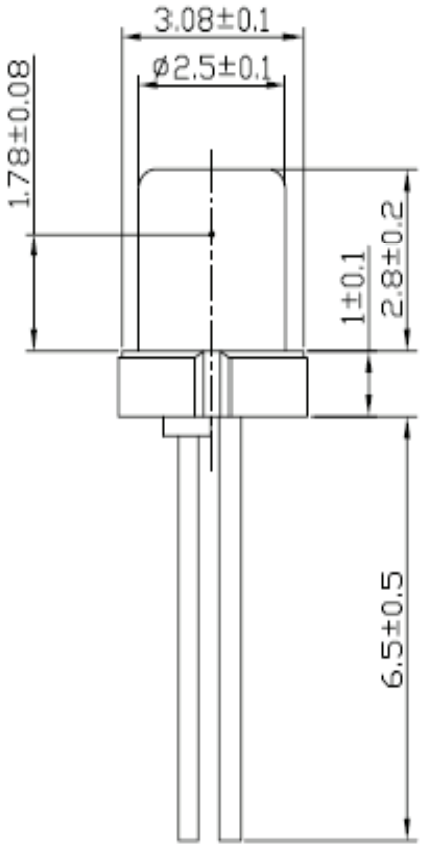
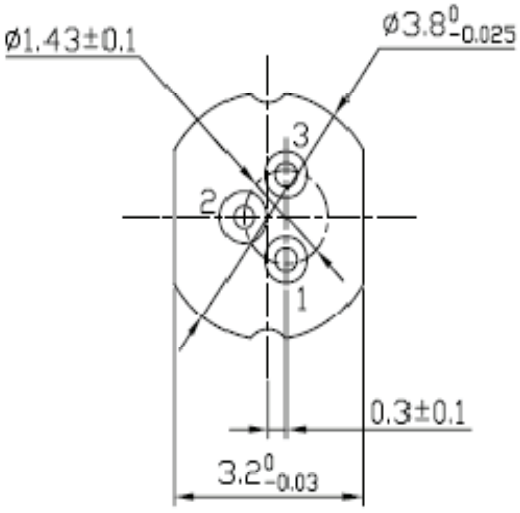
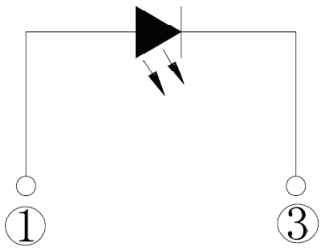
Package and Electrical connection







E-type