

OCLARO Laser Diode 638nm/700mW HL63193MG specification

Oclaro Japan, Inc.
Device division

APD No.13080
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OCLARO Red LD: HL63193MG (Under Development)



Product detail:

WL:638nm

Po: 700mW

Multi transverse mode

5.6mmPKG

Schedule

WS: Apr,2013

MP: Jan,2014

OCLARO Advantage

- High Power/Short WL
- High Po. Red LD in 5.6mmPKG
- High efficiency
- Suitable for Show laser, Laser projector

Note This product is under development. Therefore, the specification is changed without notice.

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Application

Show Laser

Laser projector

Light source of optical equipments

Features

Red light emitting: 638nm typ @ 700mW

Optical output power: 700mW CW

Operating current: 900mA typ @ 700mW

Operating voltage: 2.3V typ @ 700mW

Small package: ϕ 5.6mm

Multi transverse mode

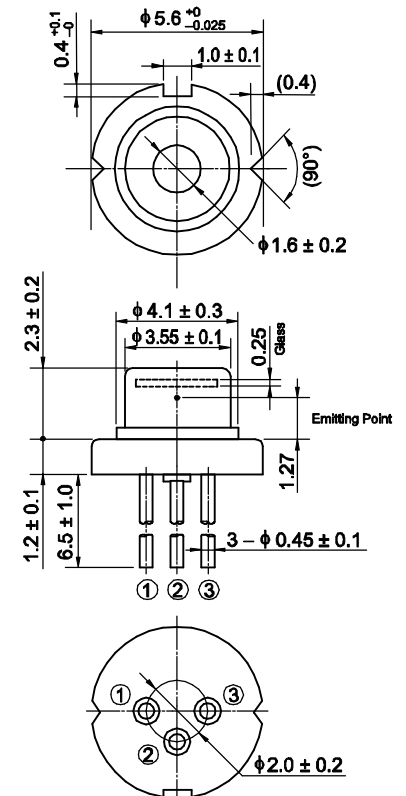
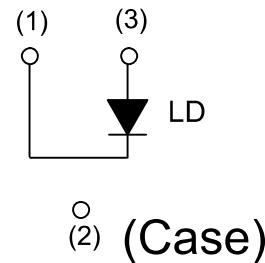
Package

Φ 5.6mm



(3) (1)
(2)

Internal circuit



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Absolute maximum rating (Tc=25°C)

No.	Items	Symbols	Ratings	Unit	Note
1	Optical output power(1)	Po(1)	700	mW	1,2,3
2	Optical output power(2)	Po(2)	550	mW	1,2,3
3	LD reverse voltage	V _{R(LD)}	2	V	1,2
4	Operating temperature	Topr	-10 ~ +40	°C	1,2,3
5	Storage temperature	Tstg	-40 ~ +85	°C	1,2

(Note1) The value is based on Oclaro measurement.

(Note2) Operating temperature is defined by case temperature “Tc”. High increase in temperature of LD chip itself is expected during operation due to high current density.

Thus, without proper heat dissipation, it is observed that no specific output power is achieved or it results to LD degradation. It is advised that sufficient measure of heat dissipation should be taken so that LD’s maximum operating temperature is not exceeded during actual operation.

(Note3) Optical output power rating is changed by operating temperature.

Please refer to page.6 for more detail.

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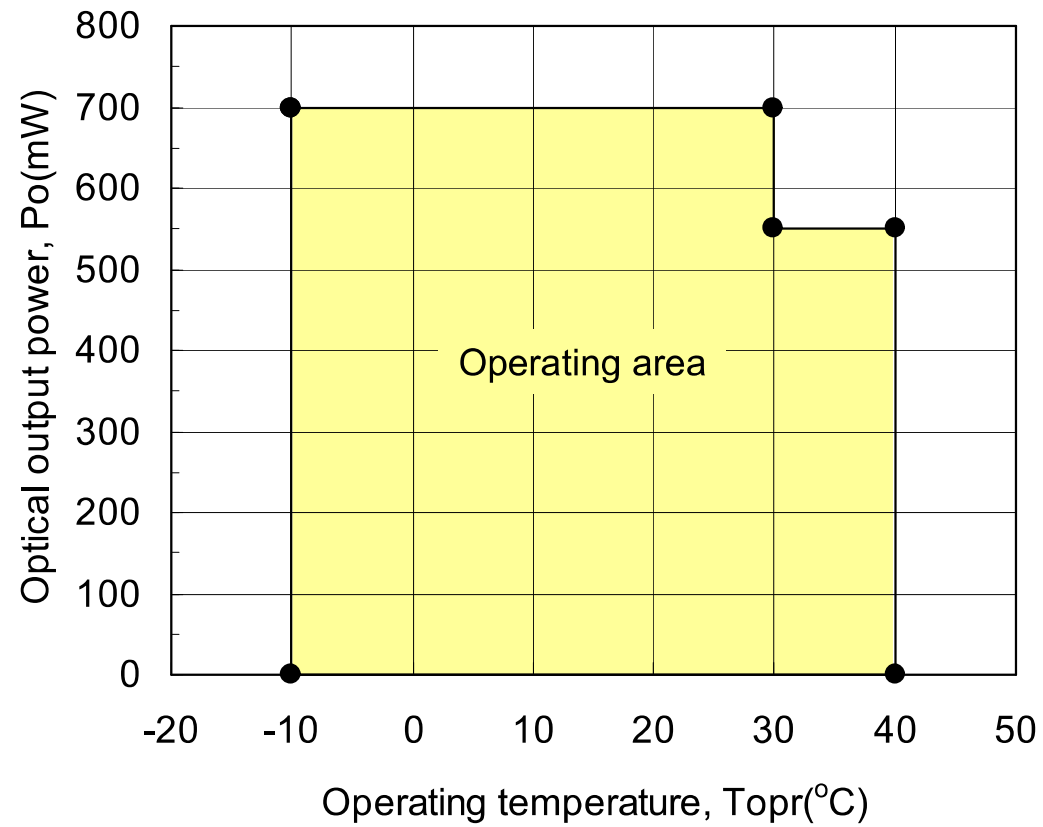
Optical and Electrical characteristics ($T_c=25\pm 3^\circ\text{C}$)

No.	Items	Symbols	Test condition	Min	Typ	max	Unit	Note
1	Threshold current	I_{th}	-	-	200	-	mA	1,2
2	Operating current	I_{OP}	$P_o=700\text{mW}$	-	900	-	mA	1,2
3	Operating voltage	V_{OP}	$P_o=700\text{mW}$	-	2.3	-	V	1,2
4	Lasing wavelength	λ_p	$P_o=700\text{mW}$	-	638	-	nm	1,2
5	Beam divergence parallel to the junction	$\theta_{//}$	$P_o=700\text{mW}$, FWHM	-	8	-	°	1,2
6	Beam divergence Perpendicular to the junction	θ_{\perp}	$P_o=700\text{mW}$, FWHM	-	35	-	°	1,2

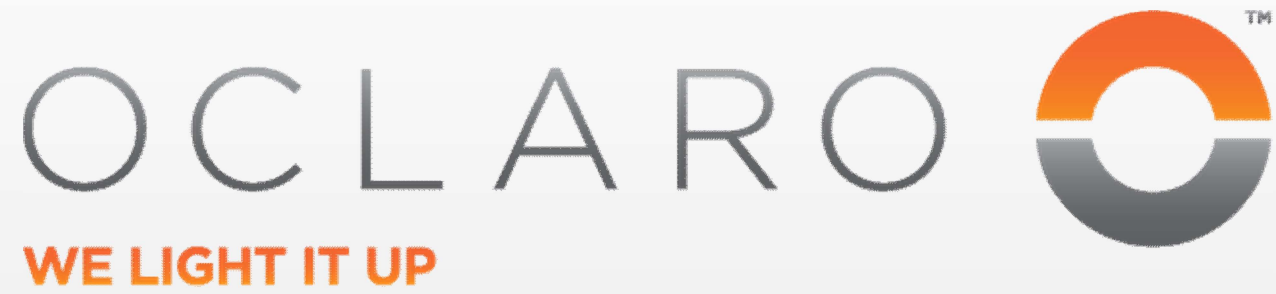
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Topr vs Po matrix



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THANK YOU.