

Red LD : HL63283HD Specifications (1)

Under Development

Application

Laser projector
Show Laser

Features

1 emitter

Optical output power: 1.2 W CW @25°C
1.5 W Pulse @25°C

Red light emitting: 636 nm typ @ 1.2 W

Low operating current: 1.3 A typ @ 1.2 W

Low operating voltage: 2.3 V typ @ 1.2 W

High wall plug efficiency: 40% typ @25°C

High heat dissipation package: $\phi 9\text{mm}$ CAN

Multi transverse mode

TM mode oscillation

Package



This is a preliminary target specification. The specification may be changed without any notice.

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Red LD : HL63283HD Specifications (2)

Under Development

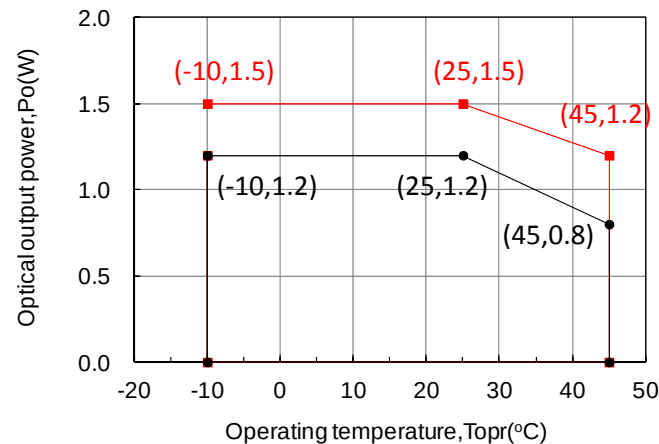
Absolute Maximum Ratings (Tc=25°C)

Items	Symbols	Unit	Ratings	Note
Optical output power	Po	W	1.2	CW, Note 2
Pulse optical output power	Po(Pulse)	W	1.5	Pulse frequency $\geq 50\text{Hz}$, duty $\leq 33\%$, Note 2
LD reverse voltage	V _{R(LD)}	V	2	
Operating temperature	Topr	°C	-10 to 45	Note 1, Note 2
Storage temperature	Tstg	°C	-40 to 85	

Note1) Operating temperature “Topr” is defined by Case temperature “Tc”.

Note2) Relation of Optical output power Po and Operating temperature Topr.

- Topr vs Po (CW)
- Topr vs Po(Pulse) (Pulse frequency $\geq 50\text{Hz}$, duty $\leq 33\%$)



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Red LD : HL63283HD Specifications (3)

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Optical and Electrical Characteristics (Tc=25°C,CW)

Items		Symbols	Unit	HL63283HD			Test conditions	Note
				Min.	Ave.	Max.		
Threshold current		I _{th}	mA	-	340	440	-	
Operating current		I _{op}	mA	-	1300	1600	P _o =1.2W	
Operating voltage		V _{op}	V	-	2.3	2.7	P _o =1.2W	
Lasing wavelength		λ _p	nm	632	636	640	P _o =1.2W	
Beam Divergence	parallel	θ//	°	3	10	20	P _o =1.2W, FWHM	
	Perpendicular	θ⊥	°	23	33	43	P _o =1.2W, FWHM	

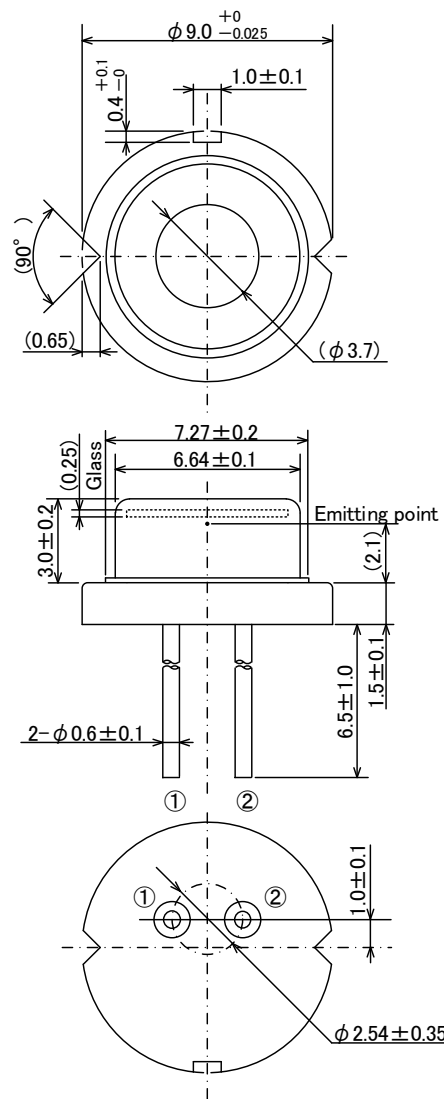
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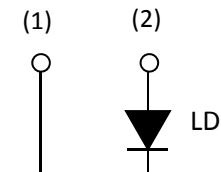
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Outline and Internal Circuit

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Internal circuit



Unit:mm

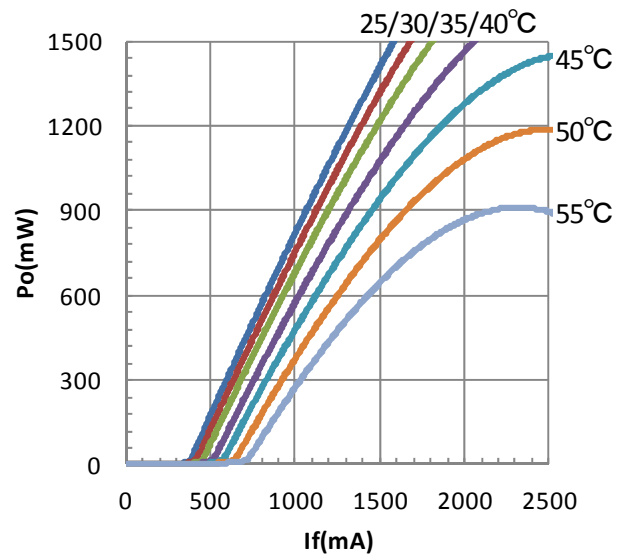
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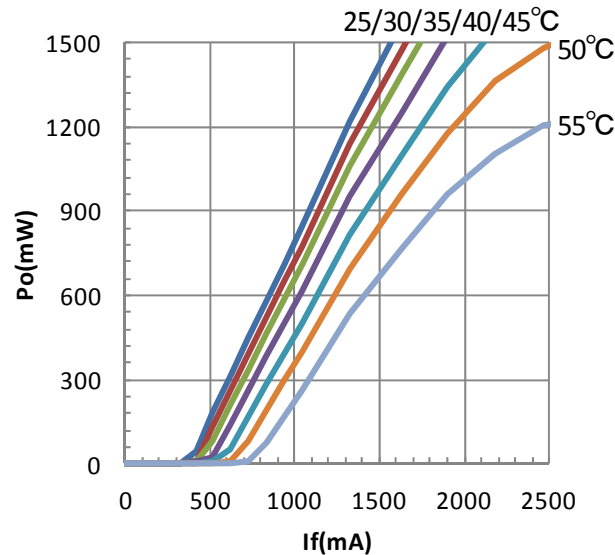
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Example IL characteristics

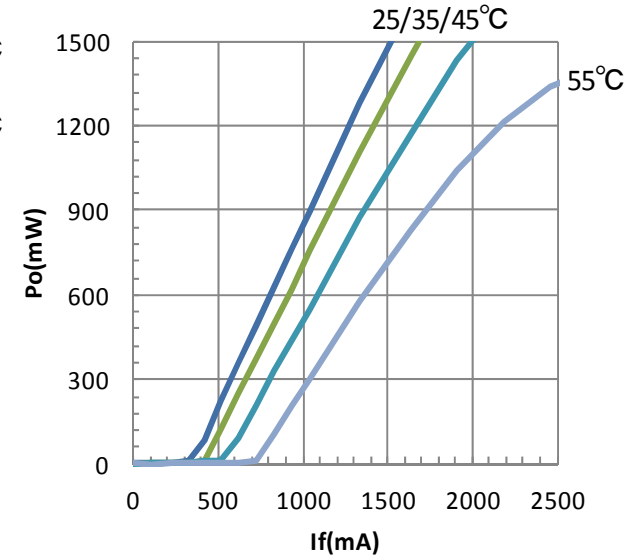
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CW



Pulse 50Hz duty33%

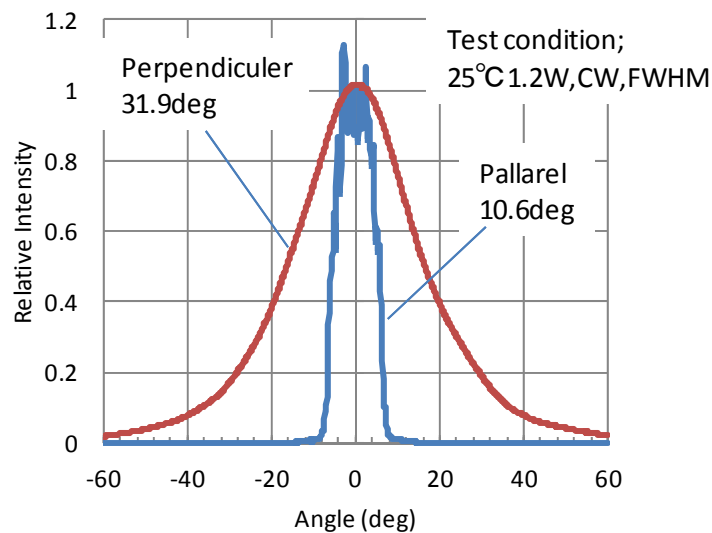


Pulse 120Hz duty30%

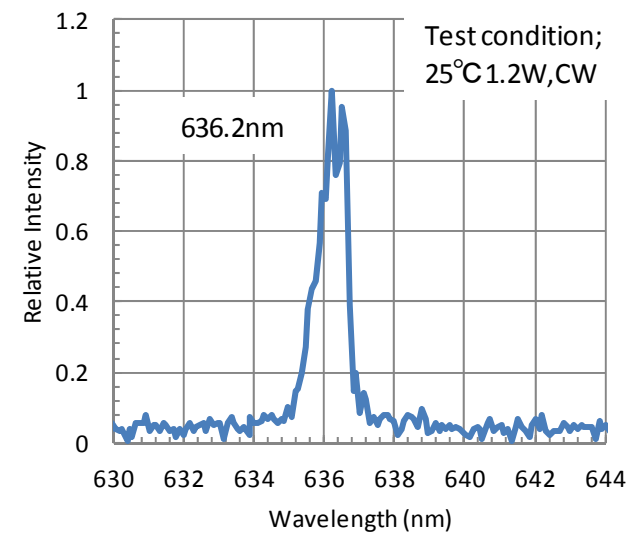
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Example of FFP, Lasing Spectrum characteristics

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Far Field Pattern



Lasing Spectrum