635nm Pure Red Laser Diode

RLD63NZC5 series Datasheet

●Application

- Leveling
- Ranging
- Sensor
- Bar-code reader
- Laser pointer

●Features

●Features

1) LD anode common
2) PD cathode common
3) 5.6ϕ CAN 3pin package

●Absolute maximum ratings (T_c= 25°C)

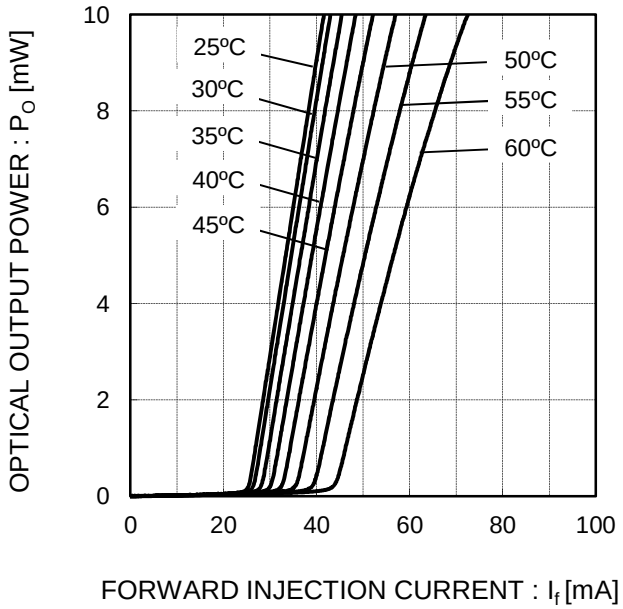
Parameter		Symbol	Ratings	Unit
Optical output power		P_O	6	mW
Reverse voltage	Laser diode	V_R	2	V
	Photo diode	V_R(PD)	20	V
Operating temperature		Top	−10 to +40	°C
Storage temperature		Tstg	−40 to +85	°C

●Electrical and optical characteristics (T_c= 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold curret	I_{th}	—	24	35	mA	-
Operating current	I_{op}	—	33	45	mA	P_O=5mW
Operating voltage	V_{op}	—	2.2	2.7	V	P_O=5mW
Output efficiency	η	0.2	0.55	0.8	mW/mA	2mW/ (I (5mW)- I (3mW))
Monitor current	Im	0.05	0.18	0.5	mA	P_O=5mW,V_R(PD)=15V
Parallel beam divergence	$\theta_{//}$	6	8	12	deg.	P_O=5mW
Perpendicular beam divergence	$\theta_{\perp}$	28	32	40	deg.	
Parallel beam tolerance	$\Delta\theta_{//}$	−3	0	3	deg.	
Perpendicular beam tolerance	$\Delta\theta_{\perp}$	−4	0	4	deg.	
Emission point accuracy	ΔXYZ	−100	0	100	μm	-
Lasing wavelength	λ	630	635	645	nm	P_O=5mW

●Electrical characteristics

Fig.1 Optical Output power vs. Forward Injection Current



●Optical characteristics

Fig.2 Far Field Pattern

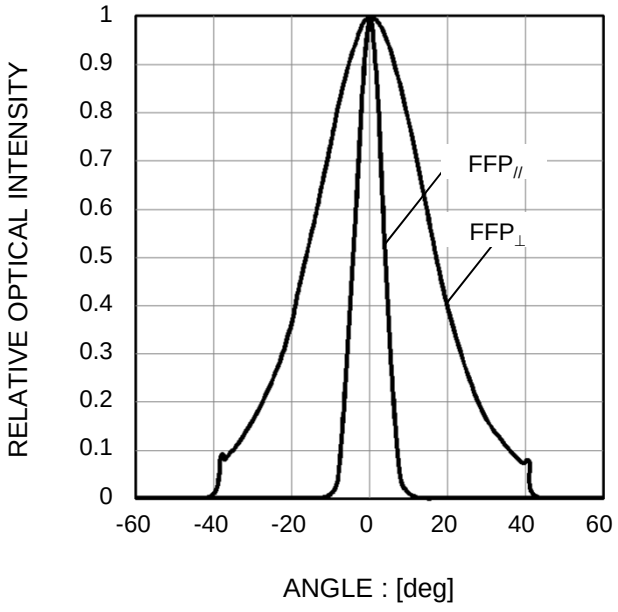
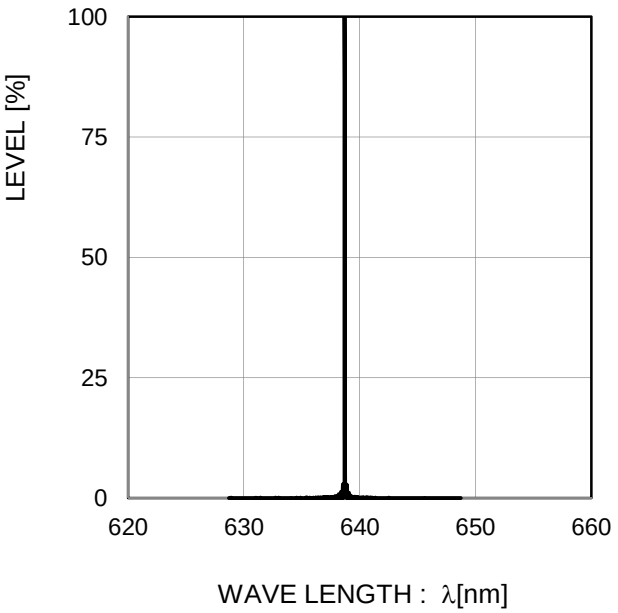


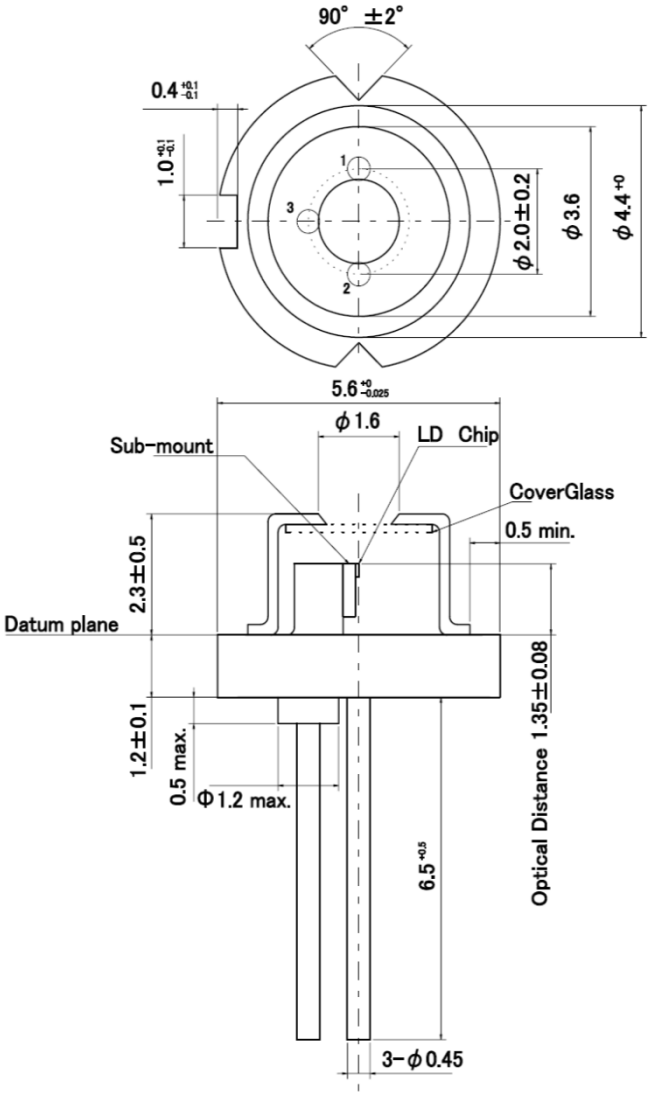
Fig.3 Lasing Spectrum



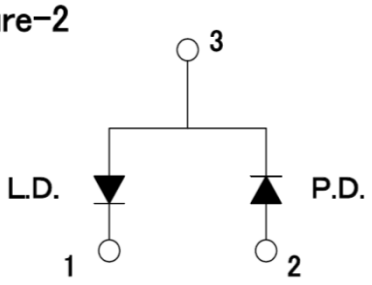
●**Dimensions** (Unit : mm)

Figure−1

Unit : mm



Figure−2



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