

660nm / 780nm Dual Wave Low Power Lasers

RLD2WMUV2

A long-run product with market-proved high reliability. Matching to various needs.

●Applications

DVD-ROM
DVD player
etc.

●Features

- 1) DVD/CD optical power output : CW7mW/CW7mW
- 2) Single mode
- 3) Excellent temperature characteristics
- 4) Low threshold current
785nm : 18mA (Tc=25°C)
655nm : 20mA (Tc=25°C)
- 5) Emission point distance : 110μm

●Absolute maximum ratings (Tc=25°C)

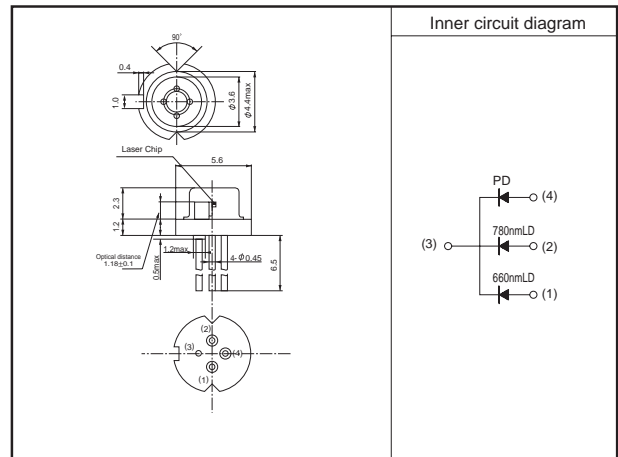
660nm

Parameter	Symbol	Limits	Unit	
Output	P _o	7	mW	
Reverse voltage	Laser	V _R	2	V
	Photodiode	V _{R(PIN)}	30	V
Operating temperature	T _{op}	-10 to +75	°C	
Storage temperature	T _{stg}	-40 to +85	°C	

780nm

Parameter	Symbol	Limits	Unit	
Output	P _o	7	mW	
Reverse voltage	Laser	V _R	2	V
	Photodiode	V _{R(PIN)}	30	V
Operating temperature	T _{op}	-10 to +75	°C	
Storage temperature	T _{stg}	-40 to +85	°C	

●Dimensions (Unit : mm)



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

660nm

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold current	I_{th}	–	20	50	mA	–
Operating current	I_{op}	–	27	60	mA	$P_o=5mW$
Operating voltage	V_{op}	–	2.3	2.7	V	$P_o=5mW$
Differential efficiency	η	0.4	0.72	1	mW/mA	$2mW/(I(5mW)-I(3mW))$
Monitor current	I_m	0.1	0.22	0.5	mA	$P_o=5mW$
Parallel divergenc angle	$\theta_{//}$	7	8	10	deg	$P_o=5mW$
Perpendicular divergenc angle	θ_{\perp}	20	27	35	deg	
Parallel deviation angle	$\Delta\theta_{//}$	-2	0	2	deg	
Perpendicular deviation angle	$\Delta\theta_{\perp}$	-3	0	3	deg	
Peak emission wavelength	λ	645	658	662	nm	$P_o=5mW$
Astigmatism	A_s	–	–	10	μm	$P_o=5mW, NA=0.45$

780nm

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold current	I_{th}	–	18	50	mA	–
Operating current	I_{op}	–	27	60	mA	$P_o=5mW$
Operating voltage	V_{op}	–	1.5	2.3	V	$P_o=5mW$
Differential efficiency	η	0.2	0.55	0.8	mW/mA	$2mW/(I(5mW)-I(3mW))$
Monitor current	I_m	0.1	0.25	0.5	mA	$P_o=5mW$
Parallel divergenc angle	$\theta_{//}$	7	9	15	deg	$P_o=5mW$
Perpendicular divergenc angle	θ_{\perp}	25	32	39	deg	$P_o=5mW$
Parallel deviation angle	$\Delta\theta_{//}$	-2	0	2	deg	$P_o=5mW$
Perpendicular deviation angle	$\Delta\theta_{\perp}$	-3	0	3	deg	$P_o=5mW$
Emission point accuracy	ΔX ΔY ΔZ	-100	0	100	μm	–
Peak emission wavelength	λ	770	782	810	nm	$P_o=5mW$
Astigmatism	A_s	–	–	10	μm	$P_o=5mW, NA=0.45$

Common

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Emission point distance	–	107	110	113	μm	–

●Electrical and optical characteristics curves (Tc=25°C)

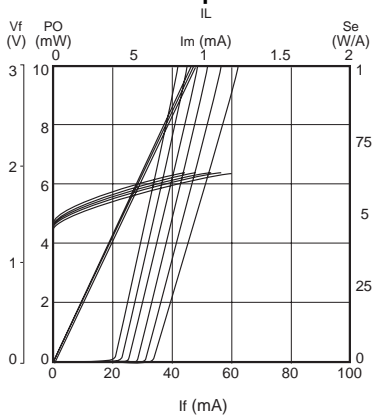


Fig.1 785nm Optical output vs. operating current

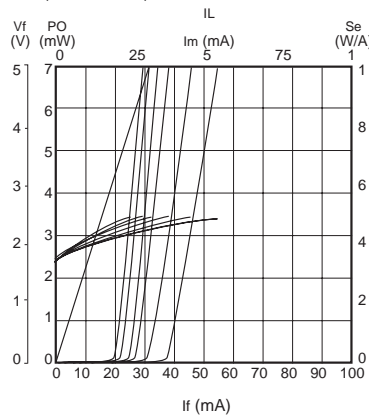


Fig.2 655nm Optical output vs. operating current

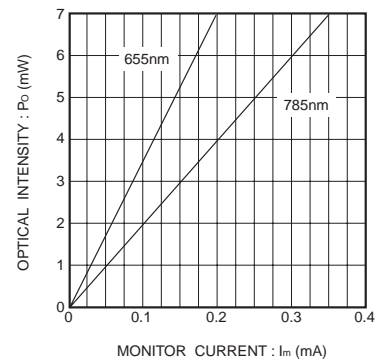


Fig.3 Monitor current vs. optical output

Notes

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