

660nm / 780nm Dual Wave Low Power Lasers

RLD2WMUV2

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

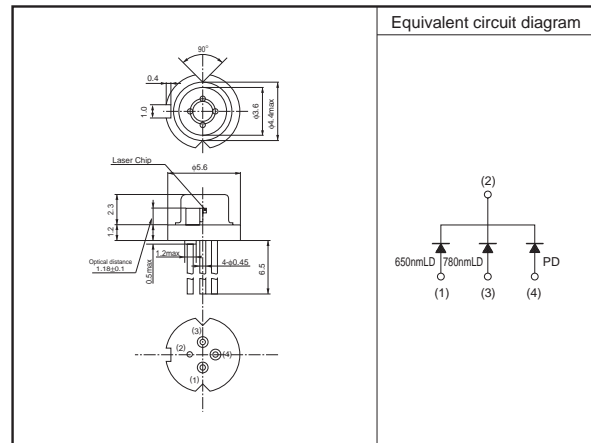
●Applications

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

●Dimensions (Unit : mm)



●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 +70	°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 +70	°C
Storage temperature	T _{stg}	-40 to +85	°C

Laser Diodes

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

660nm

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold current	I _{th}	–	20	50	mA	–
Operating current	I _{op}	–	28	60	mA	P _O =5mW
Operating voltage	V _{op}	–	2.3	2.7	V	P _O =5mW
Differential efficiency	η	0.4	0.7	1.0	mW/mA	2mW/(I(5mW)–I(3mW))
Monitor current	I _m	0.1	0.14	0.5	mA	P _O =5mW
Parallel divergence angle	θ _{//}	7	8	10	deg	P _O =5mW
Perpendicular divergence angle	θ _⊥	20	27	35	deg	P _O =5mW
Parallel deviation angle	Δθ _{//}	–2	0	2	deg	P _O =5mW
Perpendicular deviation angle	Δθ _⊥	–3	0	3	deg	P _O =5mW
Peak emission wavelength	λ	645	655	662	nm	P _O =5mW
Astigmatism	As	–	–	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}	–	30	60	mA	P _O =5mW
Operating voltage	V _{op}	–	1.9	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 divergence angle	θ _{//}	7	10	15	deg	P _O =5mW
Perpendicular divergence angle	θ _⊥	25	32	39	deg	P _O =5mW
Parallel deviation angle	Δθ _{//}	–2	0	2	deg	P _O =5mW
Perpendicular deviation angle	Δθ _⊥	–3	0	3	deg	P _O =5mW
Emission point accuracy	ΔX ΔY ΔZ	–100	0	100	μm	–
Peak emission wavelength	λ	770	785	810	nm	P _O =5mW
Astigmatism	As	–	–	10	μm	P _O =5mW, NA=0.45

Common

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

Laser Diodes

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

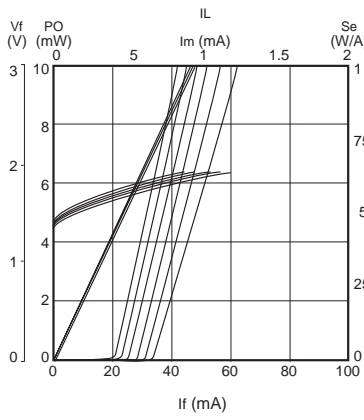


Fig.1 785nm Optical output vs. operating current

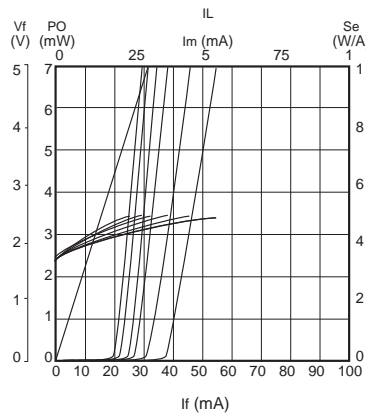


Fig.2 655nm Optical output vs. operating current

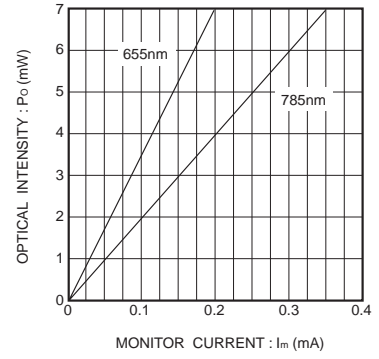


Fig.3 Monitor current vs. optical output

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