

660nm / 780nm Dual Wave High Power Laser

RLD2WMGU1

Stable optical output power and high break-down resistance by original die structure. Compact package suitable for small appliances using thin, high heat dissipation frame.

●Applications

DVD recorder (DVD recording / CD play)
Next DVD Recorder / writer
etc.

●Features

- 1) DVD / CD (Optical output) : Pulse 300mW / Pulse 350mW
- 2) Single mode
- 3) High break-down resistance by original die structure
- 4) Thin, high heat dissipation frame

●Absolute maximum ratings (Tc=25°C)

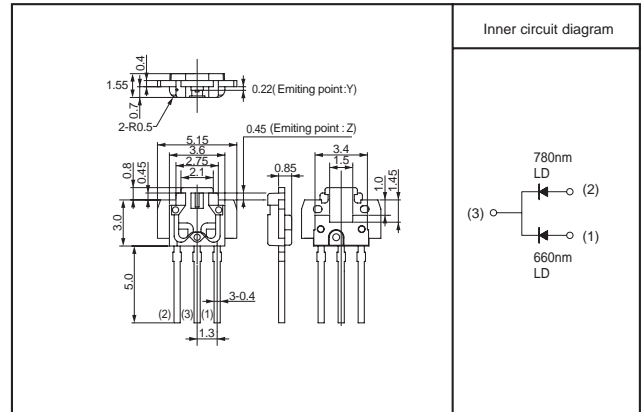
660nm

Parameter	Symbol	Limits	Unit	
Optical output	P _o	Pulse 300	mW	
Reverse voltage	Laser	V _R	2	V
	Photodiode	V _R (PIN)	—	—
Operating temperature	T _{op}	-10 to +85	°C	
Storage temperature	T _{stg}	-40 to +85	°C	

780nm

Parameter	Symbol	Limits	Unit	
Optical output	P _o	Pulse 350	mW	
Reverse voltage	Laser	V _R	2	V
	Photodiode	V _R (PIN)	—	V
Operating temperature	T _{op}	-10 to +90	°C	
Storage temperature	T _{stg}	-40 to +90	°C	

●Dimensions (Unit : mm)



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

660nm

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold current	I_{th}	–	60	75	mA	–
Operating current	I_{op}	–	160	225	mA	P _o =100mW, CW
Operating voltage	V_{op}	–	2.8	3.3	V	P _o =100mW, CW
Differential efficiency	η	0.7	0.9	1.3	mW/mA	50mW/ (I (100mW)– I (50mW))
Parallel divergences angle	$\theta_{//}$	7.5	9.5	11.5	deg	P _o =5 to 100mW, CW
Perpendicular divergence angle	θ_{\perp}	13	17.5	18.5	deg	
Parallel deviation angle	$\Delta\phi_{//}$	–3	0	3	deg	
Perpendicular deviation angle	$\Delta\phi_{\perp}$	–3	0	3	deg	
Peak emission wavelength	λ	658	662	666	nm	P _o =100mW, CW
Astigmatism	As	–	–	6	μ m	P _o =5mW, CW

780nm

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold current	I_{th}	–	55	80	mA	–
Operating current	I_{op}	–	195	250	mA	P _o =120mW, CW
Operating voltage	V_{op}	–	2.5	2.7	V	P _o =120mW, CW
Differential efficiency	η	0.7	0.85	1.25	mW/mA	50mW/ (I (120mW) – I (70mW))
Parallel divergences angle	$\theta_{//}$	6.5	8.5	10.5	deg	P _o =5 to 120mW, CW
Perpendicular divergence angle	θ_{\perp}	13	16	18	deg	
Parallel deviation angle	$\Delta\phi_{//}$	–3	0	3	deg	
Perpendicular deviation angle	$\Delta\phi_{\perp}$	–3	0	3	deg	
Peak emission wavelength	λ	777	785	791	nm	P _o =120mW, CW
Astigmatism	As	–	–	6	μ m	P _o =5mW, CW

[Common]

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Emission point distance	–	109	110	111	μ m	–
Emission point accuracy	$\Delta X, \Delta Y, \Delta Z$	–80	0	80	μ m	–

Notes

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