

No.	Component	Material	Finish
①	Laser Diode Chip	InAlGaN	-
②	Stem	Fe	Gold-plated
③	Cap	Fe	Nickel plated
④	Lead pins	Kovar	Gold-plated

3. Ratings and Characteristics

3-1 Absolute Maximum Ratings

(Tc=25°C (Note 1))

Parameter	Symbol	Value	Unit
Optical power output (CW)	Po	35	mW
Reverse voltage	Vr1	2	V
Operating temperature (Case temperature)	Top(c)	-10 ~ +60	°C
Storage temperature	Tstg	-40 ~ +85	°C
Soldering temperature (Note 2)	Tsld	350	°C

(Note 1) Tc : Case temperature (Tc measurement point is refer to P3 drawing.)

(Note 2) Soldering temperature means soldering iron tip temperature while soldering.

Soldering position is 1.6mm apart from bottom edge of the case. (Immersion time: ≤3s)

3-2 Electro-optical Characteristics

(Tc=25°C (Note 1))

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Threshold current	Ith	—	—	25	50	mA
Operating current	Iop	Po=30mW	—	75	105	mA
Operating voltage	Vop		—	6.2	7	V
Wavelength (Note 6)	λ_p		510	518	530	nm
Half Intensity Angle (Parallel) (Note 2, 3)	θ_{\parallel}		5	7.5	10	°
Half Intensity Angle (Perpendicular) (Note 2, 3)	θ_{\perp}		19	22	25	°
Ripple (Note 3, 4)	R12		—	—	30	%
Misalignment angle (Parallel) (Note 3)	$\Delta \theta_{\parallel}$		-5	0	5	°
Misalignment angle (Perpendicular) (Note 3)	$\Delta \theta_{\perp}$		-5	0	5	°
Differential efficiency	η_d	$\frac{20\text{mW}}{I(30\text{mW}) - I(10\text{mW})}$	0.35	0.60	—	mW/mA

(Note 1) Initial value, Continuous Wave Operation

(Note 2) Angle of 50% peak intensity (Full angle at half-maximum)

(Note 3) Parallel to the junction plane(X-Z plane)

Perpendicular to the junction plane(Y-Z plane)

(Note 4) $R12 = \Delta P / P$ ΔP : the maximum deviation of the far field pattern from its approximate curve

P: the peak of the approximate curve

- Approximate curve is calculated from the measuring data within the center area at 40% peak value.

- ΔP is calculated on the area within the center area at 25% peak value.

