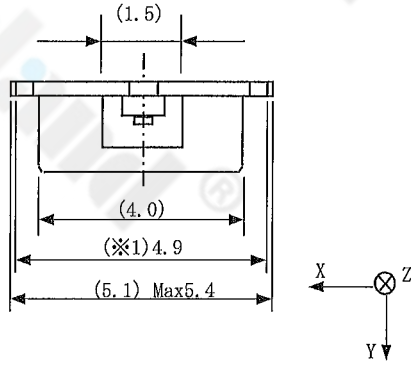
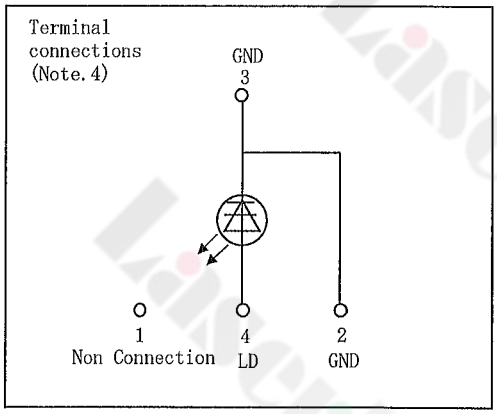
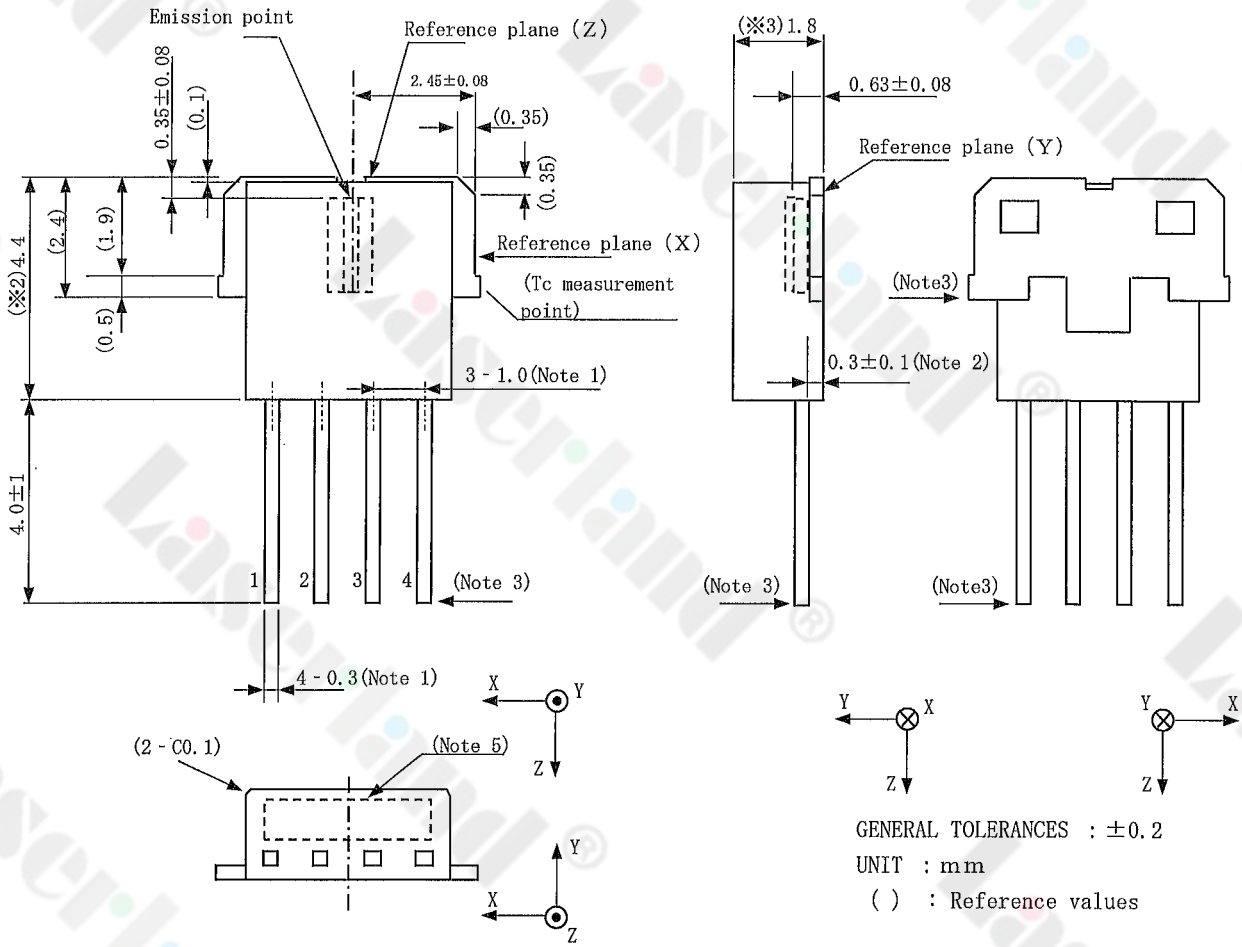
2. Outline dimensions and Terminal connections



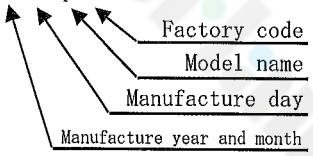




GENERAL TOLERANCES : ±0.2
UNIT : mm
( ) : Reference values

Note 1) Dimension of the bottom of lead pins.
Note 2) 0.3±0.1(mm) thickness lead frame board is used.
Note 3) Cutting section of lead frame is no Ag plating.
Avoid soldering on this section.
Note 4) Please don't connect the lead pin No.1
to the driving circuit.
Note 5) Marking area

Marking
Position : Bottom side (Note 5)
Printed contents : □ □ p □



Component	Material	Finish
Laser Diode Chip	InAlGaN	-
Lead frame	Cu alloy	Ag plated
Resin (Body & cap)	LCP	-

3. Ratings and Characteristics

3-1 Absolute Maximum Ratings (Tc=25℃(Note 1))

Parameter		Symbol	Value	Unit
Optical power output	CW	Po	55	mW
Reverse voltage	Laser diode	Vrl	2	V
Operating temperature	CW Operation(Note 2)	Topc(c)	-10 ～ +60	℃
Storage temperature		Tstg	-40 ～ +85	℃
Soldering temperature (Note 3)		Tsld	350	℃

(Note 1) Tc : Case temperature (Frame heat radiation part temperature)
(Note 2) CW Operation : Continuous Wave Operation
(Note 3) Soldering temperature means soldering iron tip temperature while soldering.
(The Power of soldering iron must be 50W or below.)
Soldering position is 2mm apart from bottom edge of the case.(Immersion time: 5s)

3-2 Electro-optical Characteristics of laser diode (Note 1) (Tc=25℃)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Threshold current	Ith	-	-	40	70	mA
Operating current	Iop	Po=50mW	-	110	150	mA
Operating voltage	Vop		-	5.9	7.5	V
Wavelength	λp		515	520	530	nm
Half Intensity Angle(Parallel) (Note 2,3)	θ //		4.5	7	9.5	°
Half Intensity Angle(Perpendicular) (Note2,3)	θ ⊥		19	22	25	°
Beam Tilt Angle (Parallel) (Note 3)	Δθ //		-3	-	3	°
Beam Tilt Angle (Perpendicular) (Note 3)	Δθ ⊥		-3	-	3	°
Ripple (Note 4)	R12		-	-	30	%
Differential efficiency	ηd	$\frac{40mW}{I(50mW)-I(10mW)}$	0.45	0.70	-	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=ΔP/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.