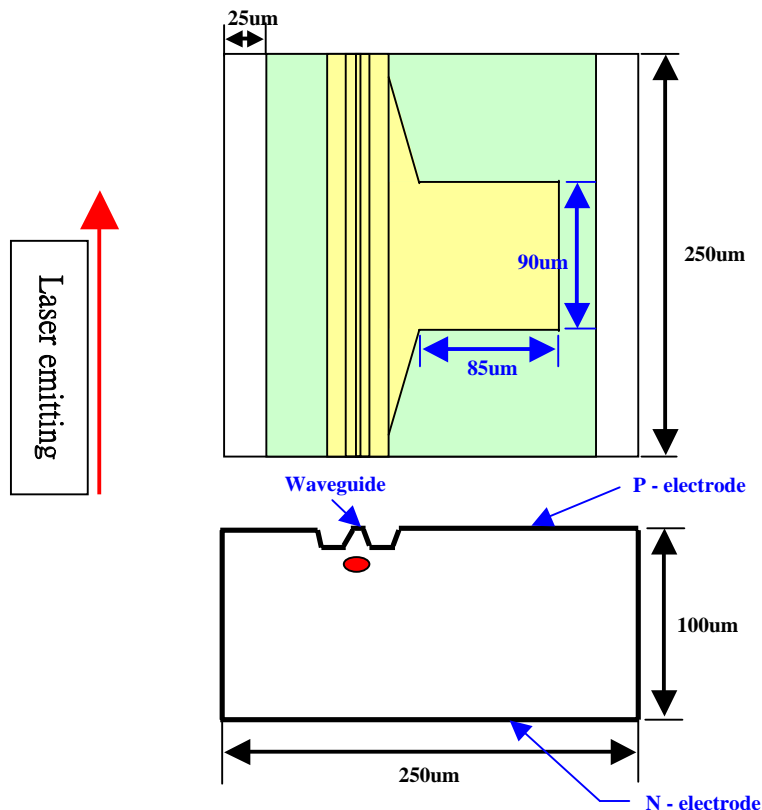


1310nm Laser Diode Chips**U-CP-130504**

■ Specifications

- (1) Size : 250*250*100 μ m
 (2) Device: 1.25G Laser diode bare chip
 (3) Structure: Double channel , single ridge waveguide

■ External dimensions(Unit : μ m)

Anode bonding pad locate on the right side to the emitting direction.

Chip size: Length 250(240~270)*Width 250(240~260)*Thickness 100(90~110) μ m

Maximum Ratings ($T_c = 25^\circ\text{C}$)

Characteristic	Symbol	Rating	Unit
Optical Output Power	P_o	9	mW
LD Reverse Voltage	V_r (LD)	2	V
Operation Temperature	T_{op}	-40 ~ +85	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40 ~ +100	$^\circ\text{C}$

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Optical-electrical characteristics ($T_c = 25^\circ\text{C}$)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit	
Threshold Current	I_{th}	$T_c = 25^\circ\text{C}$	-	10	15	mA	
Operation Voltage	V_f	$T_c = -40 \sim +85^\circ\text{C}$	-	1.3	1.6	V	
Slope Efficiency	SE	$P_o = 1 \text{ to } 5\text{mW}$	0.38	0.41	-	mW/mA	
Lasing Wavelength	λ	$P_o = 5\text{mW}$	1290	1310	1330	nm	
Spectral Width	$\Delta\lambda$	$P_o = 5\text{mW}$	-	1.8	3	nm	
Rise Time	τ_r	$P_o = 5\text{mW}, 20\text{-}80\%$	-	-	150	ps	
Fall Time	τ_f	$P_o = 5\text{mW}, 20\text{-}80\%$	-	-	150	ps	
Beam Divergence (FWHM)	Parallel	$\theta //$	$P_o = 5\text{mW}$	-	18	-	deg.
	Perpendicular	$\theta \perp$	$P_o = 5\text{mW}$	-	35	-	deg.

Precautions**QUALITY ASSURANCE**

After any processing of laser chip or laser diode TO-CAN (LD) by the customer, the performance, yield and reliability of the product, in which the chip or LD is applied, are subject to change due to customer's handling, assembly, testing, and processing. Because laser chip and LD are strongly affected by environmental conditions, physical stress, and chemical stresses imposed by customer that are not in Union Optronics Corp. (UOC) control and hence no guarantee on the characteristics and the reliability at all after the shipment. Also, UOC does not have any responsibility for field failures in a customer product. When attaching a heat sink to laser chip or LD, be careful not to apply excessive force to the device in the process.

SAFETY PRECAUTIONS

Although Union Optronics Corp. (UOC) keeps improving quality and reliability of its laser chip and laser diode TO-CAN (LD), semiconductor devices in general can malfunction or fail due to their intrinsic characteristics. Hence, it is required that the customer's products are designed with full regard to safety by incorporating the redundancy, fire prevention, error prevention so that any problems or error with UOC laser chip or LD does not cause any accidents resulting in injury, death, fire, property damage, economic damage, or environmental damage. In case customer wants to use UOC laser chip or LD in the systems requiring high safety, customer is requested to confirm safety of entire systems with customer's own testing.

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

The information provided by Union Optronics Corp. (UOC), including but not limited to technical specifications, recommendations, and application notes relating to laser chip or laser diode TO-CAN (LD) is believed to be reliable and accurate and is subject to change without notice. UOC reserves the right to change its assembly, test, design, form, specification, control, or function without notice.