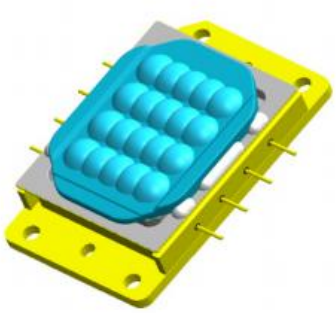

Laser Diode LT-LD-455-117W-A

LT-LD-455-117W-A is a high-efficiency, multi-beam laser diode with 117W CW output power at 455nm.The product features an MCP package and an integrated Zener diode. This laser diode is suitable for a wide range of optoelectronic applications.

■ Absolute Maximum Ratings (T_c=25℃)

Parameter	Symbol	Value	Unit
Forward Current	I_f	3.5	A
Allowable Reverse Current	$I_{r(LD)}$	85	mA
Storage Temperature	T_{stg}	-40～85	℃
Operating Case Temperature	T_m	0～75	℃

■ Initial Electrical/Optical Characteristics (T_c=25℃)

Parameter		Symbol	Condition	Min	Typ.	Max	Unit
Optical Output Power		P_o	I_f = 3.0A	105	117	129	W
Dominant Wavelength		λ_d	I_f = 3.0A	449	(455)	461	nm
Threshold Current		I_{th}	-	220	-	420	mA
Slope Efficiency		η	-	-	43	-	W/A
Operating Voltage		V_{op}	I_f = 3.0A	74	79	84	V
Beam Divergence *	Parallel	θ//	I_f = 3.0A	0.12	0.42	0.72	°
	Perpendicular	θ⊥	I_f = 3.0A	-1.5	0	1.5	°

() are reference figures.

* Full angle at $1/e^2$ from peak intensity (Individual LD chip)

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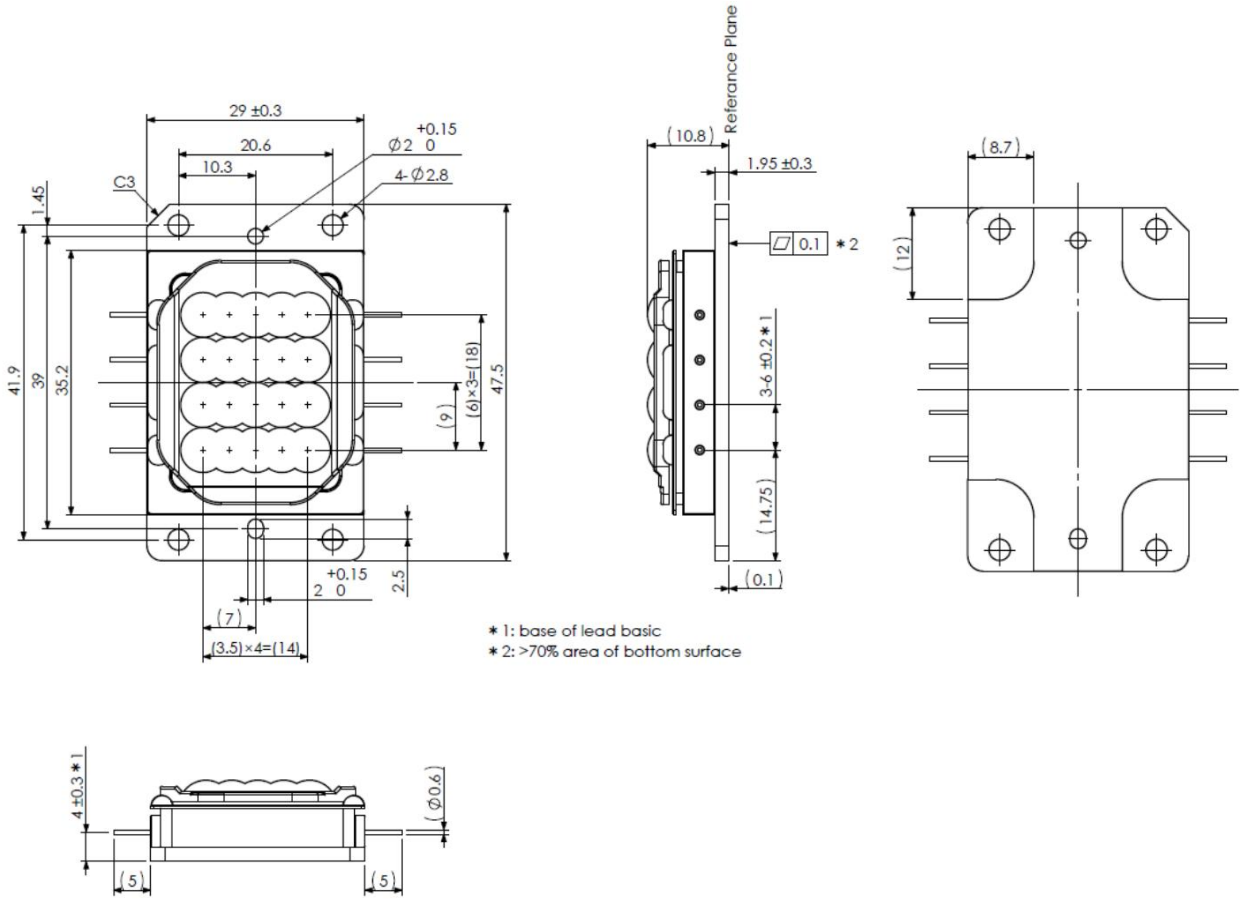
■ Outline Dimension (Unit:mm)



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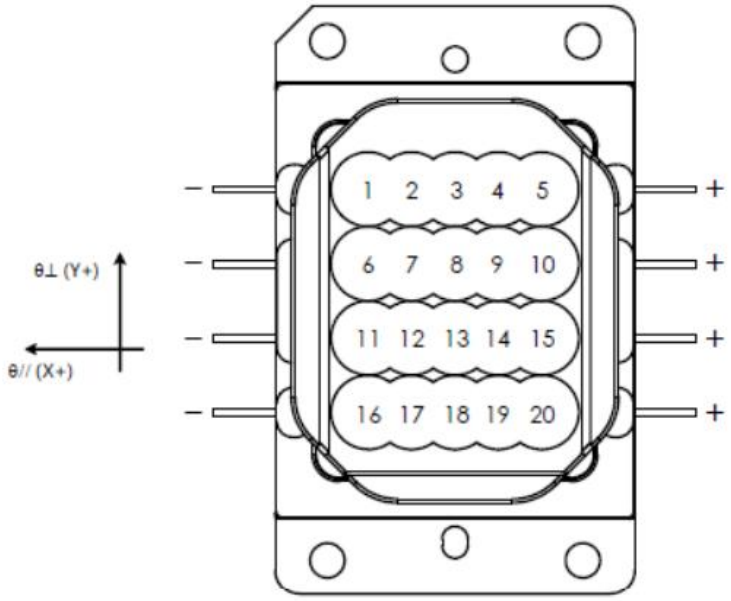
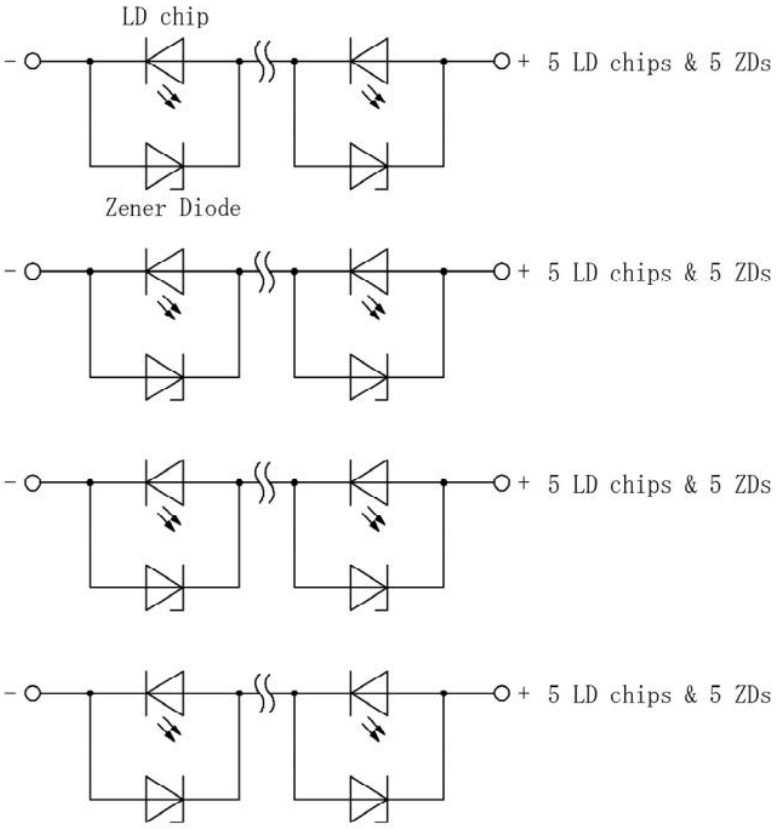
■ LD die Position No.& Pad connection





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■ Cautions

1. Laser light can damage the human eye and skin. Do not expose the eye and skin to any laser light directly or through optical lenses. Focused laser beam through optical instruments will increase the chance of eye hazard.
2. The laser needs a stable driver to avoid surges. The instantaneous reverse current and reverse voltage should not exceed the absolute maximum ratings, otherwise it will damage the laser diode.
3. Semiconductor lasers are sensitive to temperature, working at high temperatures will reduce the photoelectric conversion efficiency and accelerate the aging of laser diode. It should be used under adequate heat dissipation or cooling conditions.
4. The laser should be used at the rated current and rated power, the output power is too high will accelerate the aging of laser diode.
5. Semiconductor lasers are electrostatic sensitive devices, anti-static measures should be taken during storage and transportation.
6. Lasers should be stored or work in a dry, ventilated environment to prevent damage to the laser from condensation.
7. The light emitting surface (cavity surface) is the key parts of the laser diode, any handling to damage the cavity surface should be strictly prohibited. It should be ensured that the laser diode is not contaminated, and damaged in mechanical.

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