TSD-9B40-100

940nm Oxide VCSEL Emitter

ELECTRO-OPTICAL CHARACTERISTICS：

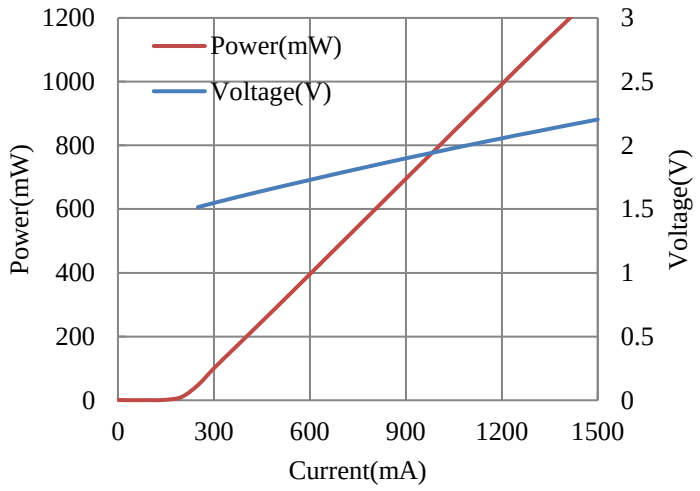
PARAMETERS	SYMBOL	MIN	TYP	MAX	UNIT	CONDITIONS
Threshold Current	I_{th}		0.2		A	
Output Power	P_o	0.85	1	1.15	W	I_F =1.2A
Slope Efficiency	η		0.95		W/A	
Forward Voltage	V_F		2.1	2.3	V	I_F =1.2A
Conversion efficiency	PCE		40		%	I_F =1.2A
Wavelength	λ_P	930	940	950	nm	I_F =1.2A
Wavelength Shift			0.07		nm/℃	
Beam Divergence	θ		27		degree	I_F =1.2A ($1/e^2$)

Notes:
All parameters except mentioned are measured at 25℃, Pulse operation(pulse width = 0.3ms / duty cycle = 1%).

ABSOLUTE MAXIMUM RATINGS：

PARAMETERS	MIN	MAX	UNIT	CONDITIONS
Storage Temperature	-40	100	℃	
Operating Temperature	0	65	℃	
Peak Operation Current		2	A	pulse width = 0.3ms / duty cycle = 1%
Solder Reflow Temperature		260	℃	max 10 seconds

ELECTRO-OPTICAL CHARACTERIZATION：



Typical electro / optical characteristics curves measured at 25℃, pulse width = 0.3ms / duty cycle = 1%

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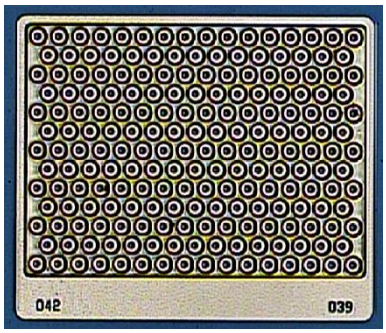
OUTLINE DIAGRAM：

- Chip length：798 μm ± 10 μm
- Chip width：668 μm ± 10 μm
- Chip thickness：120 ± 15 μm
- Anode bond pad：560 x 90 um ± 5 μm
- Emission area：480 μm x 690 μm
- Number of apertures：202



WARNING：

The VCSEL is a class 3B laser in the safety standard IEC60825-1:2014 and should be treated to avoid exposure to beam.