

940nm Multi-Mode VCSEL ARRAY

- QC94V-S-024
- 940nm 150mW (24 emitters)

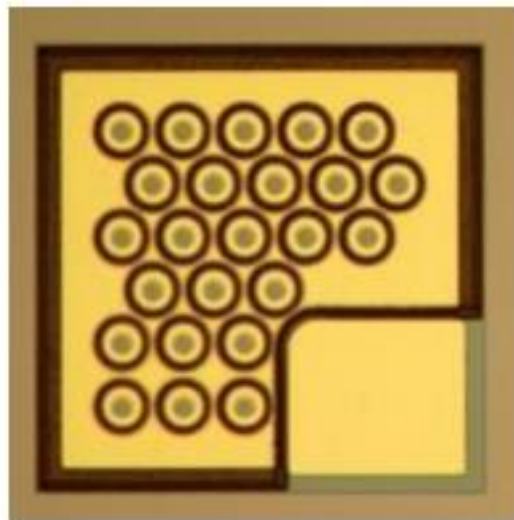
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• Application

- 3D sensing
- Proximity sensing
- Auto Focus

• Features

- High Efficiency and reliability



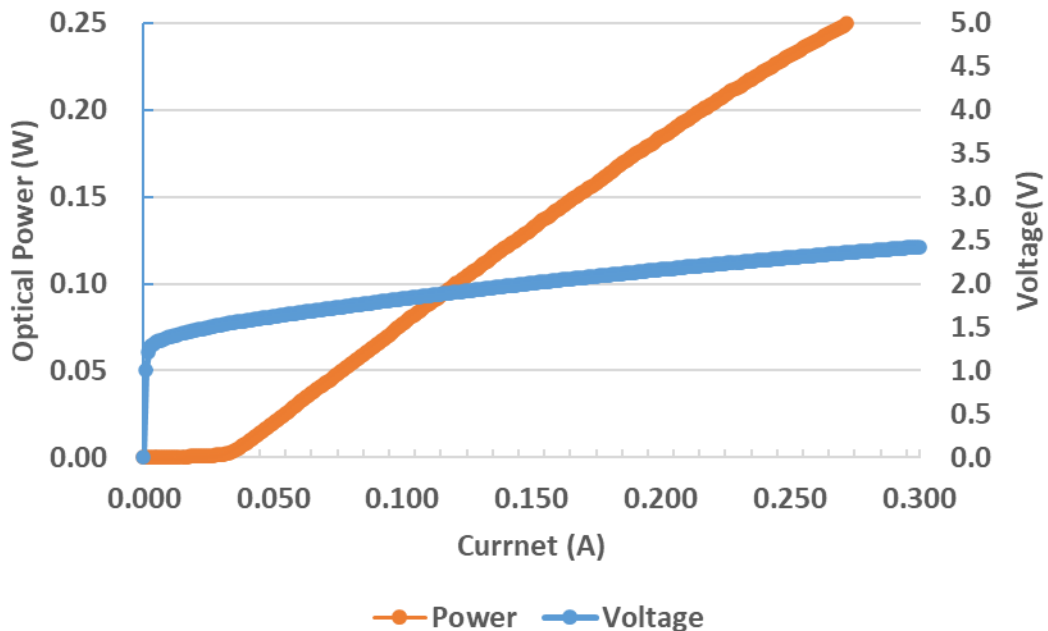
940nm Multi-Mode VCSEL Array



1. ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

Item	Symbol	Min	Typ	Max	Unit	Condition
Optical Output Power	P_{op}	100	130	-	mW	CW 150mA 25°C
Threshold Current	I_{th}	-	18	25	mA	CW 25°C
Operating Current	I_{op}	-	150	-	mA	CW 25°C
Operating Voltage	V_{op}	-	1.9	2.2	V	CW 150mA 25°C
Slope Efficiency	η_s	0.85	0.95	-	W/A	CW 150mA 25°C
Power conversion Efficiency	PCE	42	47	-	%	CW 150mA 25°C
Wavelength	λ_{peak}	930	940	950	nm	CW 150mA 25°C
Beam Full Divergence	ϕ	20	24	28	deg	CW 150mA 25°C
Wavelength coefficient	$d\lambda/dT$		0.07		nm/°C	CW 150mA

2. Typical Performance Curves at 25 °C



3. Mechanical Characteristics

Parameter	Ratings	units
Number of emitters	24	#
Emitter pitch(x)	42	μm
Emitter pitch(y)	52	μm
Chip Width	330 ± 15	μm
Chip Length	330 ± 15	μm
Chip Height	150 ± 10	μm
Anode Contact	Emission side, Au surface	
Anode bonding pad	120×104	$\mu\text{m} \times \mu\text{m}$
Cathode Contact	Back side, Au surface	

