

# QC94V-S-594

- 940nm 4W VCSEL ARRAY

JAN. 2024 (Ver. 0)

## • Application

- 3D sensing
- Proximity sensing
- Auto Focus
- IR illuminations
- Medical applications
- Industrial application

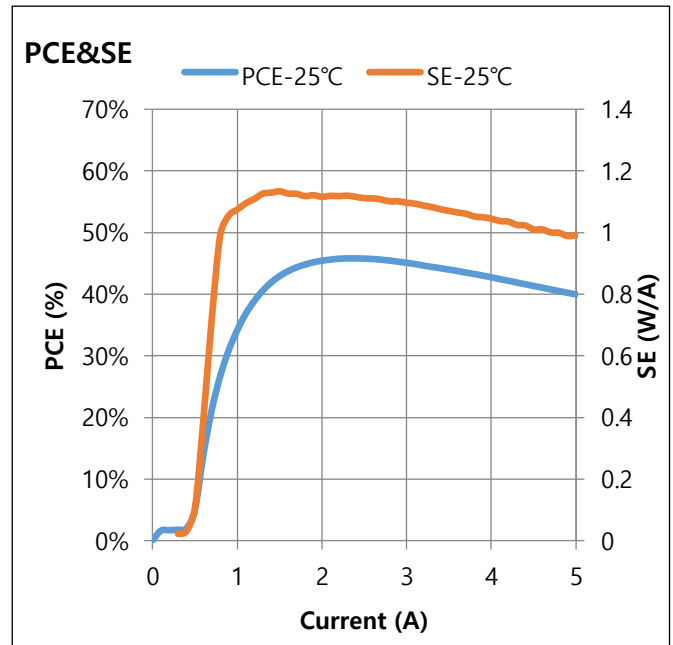
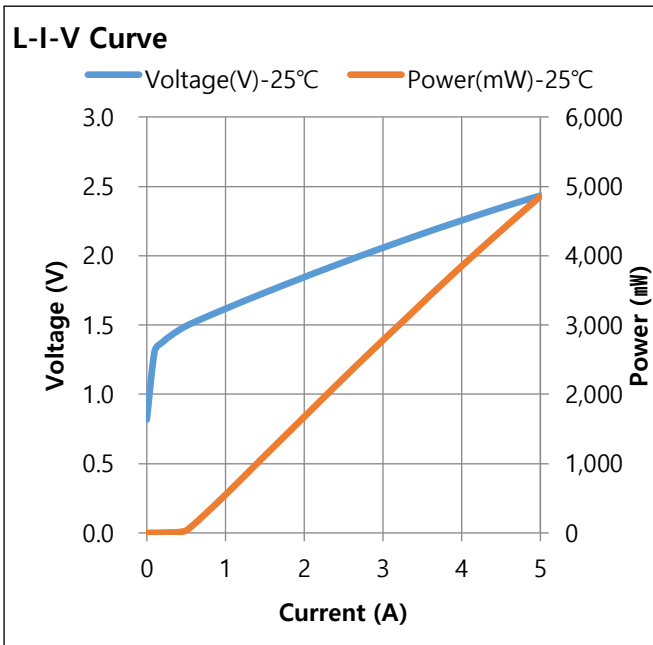
## • Features

- 940nm single wavelength
- Low wavelength drift
- Oxide isolation technology
- Low threshold current
- Small emission area
- High Efficiency and reliability

## 1. ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C , pulse width 0.5us, duty cycle 2%

Item	Symbol	Min	Typ	Max	Unit	Condition
Optical Output Power	$P_{op}$	3600	4000	-	mW	Pulse 4A 25°C
Threshold Current	$I_{th}$	300	500	800	mA	Pulse 4A 25°C
Operating Current	$I_{op}$	-	4.0	-	A	Pulse 25°C
Operating Voltage	$V_{op}$	1.9	2.3	2.5	V	Pulse 4A 25°C
Slope Efficiency	$\eta_s$	0.9	1.1	-	W/A	Pulse 4A 25°C
Power conversion Efficiency	PCE	37	42	-	%	Pulse 4A 25°C
Wavelength	$\lambda_{peak}$	930	940	950	nm	Pulse 4A 25°C
Wavelength coefficient	$d\lambda/dT$		0.07		nm/°C	Pulse

## 2. Typical Performance Curves (@25°C)



### 3. Mechanical Dimensions and Schematics

Parameter	Rating	Units
Number of emitters	594	#
Chip Width	890	$\mu\text{m}$
Chip Length	980	$\mu\text{m}$
Die Thickness	$110 \pm 10$	$\mu\text{m}$

