

940nm Multi-Mode VCSEL ARRAY

- QC94V-S-001
- 940nm 9mW (1 emitter)

JAN. 2024 (Ver. 0)

• Application

- 3D sensing
- Proximity sensing
- Auto Focus

• Features

- High Efficiency and reliability



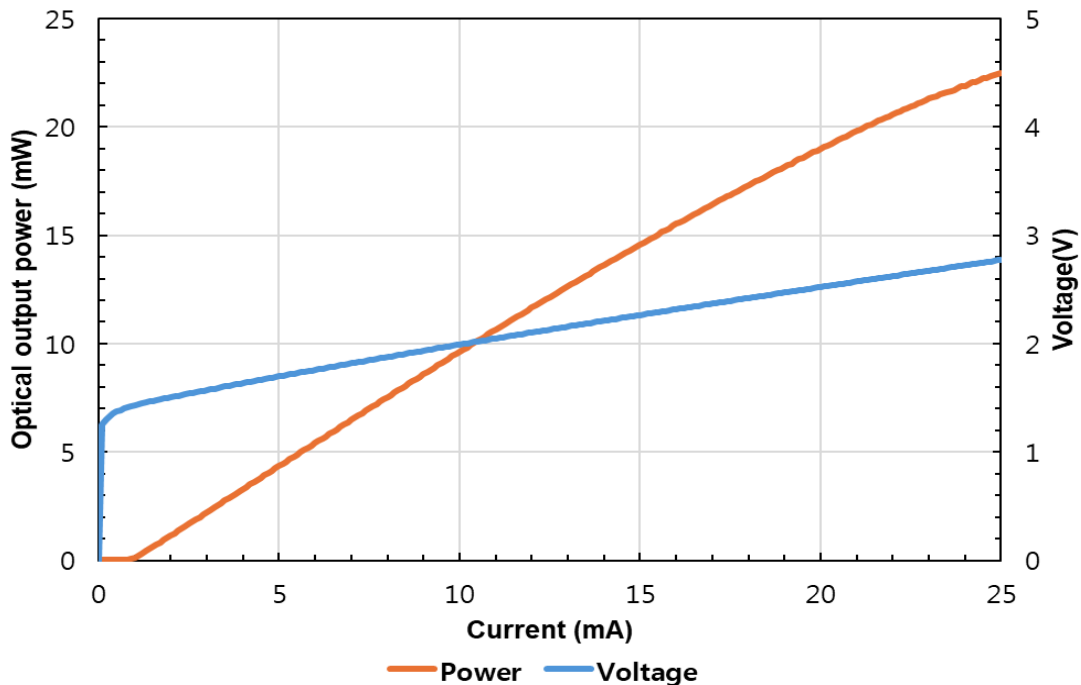
940nm Multi-Mode VCSEL Array



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

| Item | Symbol | Min | Typ | Max | Unit | Condition |
|-----------------------------|------------------|-----|------|-----|-------|-------------|
| Optical Output Power | P_{op} | 7 | 9 | - | mW | CW 9mA 25°C |
| Threshold Current | I_{th} | - | 1 | 2 | mA | CW 25°C |
| Operating Current | I_{op} | - | 9 | - | mA | CW 25°C |
| Operating Voltage | V_{op} | - | 1.9 | 2.2 | V | CW 9mA 25°C |
| Power conversion Efficiency | PCE | 45 | 50 | - | % | CW 9mA 25°C |
| Wavelength | λ_{peak} | 930 | 940 | 950 | nm | CW 9mA 25°C |
| Beam Full Divergence | ϕ | 20 | 24 | 28 | deg | CW 9mA 25°C |
| Wavelength coefficient | $d\lambda/dT$ | | 0.07 | | nm/°C | CW 9mA |

2. Typical Performance Curves at 25 °C



3. Mechanical Characteristics

| Parameter | Ratings | units |
|--------------------|---------------------------|----------------------------------|
| Number of emitters | 1 | # |
| Chip Width | 175 ± 20 | μm |
| Chip Length | 175 ± 20 | μm |
| Chip Height | 100 ± 25 | μm |
| Anode Contact | Emission side, Au surface | |
| Anode bonding pad | 85×92 | $\mu\text{m} \times \mu\text{m}$ |
| Cathode Contact | Back side, Au surface | |

