

850nm Multi-Mode VCSEL ARRAY

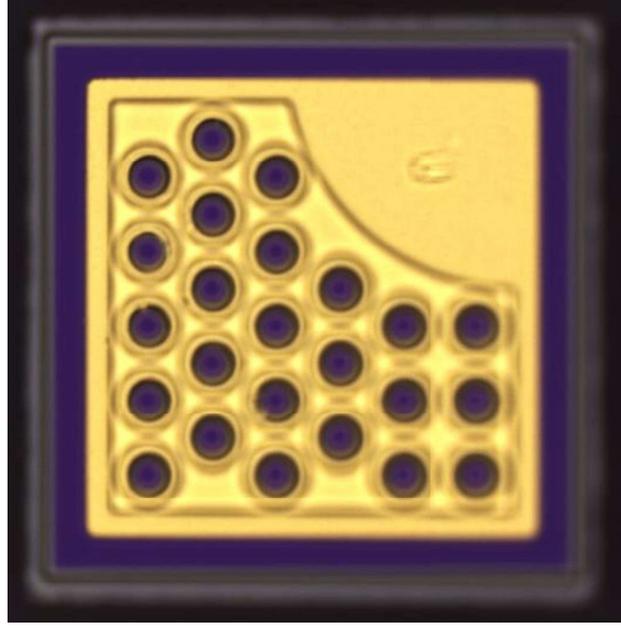
- QC85V-S-024
 - 850nm 130mW (24 emitters)
- MAR. 2025 (Ver. 0)

• Application

- 3D sensor
- Proximity sensor
- IR illuminations
- Medical applications
- Range finder sensor

• Features

- High Efficiency and reliability



850nm 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}	120	130	140	mW	CW 185mA 25°C
Threshold Current	I_{th}	16	21	26	mA	25°C
Operating Current	I_{op}	-	185	-	mA	25°C
Operating Voltage	V_{op}	1.8	2.0	2.2	V	CW 185mA 25°C
Slope Efficiency	η_s	0.65	0.70	0.75	W/A	CW 185mA 25°C
Power conversion Efficiency	PCE	30	35	-	%	CW 185mA 25°C
Wavelength	λ_{peak}	840	850	860	nm	CW 185mA 25°C
Beam Full Divergence	Φ	-	-	-	deg	CW 185mA 25°C

2. Mechanical Characteristics

Parameter	Ratings	units
Number of emitters	24	#
Emitter pitch(x)	42	μm
Emitter pitch(y)	42	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	135 x 135(Quarter)	$\mu\text{m} \times \mu\text{m}$
Cathode Contact	Back side, Au surface	