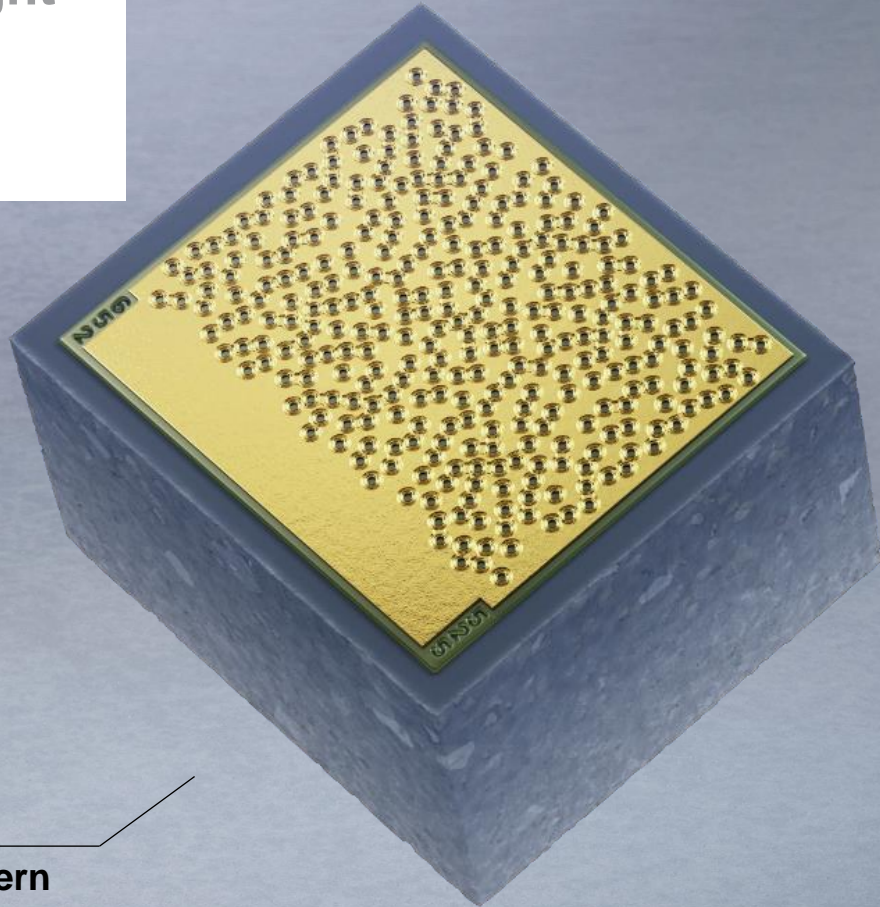


VCSEL

Structured Light
940 nm
2.25 W



Random Pattern
317 Emitters

TRUMPF Proprietary
VCSEL Technology

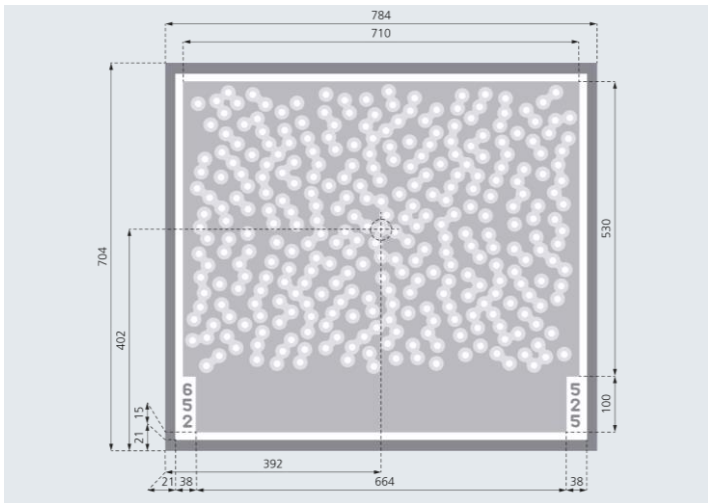
Structured Light

Datasheet: 940 nm 2.25 W Structured Light VCSEL Array

Electro-Optical Characteristics (T = 25°C, 200 μs pulse width, 10% duty cycle, I = 2.5 A, unless stated otherwise)

Parameter	Units	Min.	Typ.	Max.	Notes
Operating current	A		2.5		Peak forward drive current
Threshold current	mA	150	260	450	Calculated from LIV
Forward voltage	V	2.30	2.65	2.80	Peak forward voltage
Optical output power	W	2.00	2.25		Peak optical output power
Slope efficiency	W/A	0.8	1.0	1.2	Calculated from LIV
Power conversion efficiency	%	30	35		Calculated at operating point
Center wavelength	nm	930	940	950	
Thermal wavelength coefficient	nm/°K		0.07		
Spectral linewidth	nm		2.5	3.0	Full width 1/e ²
Dead emitter count	#		0	1	
Near field uniformity	%		3		Standard deviation of emitter power / mean emitter power
Beam divergence	Deg	18	20	24	Full width 1/e ²

Dimensions



Type	Single chip
Part number	TVT-001-940-B
Ordering number	
Dimensions	784 x 704 x 100 μm

For more information visit
www.trumpf.com/s/VCSEL-solutions

Safety information:

- Invisible laser radiation / avoid beam exposure / class 4 laser product
- Electrostatic sensitive devices / observe precautions for handling

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