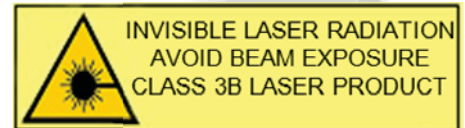


Single-mode & Polarization-stable VCSEL

850 nm, TO46, 2.0 mW

- Single-mode
- Ideal circular Gaussian beam
- Stable polarization
- Built-in ESD protection structure



PRELIMINARY

ELECTRO-OPTICAL CHARACTERISTICS

T=20°C unless otherwise stated

PARAMETER	SYMBOL	UNITS	MIN	TYP	MAX	TEST CONDITIONS
Emission wavelength	λ_R	nm	830		870	$P_{OP} = 2.0 \text{ mW}$
Threshold current	I_{TH}	mA			2	
Laser current	I_{OP}	mA			6	$P_{opt} = 2.0 \text{ mW}$
Laser voltage	U_{OP}	V			2.6	$P_{opt} = 2.0 \text{ mW}$
Slope efficiency	η_S	W/A	0.5		1	
Output power	P_{opt}	mW	2	2.5		$I_{OP} = 6.0 \text{ mA}$
Differential series resistance	R_S	Ω	50		200	$P_{opt} = 2.0 \text{ mW}$
Thermal resistance (VCSEL chip)	$R_{thermal}$	K/mW	2		4	
Beam divergence	θ	°	10		20	$P_{opt} = 2.0 \text{ mW}$, full width $1/e^2$
Side mode suppression ratio	SMSR	dB	10			$P_{opt} = 2.0 \text{ mW}$
ESD damage threshold		V	2000			human body model
Wavelength tuning over temperature		nm/K		0.06		

NOTICE: Stresses greater than those listed under „Absolute Maximum Ratings“ may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other condition beyond those indicated for extended periods of time may effect device reliability.

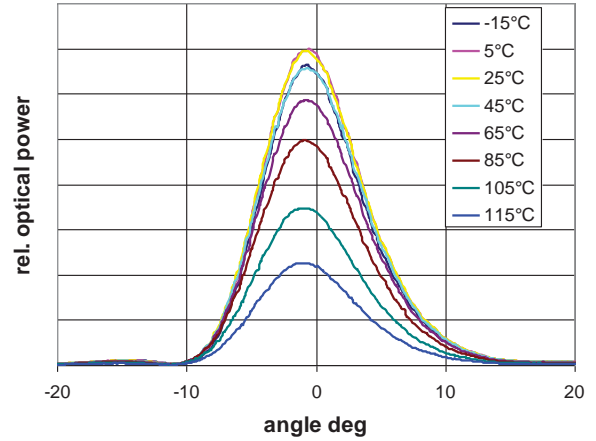
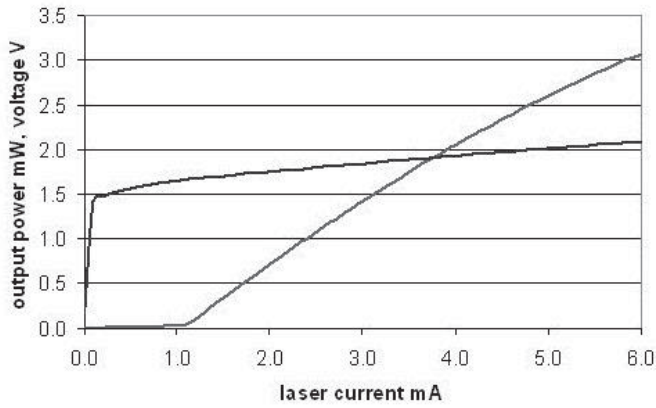


ATTENTION: Electrostatic Sensitive Devices
Observe Precautions for Handling

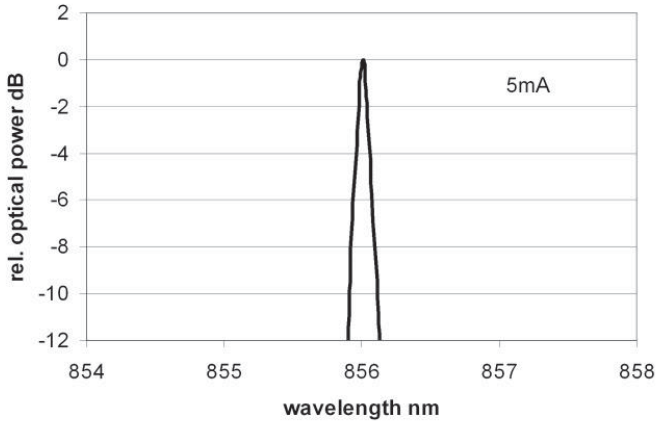
Absolute Maximum Ratings

Storage temperature	-40 ... 125°C
Operating temperature	-40 ... 85°C
Electrical power dissipation	20 mW
Continuous forward laser current	8 mA
Continuous reverse current	10 mA
Soldering temperature	330°C

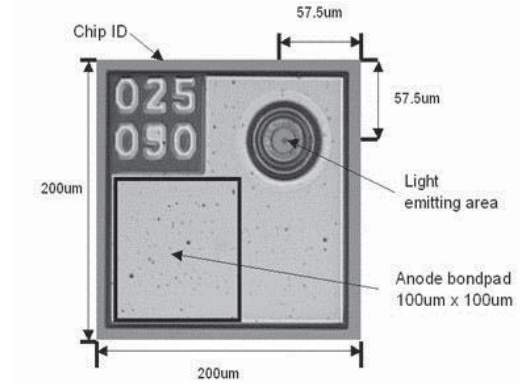
Electro-optical characteristics



Spectral characteristics

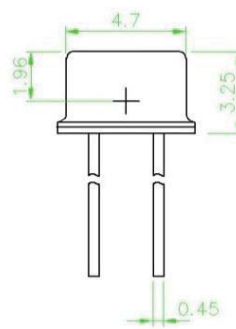


Die dimensions

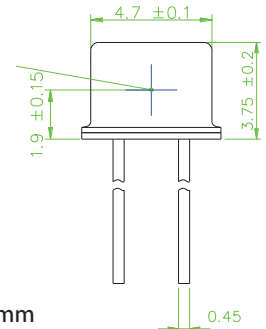


TO dimensions

without glass window



flat glass window

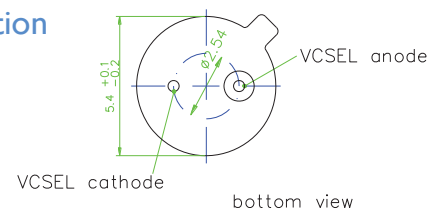


Unit: mm

For order please use:

Type	Description
ULM850-B2-PL-S010IU	850nm SM bare die
ULM850-B2-PL-S46XZP	850nm SM TO46 no glass
ULM850-B2-PL-S46FZP	850nm SM TO46 flat glass

Pin configuration



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