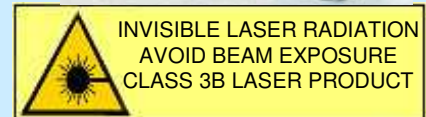


Single mode & polarization VCSEL 850nm, TO46, 2.0mW

- ◆ Single-mode & single-polarization
- ◆ 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	$P_{OP}=2.0$ mW
Threshold current	I_{TH}	mA			2.0	
Laser current	I_{OP}	mA			6.0	$P_{opt}=2.0$ mW
Laser voltage	U_{OP}	V			2.6	$P_{opt}=2.0$ mW
Slope efficiency	η_S	W/A	0.5		1.0	
Output power	P_{opt}	mW	2.0	2.5		$I_{OP}=6.0$ mA
Differential series resistance	R_S	Ω	50		200	$P_{opt}=2.0$ mW
Thermal resistance (VCSEL chip)	$R_{thermal}$	K/mW	2		4	
Beam divergence	θ	°	10		20	$P_{opt}=2.0$ mW, full width 1/e ²
Side mode suppression ratio	SMSR	dB	10			$P_{opt}=2.0$ mW
ESD damage threshold		V	2000			human body model
Wavelength tuning over temperature		nm/K		0.06		

NOTE: Polarization control by optical design

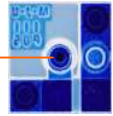
ABSOLUTE MAXIMUM RATINGS

Storage temperature	-40 .. 125 °C
Operating temperature	-40 .. 85 °C
Electrical power dissipation	20 mW
Continuous forward laser current	8.0 mA
Laser reverse voltage	8V
Soldering temperature	330 °C

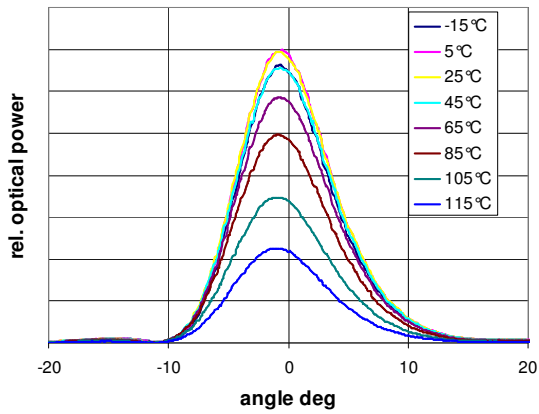
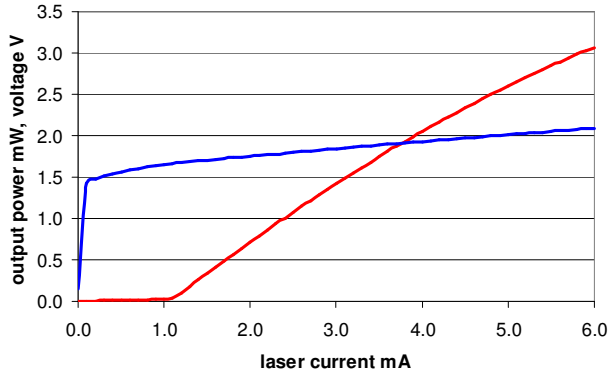
NOTICE: Stresses greater than those listed under „Absolute Maximum Ratings“ may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other condition beyond those indicated for extended periods of time may effect device reliability.



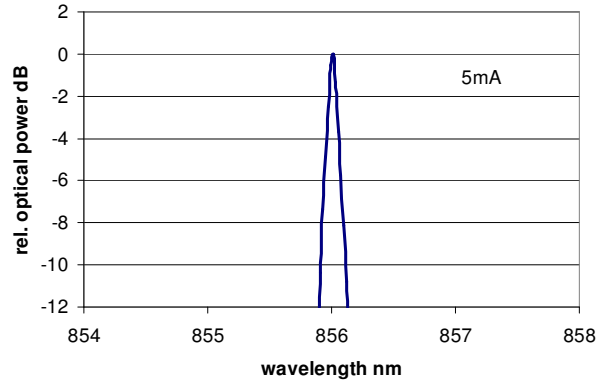
ATTENTION: Electrostatic Sensitive Devices
Observe Precautions for Handling



Electro-optical characteristics



Spectral Characteristics



Typ	ULM850-B2-PL-S46XZP
Descriptn.	850nm SM TO46 no glas
Typ	ULM850-B2-PL-S46FZP
Descriptn.	850nm SM TO46 flat glas
Typ	ULM850-B2-PL-S0101U
Descriptn.	850nm SM bare die



Package / pin layout

without glass window

flat glass window

bare die

