

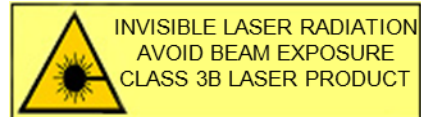
Single-mode & Polarization-stable VCSEL

850 nm

- Single-mode & stable polarization
- Ultra low current requirement and power consumption
- Ideal for wireless laser mouse and mobile phone applications



PRELIMINARY



ELECTRO-OPTICAL CHARACTERISTICS

T=25°C unless otherwise stated

PARAMETER	SYMBOL	UNITS	MIN	TYP	MAX	TEST CONDITIONS
Emission wavelength	λ_R	nm	840		860	
Threshold current	I_{TH}	mA		0.4	1.5	
Laser current	I_{OP}	mA		1.15	2.00	Output power = 0.45 mW
Laser voltage	U_{OP}	V			2.6	
Slope efficiency	η_s	W/A		0.6		
Differential series resistance	R_S	Ω		200		
Beam divergence	θ	°	14		22	$1/e^2$
Side mode suppression ratio	SMSR	dB	6			
ESD damage threshold		V	50	70		human body model
Dynamic polarization flips					0	

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.

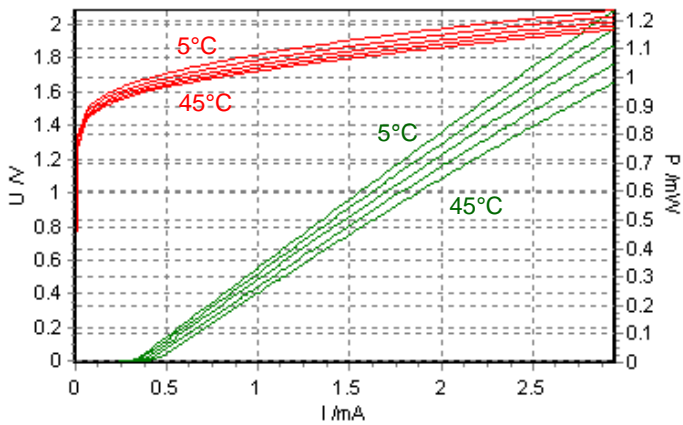


ATTENTION: Electrostatic Sensitive Devices
Observe Precautions for Handling

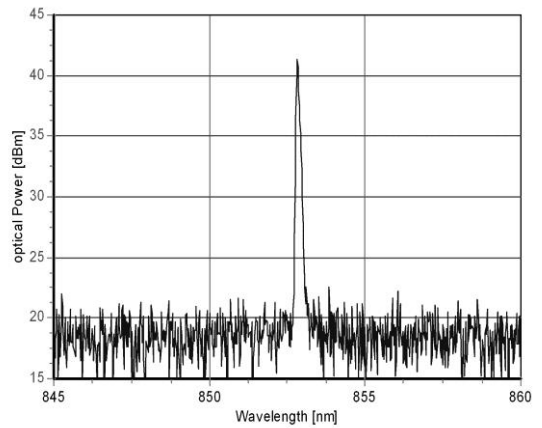
ABSOLUTE MAXIMUM RATING

Storage temperature	-40 ... 70°C
Operating temperature	5 ... 45°C
Output power	3 mW
Contiunous forward laser current	3.3 mA
Laser reverse voltage	8 V
Soldering temperature	300°C

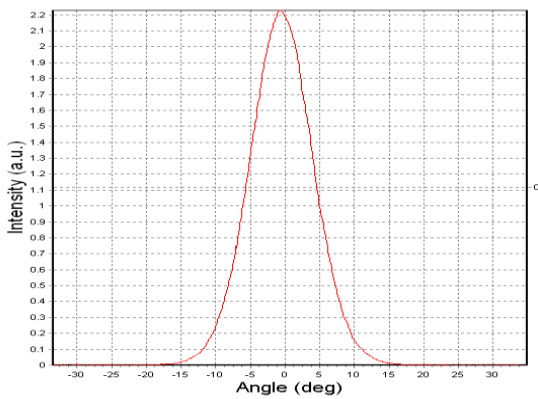
Electro-optical characteristics



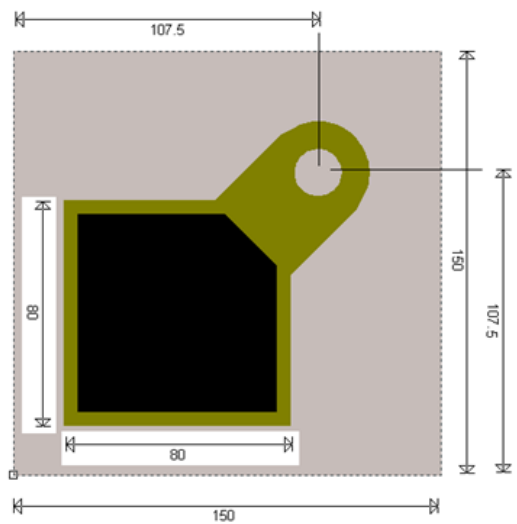
Spectral characteristics



Farfield



Die dimensions



Unit: μm

ULM850-L3-PL-S0101U

- Single-mode with polarization locking
- backside cathode contact
- Size 150 μm x 150 μm x 120 μm



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Philips GmbH U-L-M Photonics
Tel +49 731 550194-011
Fax +49 731 550194-026
philips.photonics.ulm@philips.com
www.photonics.philips.com