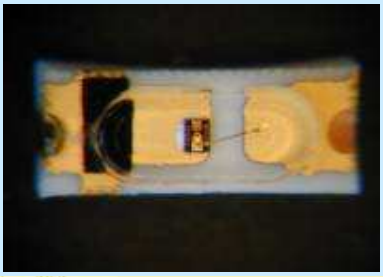
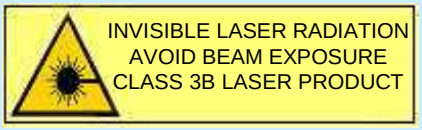
U·L·M PHOTONICS

12mW VCSEL 850nm

SMD Package

- Vertical Cavity Surface-Emitting Laser
- SMD package
- 12mW cw output power
- High performance and reliability





Prototype

ELECTRO-OPTICAL CHARACTERISTICS
SMD package

PARAMETER	SYMBOL	UNITS	MIN	TYP	MAX	TEST CONDITIONS
Emission wavelength	λ_R	nm	840	850	860	T=20℃
Threshold current	I_{TH}	mA	1.5	3.0	7.0	T=20℃
Variation of I_{TH} over Temp.	$\Delta I_{TH}(T)$	mA			3.0	T=0 .. 70℃
Threshold voltage	U_{TH}	V	1.4	1.8	2.0	
Laser current	I_{OP}	mA	15	20	25	P_{opt}=12 mW
Laser voltage	U_{OP}	V	1.8	2.0	2.4	P_{opt}=12 mW
Wallplug efficiency	η_{WP}	%	20	25	50	P_{opt}=12 mW
Slope Efficiency	η_S	W/A	0.6	0.7	1.0	T= 0 .. 70℃
Variation of η_s over Temp.	$\Delta\eta_S(T)$	W/A		0.2	0.4	T= 0 .. 70℃
Differential series resistance	R_S	Ω	15	25	30	P_{opt}=12 mW
3dB modulation bandwidth	v_{3dB}	GHz	1			P_{opt} =12 mW
Wavelength tuning over temperature		nm/K		0.07		
Thermal resistance	$R_{thermal}$	K/mW		0.6		
Beam divergence	θ	°	20	25	30	P_{opt}=12 mW, full width 1/e2
Spectral bandwidth	Δλ	nm		0.4	1	rms

ABSOLUTE MAXIMUM RATINGS

Storage temperature	-40 .. 125℃
Operating temperature	-20 .. 85℃
Electrical power dissipation	150 mW
Continous forward current	50 mA
Reverse voltage	8V
Soldering temperature	230℃

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

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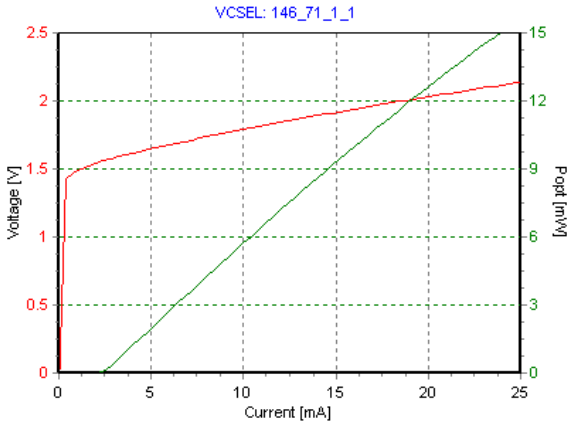
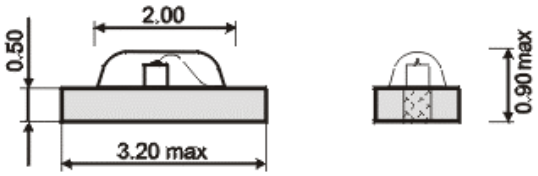
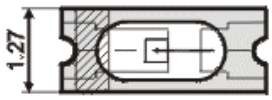
LIV @ RT



Dimensions (mm)



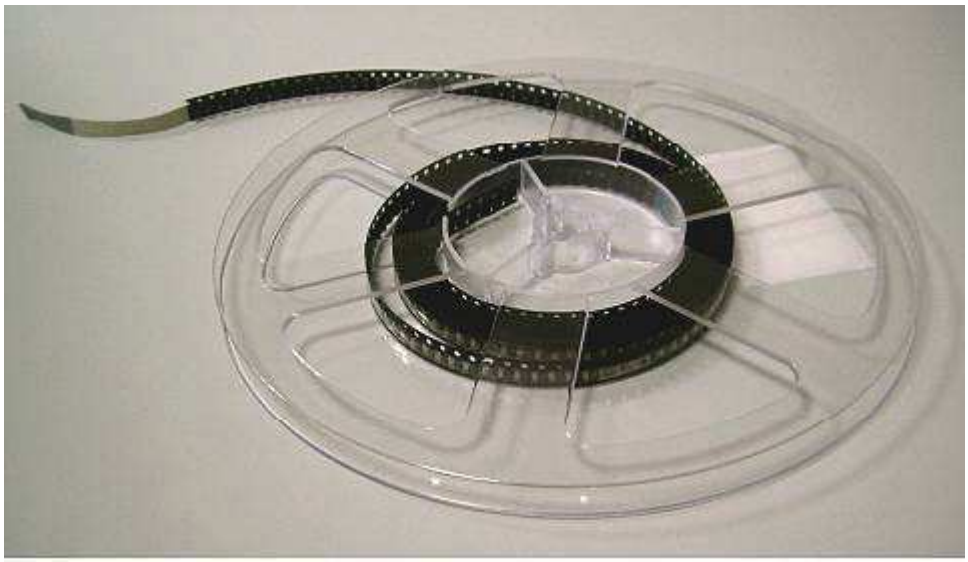


anode

Cathode (marked)

Type	ULM850-01-TT-HSMDCA
Descriptn.	**12 mW VCSEL SMD**
Cap	Epoxy Dome
Monitor	no
Common	--

Delivery in blister tape on request



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