

4.25 Gbps VCSEL 850nm LC-TOSA

- ◆ Vertical Cavity Surface-Emitting Laser
- ◆ High Speed Datacom VCSEL
- ◆ High performance and reliability
- ◆ LC-Connector to fit all LC applications

PRELIMINARY
Specifications are subject to change
without notice



INVISIBLE LASER RADIATION
AVOID BEAM EXPOSURE
CLASS 3B LASER PRODUCT

ELECTRO-OPTICAL CHARACTERISTICS

PARAMETER	SYMBOL	UNITS	MIN	TYP	MAX	TEST CONDITIONS
Peak Fiber Coupled Optical Power	P_{OC}	μW		400		$I_F=5\text{mA}$; Note 1 and 2
Threshold Current	I_{TH}	mA	0.8	1.5	2.0	Note 1
Variation of I_{TH} over Temperature	$\Delta I_{TH}(T)$	mA			1	$T=20\text{-}85^\circ\text{C}$
Slope Efficiency	η_S	mW/mA	0.05	0.15	0.2	$I_F=4\text{-}8\text{mA}$; Note 1 and 2
Variation of η_S over Temperature	$\Delta\eta_S/\eta_S/\Delta T$	%/K			-0.6	$T=20\text{-}85^\circ\text{C}$
Differential Series Resistance	R_S	Ω	30	50	70	$I_F=5\text{mA}$
Rise and Fall Time	t_R/t_F	ps			80	20-80%; ER=10dB
Relative Intensity Noise	RIN	dB/Hz		-130	-120	$I_F=5\text{mA}$
Emission Wavelength	λ_R	nm	840	850	860	$I_F=5\text{mA}$, Note 1
Wavelength Tuning over Current		nm/mA		0.2		Note 1
Wavelength Tuning over Temperature		nm/K		0.07		
RMS Spectral Bandwidth	$\Delta\lambda$	nm		0.4	0.8	$I_F=5\text{mA}$
Monitor Current	I_{PD}	mA	0.1	0.2	0.6	$I_F=5\text{mA}$; Note 1
Monitor Current Temperature Variation	$\Delta I_{PD}/\Delta T$	%/K			0.10	$T=20\text{...}85^\circ\text{C}$, $P_{OC}=100\mu\text{W}$
Monitor Dark Current	I_D	nA			20	$P_{OC}=0\text{ mW}$
Monitor Reverse Breakdown Voltage	U_{RBR}	V	30			$P_{OC}=0\text{ mW}$
Monitor Capacitance	C_{PD}	pF			100	$U_{RPD}=0\text{ V}$

1) $T=20^\circ\text{C}$

2) 50 μm Fiber

ABSOLUT MAXIMUM RATINGS

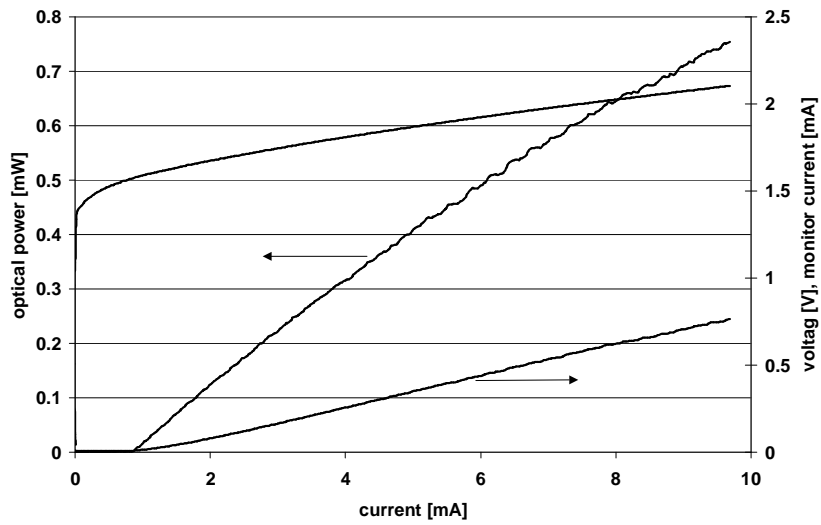
Storage Temperature	- 40 .. 125 $^\circ\text{C}$
Operating Temperature	-20 .. 85 $^\circ\text{C}$
Electrical Power Dissipation	30 mW
Continuous Forward Current	12 mA
Reverse Voltage	8V
Lead Solder Temperature	260 $^\circ\text{C}$, 10sec

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

LIV_IPD



<i>Typ</i>	ULM850-04-TN-ULCBPP	ULM850-04-TN-ULCBPN
<i>Descriptn.</i>	<4.25 Gbps VCSEL LC-TOSA	<4.25 Gbps VCSEL LC-TOSA
<i>Pin 1</i>	VCSEL Cathode	VCSEL Anode
<i>Pin 2</i>	VCSEL Anode, Monitor PD Cathode, Case	VCSEL Cathode, Monitor PD Anode, Case
<i>Pin 3</i>	Monitor PD Anode	Monitor PD Cathode

