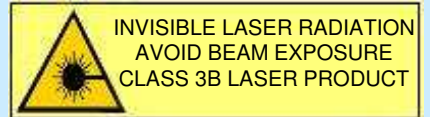
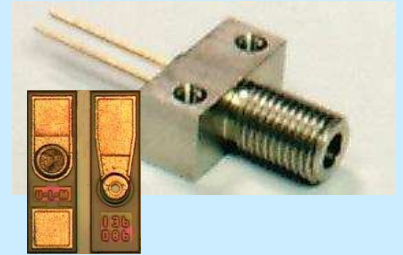


# 3mW / 6mW VCSEL SMA Receptacle / Chip

- ◆ Vertical Cavity Surface-Emitting Laser
- ◆ 3mW / 6mW peak power
- ◆ >2,5 Gbps speed
- ◆ e.g. for storage, free space, sensing
- ◆ other wavelengths available, e.g. for WDM



**Preliminary**

## ELECTRO-OPTICAL CHARACTERISTICS Receptacle (Chip)

PARAMETER	SYMBOL	UNITS	MIN	TYP	MAX	TEST CONDITIONS
Emission wavelength	$\lambda_R$	nm	835	850	860	T=20°C
Fiber-coupled mean power (power)	mW		3(6)			Fiber 125 $\mu$ m, 0.37NA, T=20°C
Threshold current	$I_{TH}$	mA			2	T=20°C
Variation of $I_{TH}$ over Temp.	$\Delta I_{TH}(T)$	mA		0.3		T=0 .. 70°C
Threshold voltage	$U_{TH}$	V	1.5	1.8	2.0	
Laser current	$I_{OP}$	mA		9		$P_{opt}=3mW^*$
Laser voltage	$U_{OP}$	V	1.8	2.0	2.2	$P_{opt}=3mW^*$
Wallplug efficiency	$\eta_{WP}$	%	5	10	30	$P_{opt}=3mW^*$
Slope Efficiency	$\eta_s$	W/A	0.3	0.4	0.6	T= 20°C
Variation of $\eta_s$ over Temp.	$\Delta \eta_s(T)$	W/A		0.2		T= 0 .. 70°C
Differential series resistance	$R_s$	$\Omega$		25		$P_{opt}=3mW^*$
3dB modulation bandwidth	$v_{3dB}$	GHz	3			$P_{opt}=3mW^*$
Rise and fall time	$t_R/t_F$	ps		90	150	20%..80%; $P_{off/on}=0.5/3.0mW^*$
Relative intensity noise	RIN	dB/Hz		-130	-120	$P_{opt} = 3 mW^* @ 1 GHz$
Wavelength tuning over temperature		nm/K		0.07		
Thermal resistance	$R_{thermal}$	K/mW			2	
Spectral bandwidth	$\Delta\lambda$	nm			1	rms
far field angle chip		deg		25		6mW chip output power
far field angle TO56 package		deg		20		6mW TO56 output power

\* in optical Fiber 125 $\mu$ m, NA 0,37

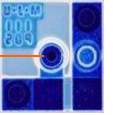
## ABSOLUTE MAXIMUM RATINGS

Storage temperature	-55 ... 125°C
Operating temperature	-40 ... 85°C
Electrical power dissipation	40 mW
Continuous forward current	15 mA
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.

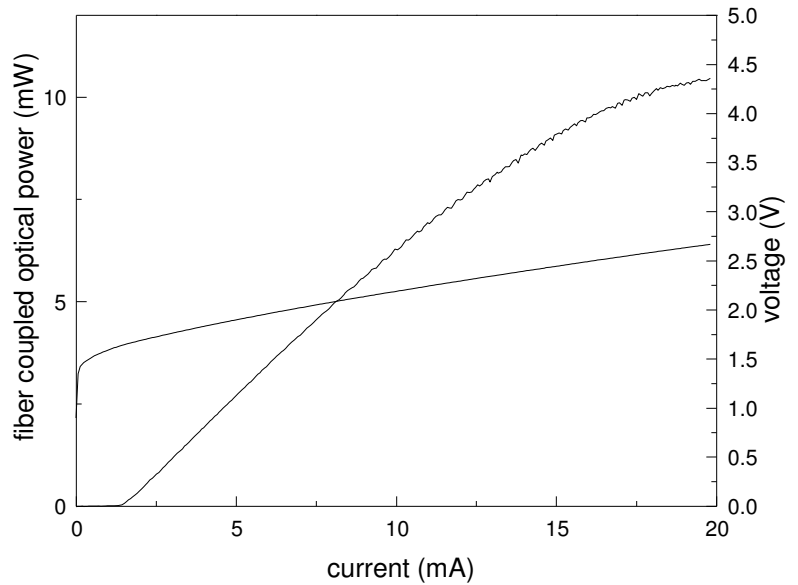


**ATTENTION:** Electrostatic Sensitive Devices  
Observe Precautions for Handling



**LIV**  
**(optical fiber**  
**125µm, NA 0.37)**

**Other fiber core**  
**diameters available**  
**upon request**



Description	3mW VCSEL SMA Receptacle	6mW VCSEL TO56	6mW VCSEL Chip
Cap	-	Ball lens	-
Common	anode	anode	-
Type	ULM850-00-TT-HSMAOP	ULM850-00-TT-H56BOP	ULM850-00-TT-H0101U

