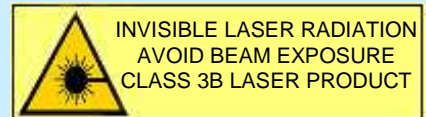
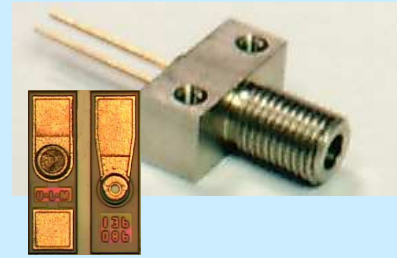


# 6mW / 12mW VCSEL SMA Receptacle / Chip

- ◆ Vertical Cavity Surface-Emitting Laser
- ◆ 6mW / 12mW 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		6(12)			Fiber 125 $\mu$ m, 0.37NA, T=20°C
Threshold current	$I_{TH}$	mA			7	T=20°C
Variation of $I_{TH}$ over Temp.	$\Delta I_{TH}(T)$	mA		0.8		T=0 .. 70°C
Threshold voltage	$U_{TH}$	V	1.5	1.8	2.0	T=20°C
Laser current	$I_{OP}$	mA		20		$P_{opt}=6$ mW*, T=20°C
Laser voltage	$U_{OP}$	V	1.6	2.0	2.3	$P_{opt}=6$ mW*, T=20°C
Wallplug efficiency	$\eta_{WP}$	%	5	10	30	$P_{opt}=6$ mW*, T=20°C
Slope Efficiency	$\eta_s$	W/A	0.3	0.5	0.8	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		$P_{opt}=6$ mW*
3dB modulation bandwidth	$V_{3dB}$	GHz	3			$P_{opt}=6$ mW*
Rise and fall time	$t_R/t_F$	ps		90	150	20%..80%; $P_{off/on}=0.5/6.0$ mW*
Relative intensity noise	RIN	dB/Hz		-130	-120	$P_{opt} = 6$ mW* @ 1 GHz
Wavelength tuning over temperature		nm/K		0.07		
Thermal resistance	$R_{thermal}$	K/mW			1	
Spectral bandwidth	$\Delta\lambda$	nm			1	rms

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

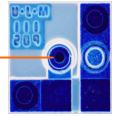
## ABSOLUTE MAXIMUM RATINGS

Storage temperature	-55 .. 125°C
Operating temperature	-30 .. 85°C
Electrical power dissipation	100 mW
Continous forward current	40 mA
Reverse voltage	8V
Pin Soldering temperature	290°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.

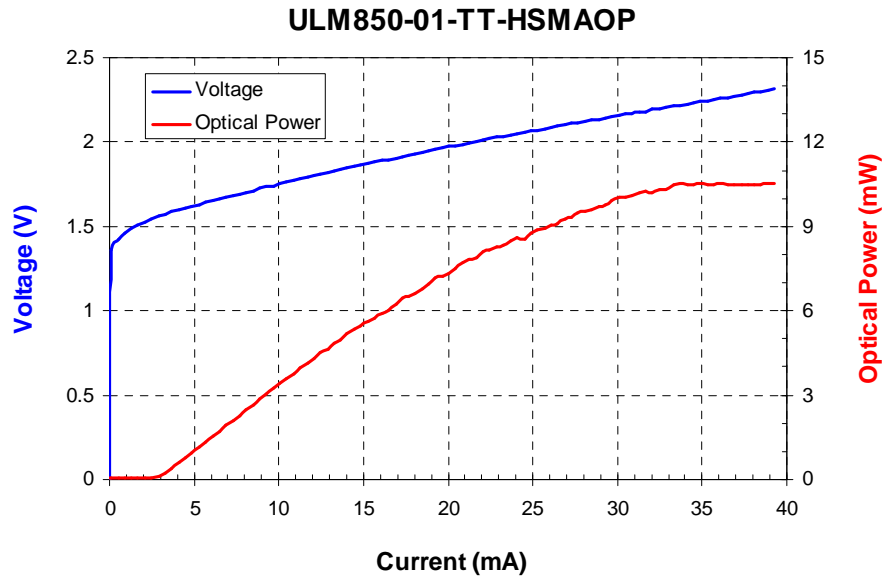


**ATTENTION:** Electrostatic Sensitive Devices  
Observe Precautions for Handling



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

Other fiber core  
 diameters available  
 upon request



Description	6mW VCSEL SMA Receptacle	12mW VCSEL TO56	12mW VCSEL Chip
Cap	-	Ball lens	-
Common	anode	anode	-
Type			
with Monitor (PD)	<b>ULM850-01-TT-HSMAPP</b>	<b>ULM850-01-TT-H56BPP</b>	-
without Monitor	<b>ULM850-01-TT-HSMAOP</b>	<b>ULM850-01-TT-H56BOP</b>	<b>ULM850-01-TT-H0101U</b>

