

ROITHNER LASERTECHNIK

A-1040 WIEN, FLEISCHMANNGASSE 9
 TEL: +43 -1- 586 52 43 FAX: +43 -1- 586 41 43
 e-mail: rlt@mcb.at, <http://www.roithner.mcb.at>

VCSEL TTR-D1 TECHNICAL DATA

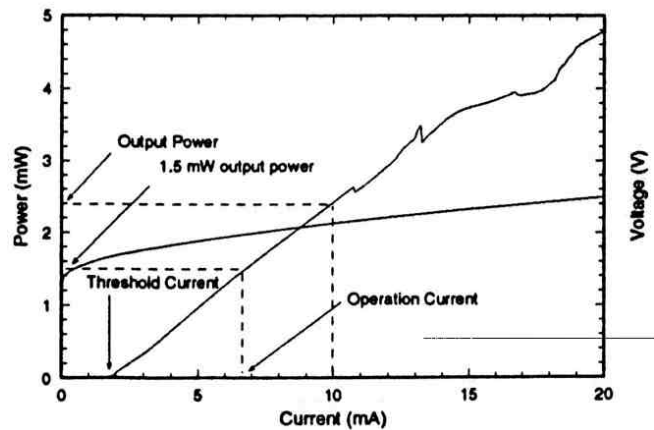
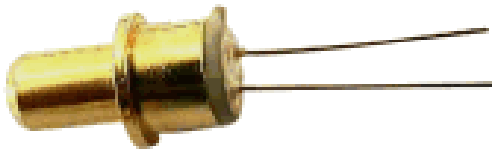
Infrared Wavelength VCSEL SC Connector

Lasing wavelength: **840 nm typ.**

Max. optical power: **3 mW typ., - 4dBm into 62.5/125 multimode fiber**

Package: **prealigned SC connector, metal can pin out**

Very low threshold current, low operating current, high speed (> 1GHz)



Absolute Maximum Ratings (Tc=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Optical Output Power	P_o	5	mW
LD Reverse Voltage	$V_{R(LD)}$	10	V
Operation Temperature	T_C	-10 .. +70	°C
Storage Temperature	T_{STG}	-40 +85	°C

Optical-Electrical Characteristics (Tc = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Power into 62.5/125	P_{MF}	$I_F = 10 \text{ mA}$	-8	-4	0	dBm
Power stability 1h/8h	ΔP_{MF}	$I_F = 10 \text{ mA}$		-0.06 -0.15		dB
Threshold Current	I_{th}		1.5	2.0	3.0	mA
Threshold Variation	ΔI_{th}	$T_A = 0 \dots 70^\circ\text{C}$	- 1	0	+ 1	mA
Operation Current	I_{op}	P_{MF}		7	10	mA
Operating Voltage	V_{op}	$I_F = 10 \text{ mA}$	1.8	2.2	2.5	V
Slope Efficiency	η	$I_F = 10 \text{ mA}$	0.15	0.25	0.35	mW/mA
Series Resistance	R_S	$I_F = 10 \text{ mA}$		50		Ω
Wavelength	λ_p	$I_F = 10 \text{ mA}$	820	840	860	nm
Risetime / Falltime	t_r / t_f			200		ps
Spectral Width	$\Delta\lambda$	$I_F = 10 \text{ mA}$		0.5		nm
Wavelength Drift	$\Delta\lambda_p/\Delta T$	$I_F = 10 \text{ mA}$		0.05		nm/°C