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VCSEL TMC-4F TECHNICAL DATA

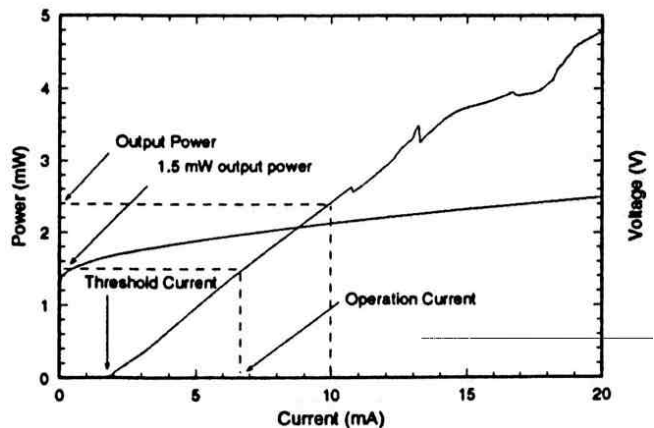
Infrared Wavelength VCSEL

Lasing wavelength: **840 nm typ.**

Max. optical power: **3 mW typ.**, lasing aperture \varnothing **10 μ m typ.**

Package: **standard TO-46 with flat window, beam divergence: 8° (FWHM)**

Very low threshold current, low operating current, high speed



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
Optical Output Power	P _o	I _F = 10 mA	1.0	2.0	3.0	mW
Threshold Current	I _{th}		1.5	2.0	3.0	mA
Threshold Variation	ΔI_{th}	T _A = 0 .. 70°C	- 1	0	+ 1	mA
Operation Current	I _{op}	P _o = 1.5 mW		7	10	mA
Operating Voltage	V _{op}	I _F = 10 mA	1.8	2.2	2.5	V
Slope Efficiency	η	I _F = 10 mA	0.15	0.25	0.35	mW/mA
Series Resistance	R _S	I _F = 10 mA		50		Ω
Wavelength	λ_p	I _F = 10 mA	820	840	860	nm
Risetime / Falltime	t _r / t _f			200		ps
Beam Divergence	θ	I _F = 10 mA		8		°
Spectral Width	$\Delta\lambda$	I _F = 10 mA		0.5		nm
Wavelength Drift	$\Delta\lambda_p/\Delta T$	I _F = 10 mA		0.05		nm/°C