

PRODUCT INFORMATION

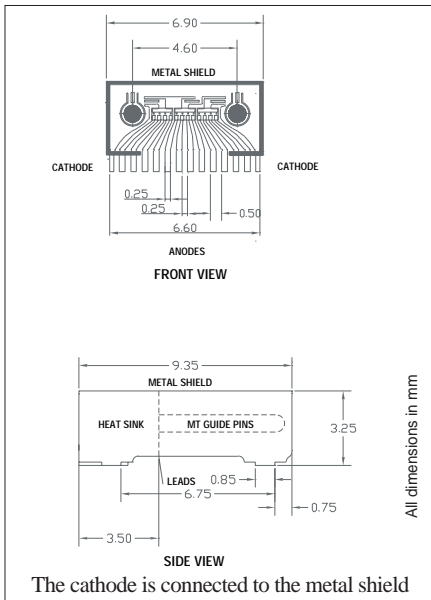
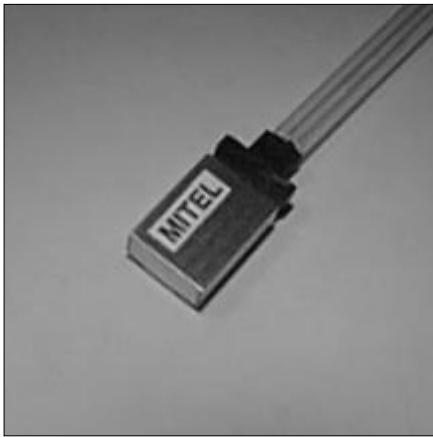
840nm

12L485
VCSEL Array

Parallel Datacom, Telecom

ADVANCE/α

This device consists of a 12-channel VCSEL array in a miniature surface-mountable MT package. It is based on a unique combination of self-alignment technology and direct optical coupling to fiber, resulting in pure beam shapes and optimum coupling efficiency without need for active alignment. Applications include parallel Fibre Channel and optical interconnect inter/intra-board. And it matches the 12L486 PIN Photodiode Array.



VCSEL Array in MT Package

WARNING: Laser Radiation, avoid exposure to beam. Class 3B laser product, potential eye hazard. Warning labels in each box.

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Optical and Electrical Characteristics (25° C Case Temperature)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Fiber-Coupled Power	P_{fiber}		0.5		mW	
Optical Power	P_o		0.6		mW	
Slope Efficiency (dP_o/dI_F)	η		250		mW/A	
Beam Divergence	θ		15		deg	Full Width at 1/e ²
Bandwidth (3dB _{e1})	f_c		2		GHz	
Peak Wavelength	λ_p	830	840	860	nm	
Spectral Width (FWHM)	$\Delta\lambda$		0.5	1	nm	
Forward Voltage	V_F		1.8		V	
Threshold Current	I_{th}		5.5		mA	
Relative Intensity Noise	RIN		-130		dB/Hz	f=1 GHz
Crosstalk	X		-25		dB _{e1}	(Note 1)

Test Condition: $I_F=8\text{mA}$. Fiber Ribbon: 50/125 GI, NA=0.2 or 62.5/125 GI, NA=0.275.

Note 1: Crosstalk between adjacent channels operating at 2GHz.

Absolute Maximum Ratings

PARAMETER	SYMBOL	LIMIT
Storage Temperature	T_{stg}	-40 to +85°C
Operating Temperature	T_{op}	0 to +70°C
Electrical Power Dissipation	P_{tot}	16 mW/Channel
Continuous Forward Current ($f \leq 10\text{ kHz}$)	I_F	9 mA/Channel
Peak Forward Current (duty cycle $\leq 50\%$, $f \geq 1\text{ MHz}$)	I_{FRM}	16 mA/Channel
Reverse Voltage	V_R	1.5 V
Soldering Temperature (2mm from the case for 10 sec)	T_{sld}	260°C

Thermal Characteristics

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
Thermal Resistance	R_{th}		TBD		°C/W
Temp. Coefficient - Wavelength	$d\lambda/dT_j$		0.06		nm/°C
Optical Power - Variation 0 to 70°C	ΔP		± 0.7		dB
Threshold Current - Variation 0 to 70°C	ΔI_{th}		± 0.6		mA



Europe: Tel (46) 8 58 02 45 00 Fax (46) 8 58 02 01 10
Tel (44) 1291 436180 Fax (44) 1291 436771

America: Tel 1-800-96MITEL Fax (613) 592-6909
Asia: Tel (65) 293 5312 Fax (65) 293 8527