



Features

- : VCSEL Array 1 x 4 / 1 x 12
- : 850nm wavelength range
- : High uniformity
- : Data rates > 2.5 Gbps per channel
- : Other configurations available on request

Description

AM85-1N104



AM85-1N112



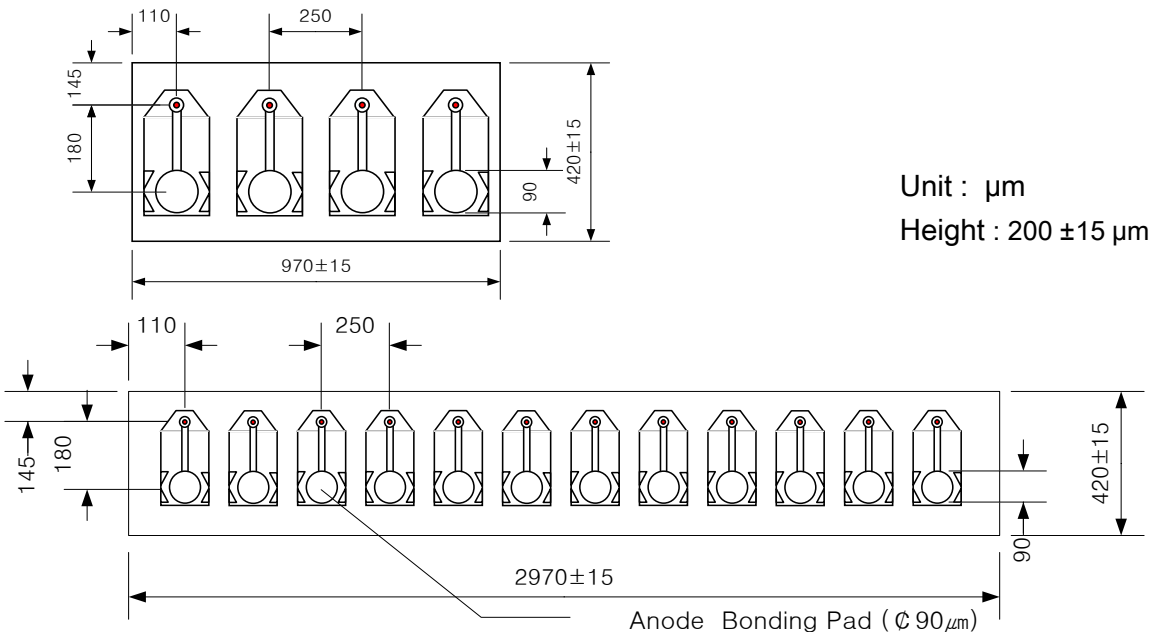
Applications

- : High speed Data Communications
- : Gigabit Ethernet
- : Fiber Channel

Absolute Maximum Ratings

Parameter	Rating
Storage Temperature	-40 to 100°C
Operating Temperature	0 to 85°C
Continuous Forward Current	12mA
Continuous Reverse Voltage	5V (@10µA)

Dimensions





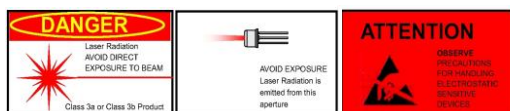
Electro-Optics Characteristics ($T_a=25^\circ\text{C}$ unless otherwise stated)

Parameters	Symbol	Specified			Unit	Test Conditions
		Min.	Typ.	Max.		
Threshold Current	I_{th}		1.5	2.5	mA	CW
Ith Temperature Variation	ΔI_{th}		1.5		mA	$T_a=0$ to 85°C
Ith uniformity within Array	ΔI_{th}^a			0.5	mA	CW
Slope Efficiency	η	0.3	0.5	0.7	W/A	$I_f = 5\text{mA}$
η Temperature Variation	$\Delta\eta / \Delta T$		-0.5		%/ $^\circ\text{C}$	$T_a=0$ to 85°C at 5mA
Optical Output Power	P_o		2.0		mW	$I_f = 5\text{mA}$
Po uniformity within Array	ΔP_o			0.4	mW	$I_f = 5\text{mA}$
Peak Wavelength	λ	840	850	860	nm	$I_f = 5\text{mA}$
λ Temperature Variation	$\Delta \lambda / \Delta T$		0.06		nm/ $^\circ\text{C}$	$T_a=0$ to 85°C at 5mA
Spectral Bandwidth (RMS)	$\Delta \lambda$			0.85	nm	$I_f = 5\text{mA}$
λ uniformity within Array	$\Delta \lambda_p$			1	nm	$I_f = 5\text{mA}$
Beam Divergence	Θ	14		30	$^\circ$	$P_0=2.0\text{mW}$, (Full Width, $1/e^2$)
Operating Voltage	V_f		1.8	2.2	V	$I_f = 5\text{mA}$
Breakdown Voltage	V_b		-10		V	
Dynamic Resistance	R_d	20	35	55	Ohm	$I_f = 5\text{mA}$
Rise and Fall times	t_r/t_f			110	ps	20% to 80%

Notes

1. High power or sub-milliampere threshold current can be provided under request.
2. Tighter wavelength specifications are available on request.

* These specifications are subject to change without notice.



NOTICE	The inherent design of this component causes it to be sensitive to electrostatic discharge(ESD). To prevent ESD-induced damage and/or degradation to equipment, take normal ESD precautions when handling this product
DANGER	The VCSEL is a class IIIb laser and should be treated as a potential eye hazard. Due to the size of the component, the applicable warning logotype, aperture label, and certification / identification label cannot be placed on the component itself.



Characteristics Curves

