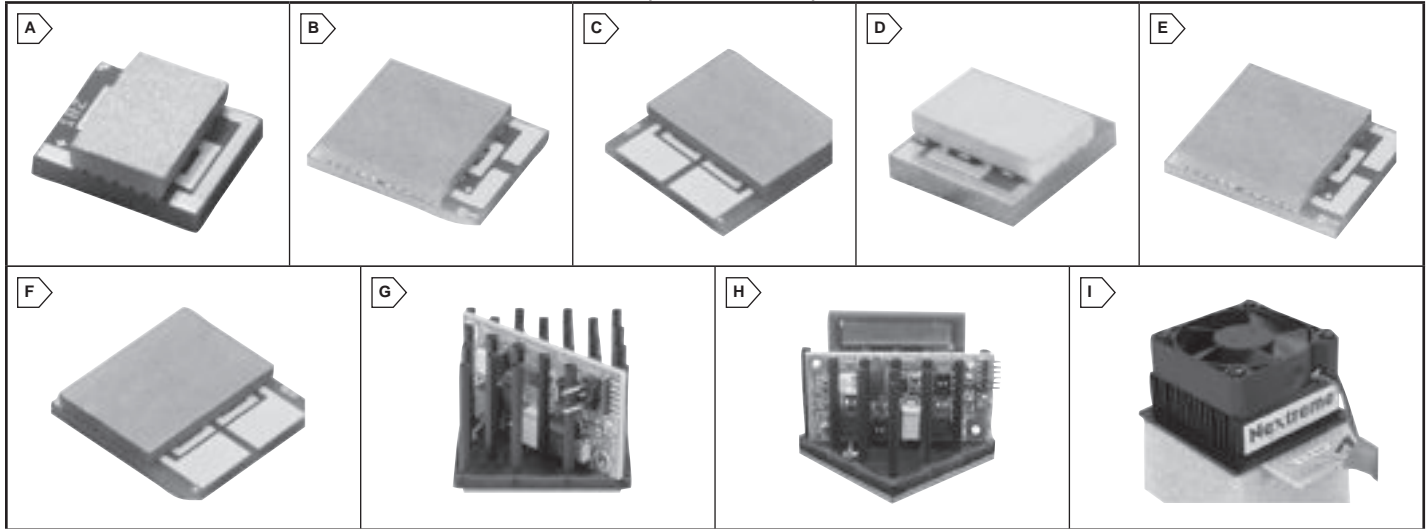


NEXTREME Thermal Management



RoHS Compliant This product is RoHS compliant.



Embedded Modules

Nextreme

NEW SUPPLIER

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THERMOELECTRIC COOLING

Nextreme HV Series Thermoelectric Coolers are part of a new line of thin-film, high voltage/and high heat pumping thermoelectric coolers (TECs) that are designed for the cooling and temperature control of photonics and optoelectronic devices. Nextreme has developed the HV Series Thermoelectric Coolers to address electronics cooling applications with high heat flux and larger heat pumping requirements. The HV Series removes unique voltage and current requirements as barriers to the integration of thin-film thermoelectrics into electronics.

The size, input power requirements, and heat pumping capability of the OptoCooler™ HV14 make it particularly well suited for devices such as laser diodes and high brightness LEDs.

Applications:

- Semiconductor optical amplifiers (SOA)
- Laser Diodes
- High Brightness LEDs
- VCSELs
- Photo-detectors



RoHS Compliant

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Nextreme Part No.	Fig.	Maximum Cooling (W)	Heat Pump Capability (W/cm ²)	ΔT Max (°C)	Resistance @ 85°C (Ω)	Operating Temp. Max. (°C)	Footprint (mm)	Description	Price Each		
										1	25	50
944-NCA11014430202AA	NCA-1101443-0202A_A	A	1.7	115	60	2.3	150	1.52x1.79	HV14 thermoelectric cooler	50.70	47.83	45.27
944-NCA10037500202AA	NCA-1003750-0202A_A	B	4.5	107	60	6.1	150	2.1x2.9	HV37 thermoelectric cooler	59.98	66.02	62.48
944-NCA10037500202AW	NCA-1003750-0202A_W	-	4.5	107	60	6.1	150	2.1x2.9	HV37 thermoelectric cooler w/ wire leads	81.98	77.34	73.20
944-NCA10048500304AA	NCA-1004850-0304A-A	C	6	58	60	9.2	150	3.1x3.3	HV56 thermoelectric cooler	90.98	85.83	81.23
944-NCA10048500304AW	NCA-1004850-0304A-W	-	6	58	60	9.2	150	3.1x3.3	HV56 thermoelectric cooler eTEC w/ wire leads	102.98	97.15	91.95

THERMOELECTRIC POWER GENERATION

Nextreme eTEG™ HV Thermoelectric Power Generators are the next generation of high voltage, thinfilm thermoelectric generators developed to address micro-power applications. The Nextreme eTEG™ HV Thermoelectric Power Generators can convert waste heat from thermal sources into usable electricity as an energy source. Manufactured using semiconductor fabrication techniques, the eTEG is scalable, cost-effective, and can be utilized in a broad range of markets and applications including automotive, government and aerospace, thermal batteries, medical implants, and wireless sensor networks.

At the core of the eTEG™ module is Nextreme's breakthrough Thermal Copper Pillar Bump, a structure made from thin-film thermoelectric material embedded into flip chip interconnects (in particular, copper pillar solder bumps) used in electronic and optoelectronic packaging. The device generates electricity via the Seebeck Effect, where electricity is produced from a temperature differential applied across the device.

Applications:

- Automotive
- Aerospace
- Thermal batteries
- Medical implants
- Wireless sensor networks



RoHS Compliant

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Nextreme Part No.	Fig.	Output Power (mW)	Output Voltage Range (V)	Footprint (mm)	Description	Price Each		
							1	25	50
944-NGA11014430202AA	NGA-1101443-0202A_A	D	33	.3-1.1	1.8x1.5	HV14 thermoelectric power generator	50.70	47.83	45.27
944-NGA10037500202AA	NGA-1003750-0202A_A	E	24	.17-.85	2.1x2.9	HV37 thermoelectric power generator	69.98	66.02	62.48
944-NGA10037500202AW	NGA-1003750-0202A_W	-	24	.17-.85	2.1x2.9	HV37 thermoelectric power generator w/ wire leads	81.98	77.34	73.20
944-NGA10048500304AA	NGA-1004850-0304A-A	F	36.5	.25-1.25	3.1x3.3	HV56 thermoelectric power generator	90.98	85.83	81.23
944-NGA10048500304AW	NGA-1004850-0304A-W	-	36.5	.25-1.25	3.1x3.3	HV56 thermoelectric power generator w/ wire leads	102.98	97.15	91.95

Development Kits



RoHS Compliant

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Nextreme Part No.	Fig.	Output Power (mW)	Output Voltage Range (V)	Output Current (mA)	Description	Price Each
944-WPG-1	WPG-1	G	1	3.3-5	0.1	WPG-1 Wireless Power Generator	525.93
944-WPG-1S	WPG-1S	H	80	3.3	30	WPG-1S Wireless Power Generator with On-board Storage	632.19
944-NCA10048503040A	NCA-1004850-3040A_KIT	I	-	-	-	HV56 thermoelectric power generator evaluation kit	625.93