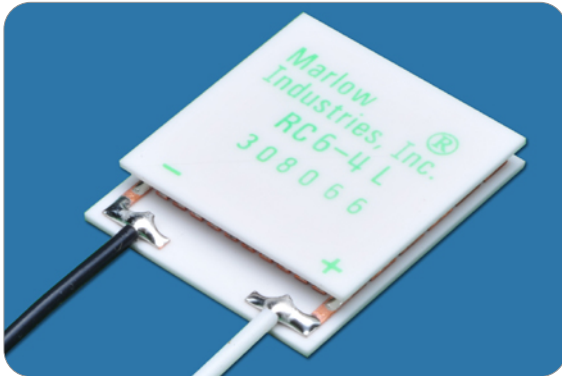


marlow industries, inc.®  
 Subsidiary of II-VI INCORPORATED



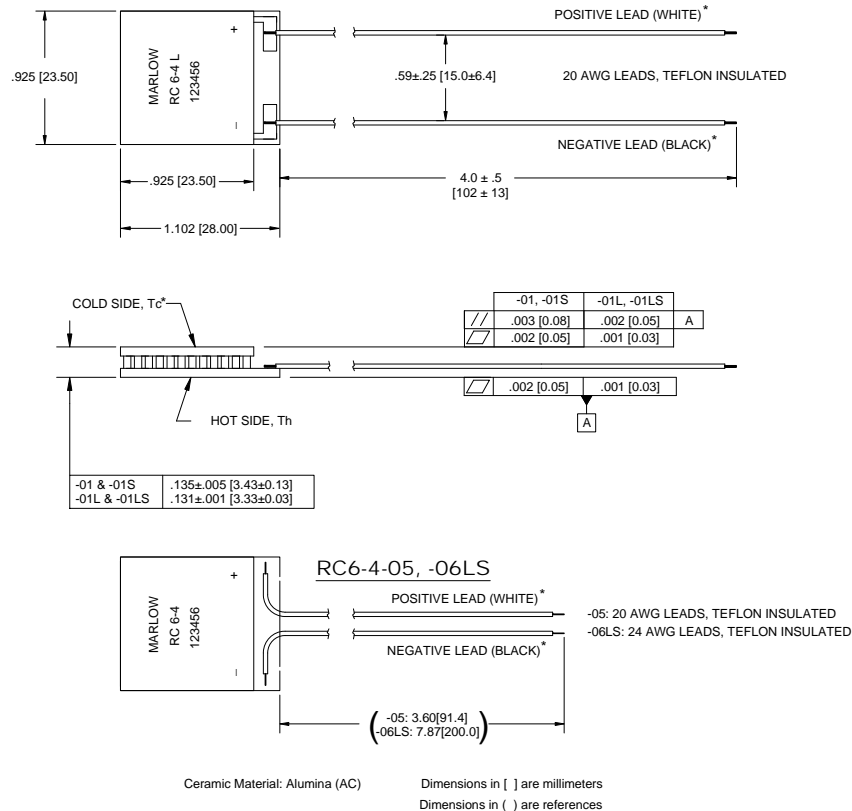
## RC6-4

Single-Stage Thermoelectric Module  
 RoHS EU Compliant

### TYPICAL PERFORMANCE VALUES

Hot Side Temperature (°C)	27°C	50°C
Δ Tmax (°C-dry N <sub>2</sub> ):	65	73
Qmax (watts):	20	22
Imax (amps):	3.7	3.7
Vmax (vdc):	8.2	9.2
AC Resistance (ohms):	1.8	--
Device ZT	0.74	--

### MECHANICAL CHARACTERISTICS



**\*NOTE: Cold side and positive and negative leads are valid only for thermoelectric cooling. For power generation, refer to page 3.**

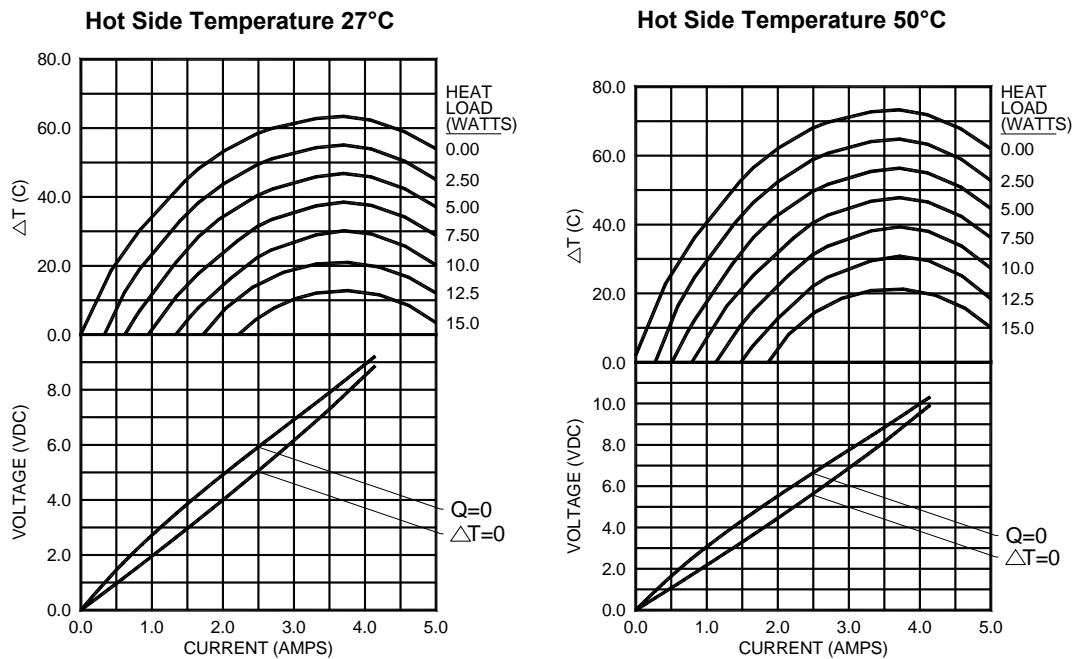
### ORDERING OPTIONS

Model Number	Description
RC6-4-01	Base Model w/ leads
RC6-4-01L	Lapped Model
RC6-4-01S	Sealed Model
RC6-4-01LS	Lapped and Sealed Model
RC6-4-02L	Lapped, Mark with "L", Nail Head
RC6-4-05	Base Model w/ bent-leads
RC6-4-06LS	Lapped and Sealed Mode w/bent-leads

### AVAILABLE MODIFICATIONS

Solid-state reliability.  
 Built with high temperature solder with the ability to withstand higher assembly processing temperatures for short periods of time (<160°C).  
 Superior nickel diffusion barriers on elements.  
 High strength for rugged environment.  
 Porched configuration for enhanced leadwire strength.  
 RTV sealing available (Optional).  
 Lapped option available for multiple module applications.

ENVIRONMENT: ONE ATMOSPHERE DRY NITROGEN



For performance information in a vacuum or with hot side temperatures other than 27°C or 50°C, consult one of our Applications Engineers.

**Installation**

Recommended mounting methods: Bonding with thermal epoxy or soldering with metallized ceramics. For additional information, please refer to our TEC Installation Guide.

**Operation Cautions**

For maximum reliability, storage and operation below 85°C in a non-condensing environment is recommended. To minimize thermal stress when operating in cooling mode, use linear/proportional temperature control or a similar method rather than an ON/OFF method.

**CONTACT US:**

For customer support or general questions please contact a local office below or consult our website for distributor information.

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10451 Vista Park Road  
Dallas Texas 75238-1645  
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www.marlow.com

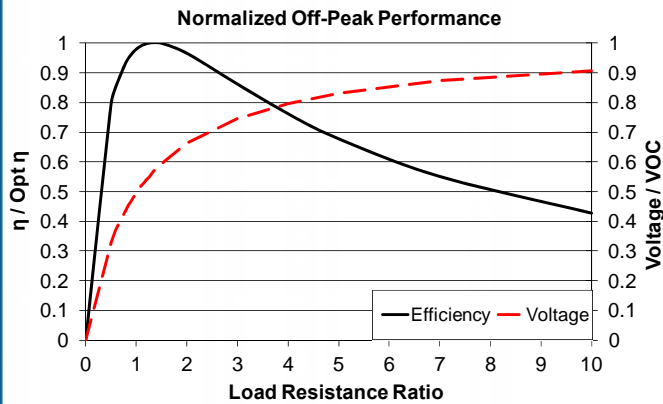
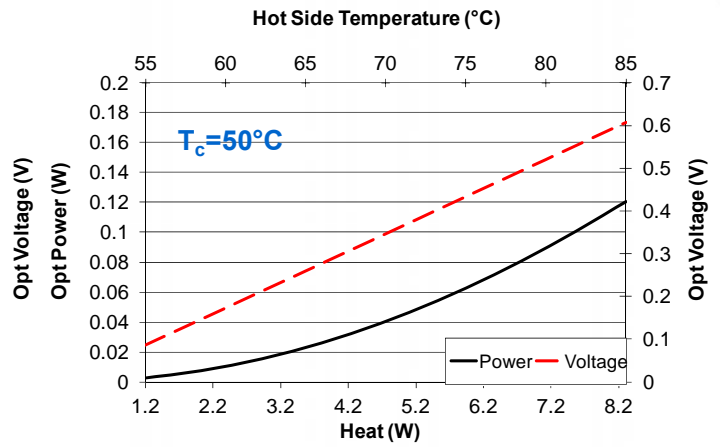
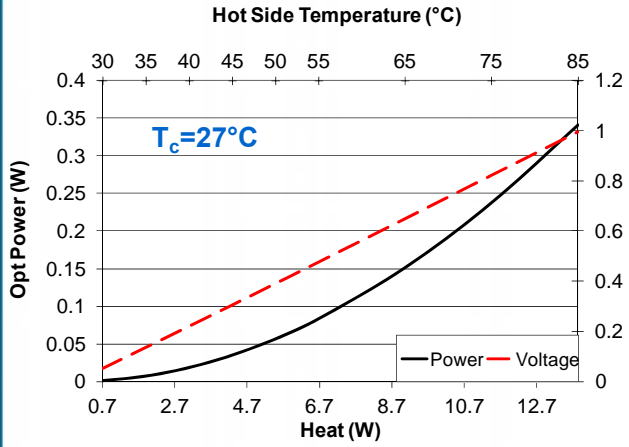
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POWER GENERATION PERFORMANCE CURVES



Hot Side Temperature (°C)	85	55	35
Cold Side Temperature (°C)	27	27	27
Optimum Efficiency, $\eta$ (%)	2.46	1.24	0.36
Optimum Power (W)	0.341	0.083	0.007
Optimum Voltage (V)	0.996	0.475	0.134
Load Resistance for Opt $\eta$ ( $\Omega$ )	2.90	2.71	2.58
Open Circuit Voltage, VOC (V)	1.75	0.84	0.24
Short Circuit Current (A)	0.79	0.40	0.12
Thermal Resistance (°C/W)	4.18	4.19	4.18

Power Generation performance information is given in a nitrogen environment and cold side temperatures of 27°C and 50°C. Module temperature does not include thermal resistance of heat sinks. For performance information in vacuum, other cold side temperatures, or specific heat sinks, consult one of our applications engineers.

### TYPICAL POWER GENERATION CONFIGURATION

EXAMPLE:

