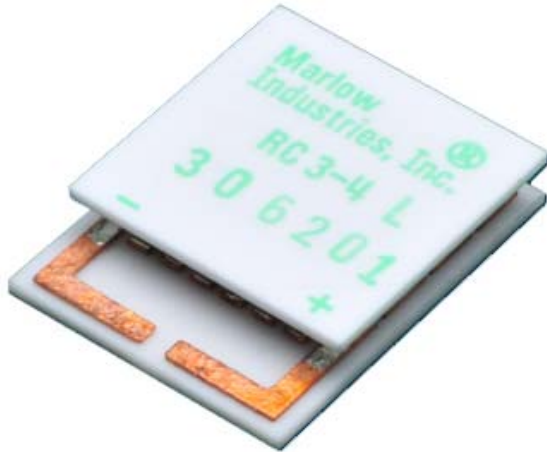




# Technical Data Sheet for RC3-4

## Single-Stage Thermoelectric Module



### NOMINAL PERFORMANCE IN NITROGEN

Hot Side Temperature (°C)	27	50
$\Delta T_{max}$ (°C):	65	73
Q <sub>max</sub> (watts):	9	10
I <sub>max</sub> (amps):	3.7	3.7
V <sub>max</sub> (vdc):	3.6	4.1
AC Resistance (ohms):	0.8	--
Device ZT	0.74	--

### PRODUCT FEATURES

- RoHS EU Compliant
- Rated operating temperature of 130°C.
- Ceramic Material: Aluminum Oxide
- Porch configuration for high strength lead wire connection.
- Superior nickel diffusion barriers on elements.
- High strength for rugged environment.
- RTV sealing option available.
- Lapped option available for multiple module applications.

### ORDERING OPTIONS

Model Number	Description
RC3-4-01	20 AWG 101mm Leadwires
RC3-4-01L	20 AWG 101mm Leadwires, Lapped
RC3-4-01S	20 AWG 101mm Leadwires, Sealed
RC3-4-01LS	20 AWG 101mm Leadwires, Lapped, Sealed
RC3-4-03LS	24 AWG 165mm Leadwires, Lapped, Sealed

### OPERATION CAUTIONS

For maximum reliability, storage and operation below 130°C in a non-condensing environment is recommended. To minimize thermal stress, use linear/proportional temperature control or a similar method rather than an ON/OFF method.

### INSTALLATION

Recommended mounting method: Clamp with uniform pressure to a flat surface with thermal interface material. For additional information, please refer to our TEM Installation Guide.

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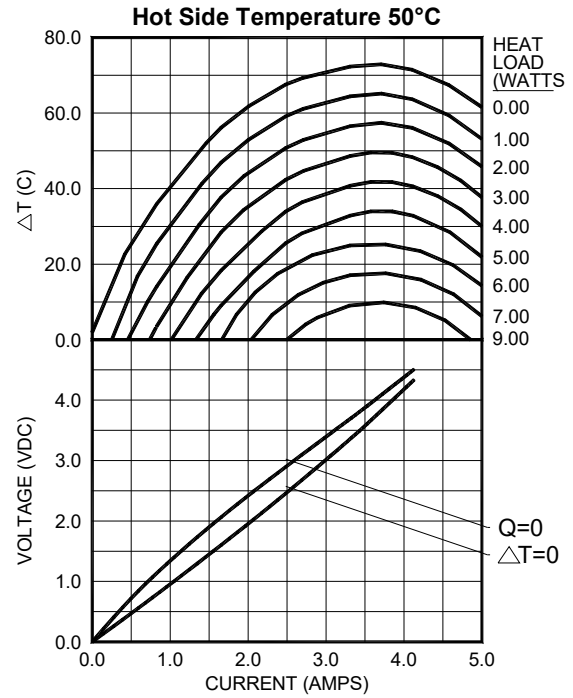
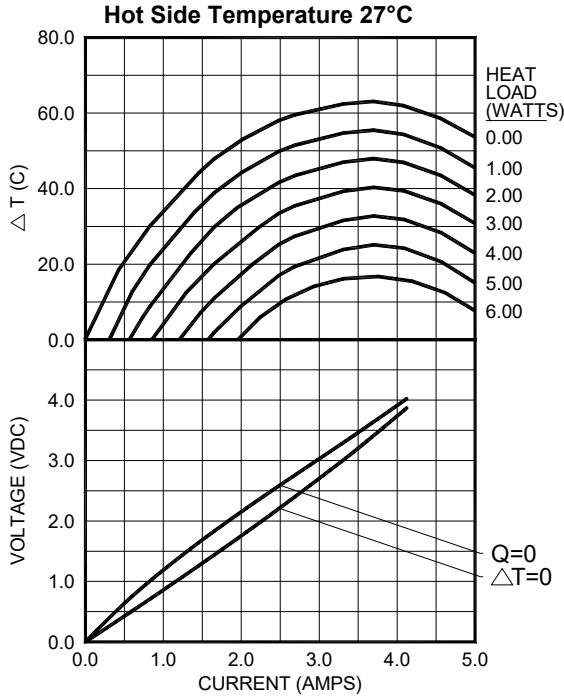
II-VI Singapore Pte., Ltd.  
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86-10-643 98226  
info@iivibj.com



**ENVIRONMENT: ONE ATMOSPHERE DRY NITROGEN**

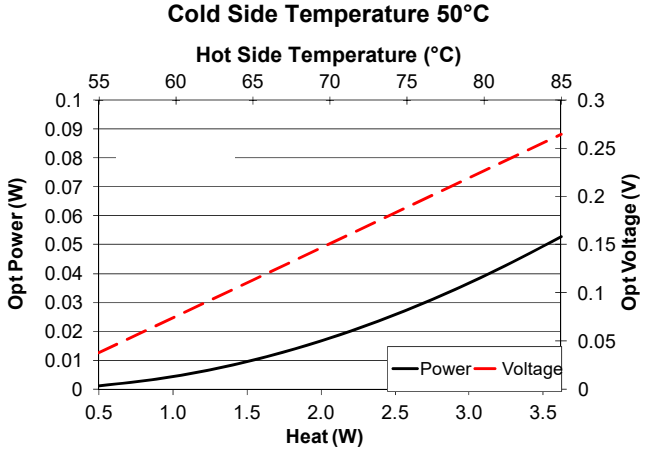
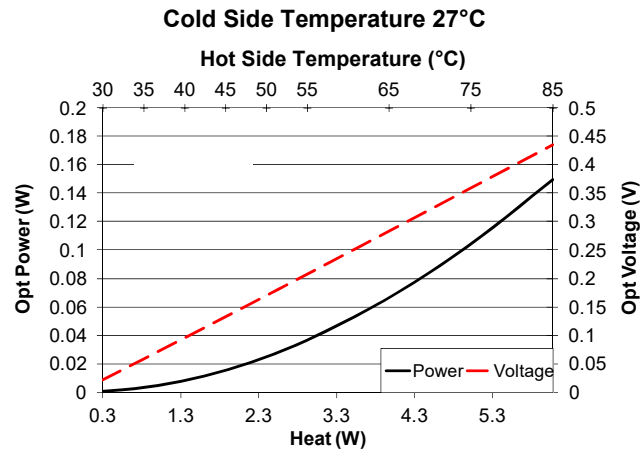
ENVIRONMENT: ONE ATMOSPHERE DRY NITROGEN



For performance information with hot side temperatures other than 27°C or 50°C, contact one of our Applications Engineers at 877-627-5691.

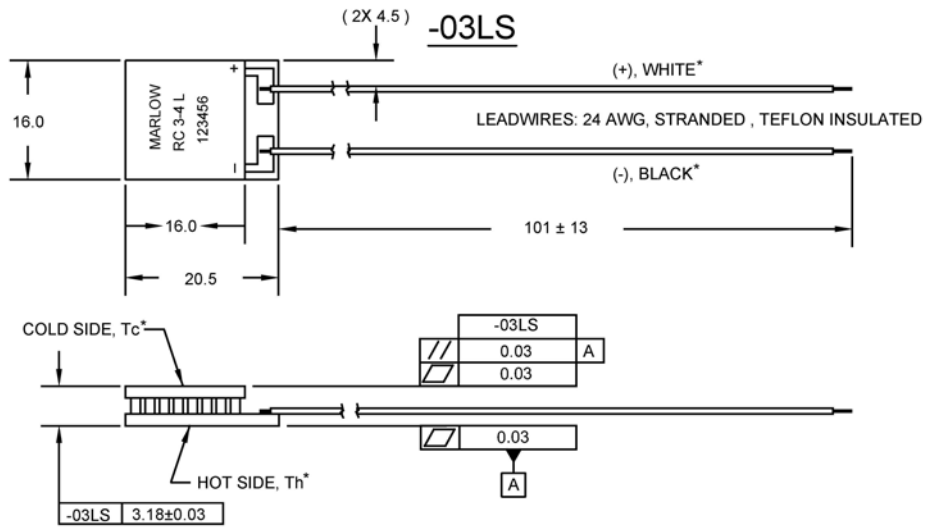
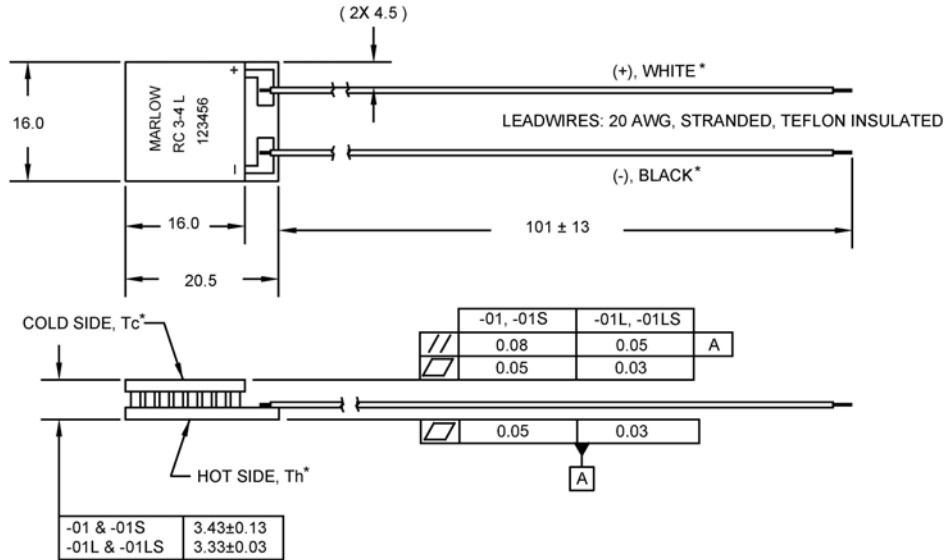
**POWER GENERATION PERFORMANCE CURVES**

ENVIRONMENT: ONE ATMOSPHERE DRY NITROGEN



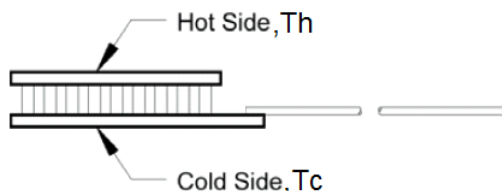
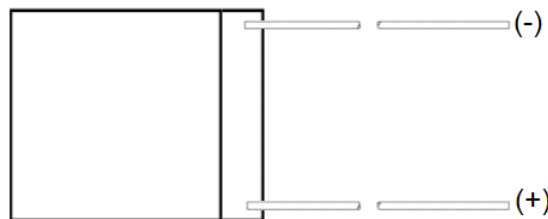
Hot Side Temperature (°C)	85	55	35
Cold Side Temperature (°C)	27	27	27
Optimum Efficiency, $\eta$ (%)	2.45	1.24	0.36
Optimum Power (W)	0.149	0.036	0.003
Optimum Voltage (V)	0.435	0.208	0.059
Load Resistance for Opt $\eta$ ( $\Omega$ )	1.27	1.18	1.13
Open Circuit Voltage, $V_{OC}$ (V)	0.77	0.37	0.10
Short Circuit Current (A)	0.79	0.41	0.12
Thermal Resistance (°C/W)	9.53	9.54	9.52

For performance information with hot side temperatures other than 27°C or 50°C, contact one of our Applications Engineers at 877-627-5691.



All units are in millimeters unless otherwise stated.

**\*NOTE: Cold side, hot side, positive lead, and negative lead are valid only for thermoelectric cooling. For power generation, refer to figure below:**



For customer support or general questions please contact a local office or visit our website at [www.marlow.com](http://www.marlow.com). Marlow reserves the right to make product changes without notice.