



TECHNICAL DATA SHEET

RoHS 2002/95/EC Compliant

Hot Side Temperature (°C)	27°C	50°C
Δ Tmax (°C-dry N ₂):	66	74
Qmax (watts):	23	26
I _{max} (amps):	2.5	2.5
V _{max} (vdc):	14.7	16.4
AC Resistance (ohms):	4.9	---

Technical drawing of a thermocouple assembly. The drawing includes a side view of the thermocouple body and a detail view of the thermocouple junction.

Side View Dimensions:

- Overall width: 1.181 [29.9]
- Overall height: 1.181 [29.9]
- Lead length: 4.00 ± .50 [101.6 ± 12.7]
- Lead diameter: .800 ± .33 [20.32 ± 8.38]
- Lead material: 20 AWG LEADS, TEFLON INSULATION
- Lead color: POSITIVE LEAD (WHITE), NEGATIVE LEAD (BLACK)
- Body width: 1.339 [34.0]
- Body height: 1.181 [29.9]
- Body material: MARLOW RC12-2.5 123456 USA

Thermocouple Junction Detail:

The junction is shown with a COLD SIDE (T_c) and a HOT SIDE (T_h). The junction is made of Ceramtec Material: Alumina (AC).

Material Specifications:

Material	Thermocouple Type	Thermocouple Material	Thermocouple Material
Ceramtec Material: Alumina (AC)	-01, -01S	-01L, -01LS	A
	-01L, -01LS	-01L, -01LS	A

Dimensions in [] are millimeters.

Features

Model Number	Description
RC12-2.5-01	Base Model w/ leads
RC12-2.5-01L	Lapped Model
RC12-2.5-01S	Sealed Model
RC12-2.5-01LS	Lapped and Sealed Model

- **RoHS 2002/95/EC compliant**
- 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.



**marlow
industries**
Subsidiary of II-VI Incorporated

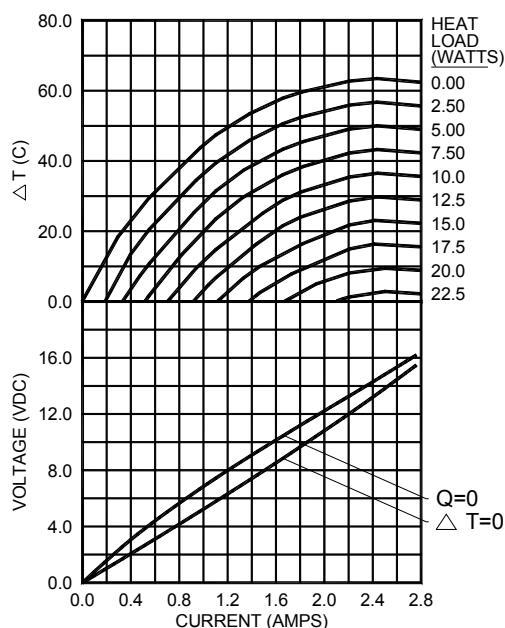
a global leader in thermoelectric solutions

TECHNICAL DATA SHEET

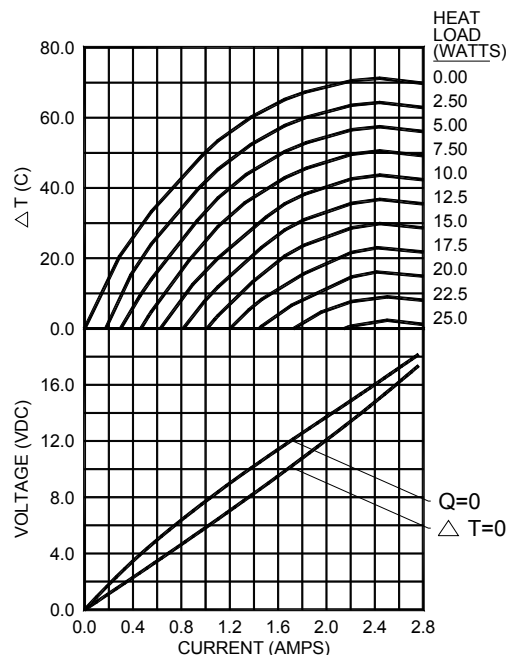
Performance Curves

Environment: One atmosphere dry nitrogen

Hot Side Temperature: 27°C



Hot Side Temperature: 50°C



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, use linear/proportional temperature control or a similar method rather than an ON/OFF method.

Addresses

Marlow Industries, Inc.
10451 Vista Park Road
Dallas Texas 75238-1645
214-340-4900 (tel)
214-341-5212 (fax)
www.marlow.com

Marlow Industries Europe
Aberdeen House, South Road
Haywards Heath
West Sussex RH164NG UK
+44 (0)1444-443404 (tel)
+44 (0)1444-443334(fax)

Marlow Industries Japan
1-1-8-401
Uehara, Shibuya-ku
Tokyo, Japan 151-0064
+81 (3) 5454-5280 (tel)
+81 (3) 5454-5281(fax)