

# Metal Clad Wire Wound Resistors



The IRM(M=Metal Cover type) models are metal-clad wire-wound high-power resistors designed for industrial and other applications. Our extruded aluminum housing provides rugged and strong protection. These models are available with tab terminals.

The most common applications for these models are: Motor drives, braking and snubber applications and power sources for industrial equipment.

## GENERAL SPECIFICATIONS

| Model          | Rated Power | Resistance Range[Ω] |               | Resistance Tolerance (%)    |
|----------------|-------------|---------------------|---------------|-----------------------------|
|                | In Free Air | Inductive           | Non-Inductive |                             |
| IRM / ULM 1600 | 570W        | 1.5 ~ 88            | 0.3 ~ 23      | F [±1]<br>J [±5]<br>K [±10] |
| IRM / ULM 2000 | 650W        | 2.0 ~113            | 0.45 ~ 30.5   |                             |
| IRM / ULM 2400 | 720W        | 2.5 ~ 144           | 0.6 ~ 37      |                             |
| IRM / ULM 2800 | 750W        | 3.0 ~ 135           | 0.7 ~ 33.5    |                             |

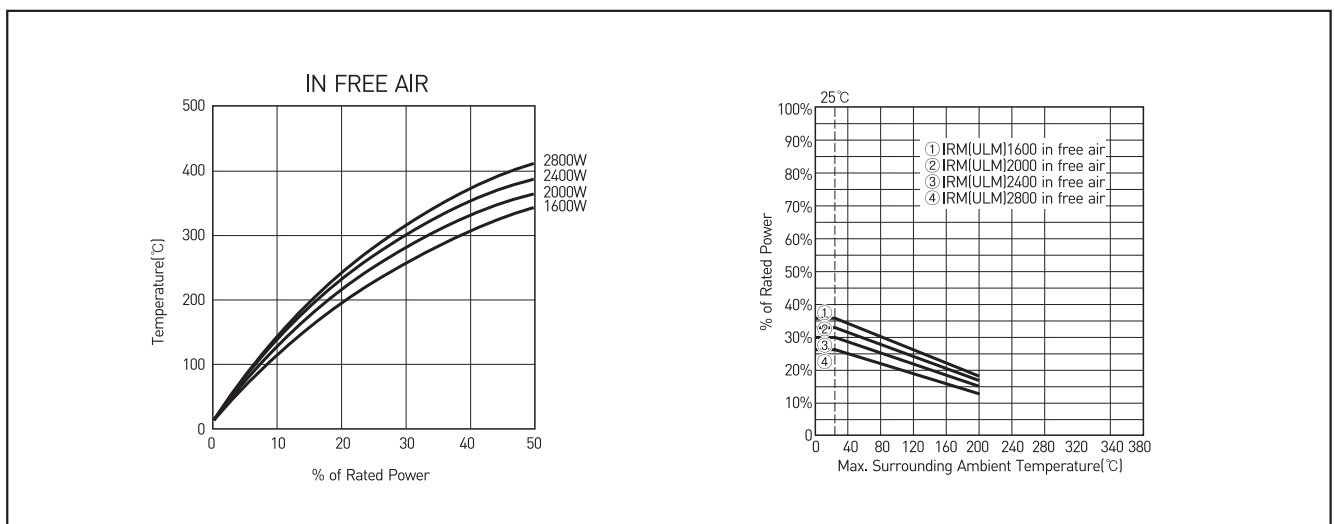
Extended ohmic ranges are available. Please ask RARA for more info. on this.

## CHARACTERISTICS

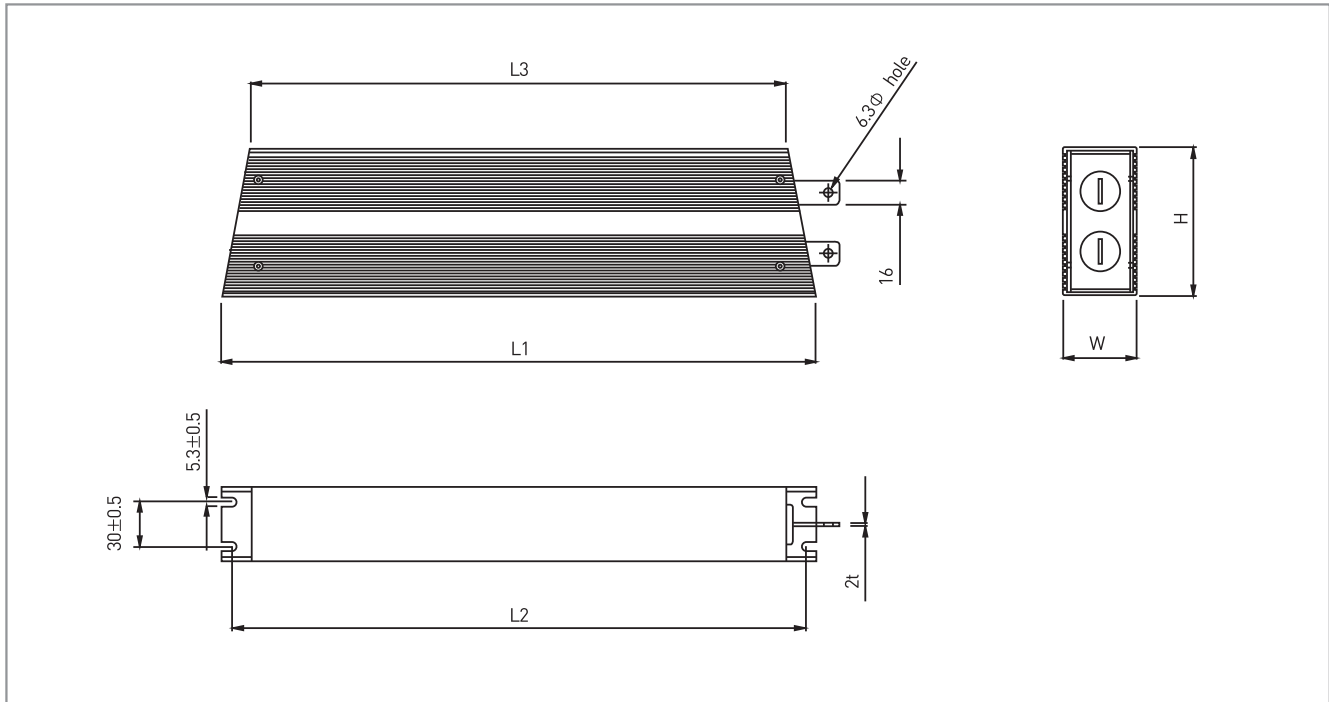
Values in [ ] mean change in Ω after test

|                                 |             |   |
|---------------------------------|-------------|---|
| Temperature Range               |             | -55°C~+200°C  |
| Insulation Resistance           |             | 20MΩ minimum  |
| Dielectric Withstanding Voltage | IRV         | Available options : AC1500V, 2500V, 3500V, 4500V for 1minute; Max. leakage current: 2mA   |
|                                 | ULV         | 500V for 1minute not more than 50V<br>[ 1000V + (Voltage ratingx2)for 1minute : 50V ~ 600V<br>[ 2000V + (Voltage ratingx2.25)for 1minute : 601V ~ 1500V |
| Temperature Coefficient         |             | ±260ppm/°C maximum  |
| Short Time Overload             | ±[3%+0.05Ω] | 10 X Power rating 5 seconds   |
| Moisture Resistance             | ±[3%+0.05Ω] | 40°C, 95% RH, DC100V case to terminal, 500hours   |
| Thermal Shock                   | ±[2%+0.05Ω] | Power rating 30minutes, -25°C, 15minutes  |
| Vibration                       | ±[2%+0.05Ω] | 10Hz-55Hz-10Hz (1minute), 2 hours each direction  |
| Moisture Load Life              | ±[3%+0.05Ω] | 40°C, 95%RH, 0.1 x Power rating, 1.5 hours on, 30 minutes off, 500 hours  |
| Load Life                       | ±[5%+0.05Ω] | Power rating 1.5 hours on, 30 minutes off, 500hours   |

## SURFACE TEMPERATURE INCREASE VERSUS POWER LOAD AND DERATING CURVES



**DIMENSIONS [mm]**



| Model          | Dimensions(mm) |      |      |     |       | Weight(kg) |
|----------------|----------------|------|------|-----|-------|------------|
|                | L1±2           | L2±2 | L3±2 | H±1 | W±0.5 |            |
| IRM / ULM 1600 | 330            | 315  | 290  | 100 | 50    | 2.5        |
| IRM / ULM 2000 | 400            | 385  | 360  | 100 | 50    | 3.1        |
| IRM / ULM 2400 | 480            | 465  | 440  | 100 | 50    | 3.7        |
| IRM / ULM 2800 | 550            | 535  | 510  | 100 | 50    | 4.3        |

**FLYING LEADS**

| Model          | 3.5mm <sup>r</sup> | 2mm <sup>r</sup> | UI3512 AWG 10 | UI3512 AWG 14 |
|----------------|--------------------|------------------|---------------|---------------|
| IRM / ULM 1600 | 0.3Ω~0.99Ω         | 1Ω~              | 0.3Ω~0.99Ω    | 1Ω~           |
| IRM / ULM 2000 | 0.45Ω~0.99Ω        | 1Ω~              | 0.45Ω~0.99Ω   | 1Ω~           |
| IRM / ULM 2400 | 0.6Ω~0.99Ω         | 1Ω~              | 0.6Ω~0.99Ω    | 1Ω~           |
| IRM / ULM 2800 | 0.7Ω~0.99Ω         | 1Ω~              | 0.7Ω~0.99Ω    | 1Ω~           |

**ORDERING PROCEDURE EXAMPLE**

