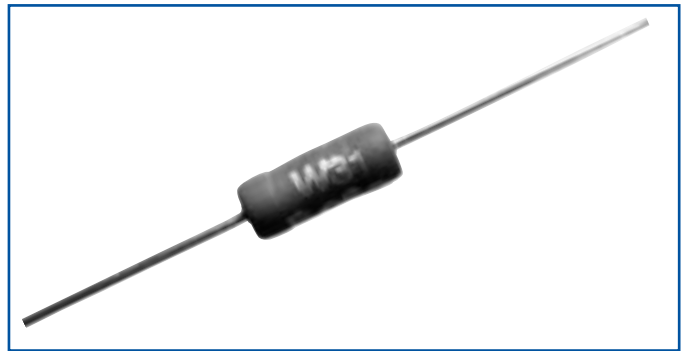


# Cement Coated Wirewound Resistors



## W30 SERIES

- 1% Tolerance
- Flameproof cement coating
- All welded construction
- High reliability
- Ideal for automotive applications and power supplies



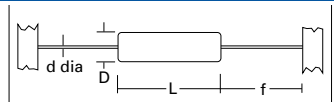
## Electrical Data

		W31	NOTES
Power rating at 25°C	watts	3.0	
Power rating at 70°C	watts	2.5	
Resistance range	ohms	0.01 to 10k	
TCR (-55 to 155°C)	ppm/°C	See below	
Resistance tolerance	%	5 2 1	
Standard values		E24 series preferred	Other values to special order
Thermal impedance	°C/watt	83	
Ambient temperature range	°C	-55 to 155	
Limiting element voltage	volts	100	

TCR	ppm/°C
0.01 ohms	<1000
0.033 ohms	<500
0.091 ohms	<200
10 ohms	<150
10K ohms	<100

## Physical data

Dimensions (mm) and Weight (g)					Wt.
Type	L max.	D max.	f min.	d nom.	nom.
W31	13	5.6	22.75	0.8	1.0



### CONSTRUCTION

A high quality ceramic substrate is assembled with interference fit end caps to which are welded the element winding and termination wires. The protection is then applied to the body, providing an effective seal which is impervious to moisture, shock, vibration, fungus and salt spray.

### TERMINATIONS

- Material** Solder-coated copper clad steel wire.
- Strength** The terminations meet the requirements of IEC 68.2.21.
- Solderability** The terminations meet the requirements of IEC 115-1, Clause 4.17.3.2.

### MARKING

W31 resistors are legend marked with type reference, resistance value and tolerance. Values are marked in accordance with IEC 62.

### SOLVENT RESISTANCE

The body and marking are resistant to all normal industrial cleaning solvents suitable for printed circuits.

### FLAMMABILITY

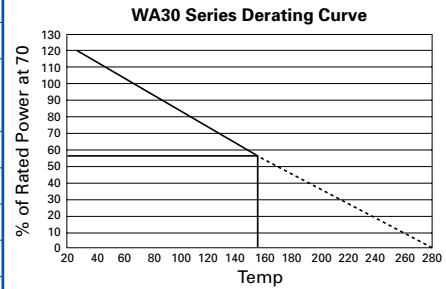
The resistor coating will not burn under any condition of applied temperature or component overload.

### General Note

Welwyn Components reserves the right to make changes in product specification without notice or liability. All information is subject to Welwyn's own data and is considered accurate at time of going to print.

### Performance Data

		MAXIMUM	TYPICAL
Load: 1000 hrs 3 Watts @ 25°C	ΔR%	5.0 + .001Ω	3.5
1000 hrs 2.5 Watts @ 70°C	ΔR%	5.0 + .001Ω	3.5
Dry heat: 1000 hrs at 200°C	ΔR%	5.0 + .001Ω	3.5
Derating from room temperature		see derating curve	
Short term overload 10 x rated power for 5 seconds	ΔR%	5.0 + .001Ω	1.0
Climatic	ΔR%	5.0 + .001Ω	3.5
Climatic category		55/200/56	
Long term damp heat: 56 days	ΔR%	3.0 + .001Ω	1.0
Temperature rapid change	ΔR%	2.0 + .001Ω	1.5
Resistance to solder heat	ΔR%	5.0 + .001Ω	2.0
Vibration and bump	ΔR%	5.0 + .001Ω	2.0
Voltage proof	volts	500 min	
Pulse handling data		Available by request	



### APPLICATION NOTES

The terminations should not be bent closer than 1.6mm from the body, and the recommended minimum bend radius is 1.2mm.

Care must be taken when determining clearance between the resistor body and the P.C.B. or other components. Resistance is measured 6mm from body.

### PACKAGING

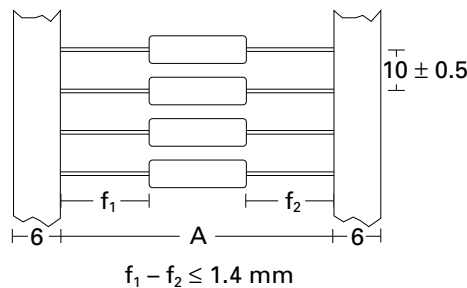
The standard method of packaging is taped in ammopacks. Alternatives available by request are:

- taped and reeled
- loose packed in boxes (minimum lead length 30mm)

W31 resistors can be supplied preformed.

Contact factory for details.

Type	A
W31	63 ± 2



### STANDARD QUANTITIES PER PACKAGE

Type	W31
Ammopack	1000
Reel	1000