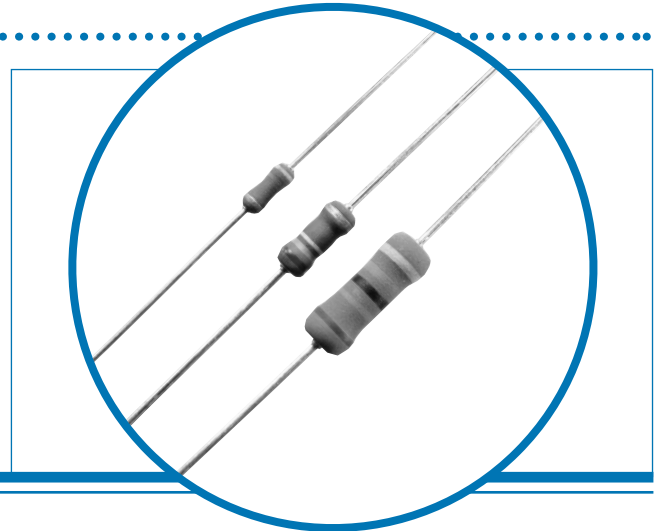


# High Value Thick Film Resistors

## GC Series

- High working voltage to 10kV
- Value up to 1G ohm
- Custom product available
- High stability thick film

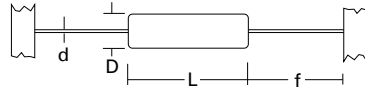


## Electrical Data

		GC55	GC65	GC70
Power rating at 70°C	watts	0.25	0.5	1.0
Resistance range	ohms	47k to 900 meg	47k to 900 meg	47k to 1G
Limiting element voltage	Volts dc or ac Peak	1700	3500	10000
Isolation voltage	volts	700		
TCR (20°C to 70°C)	ppm/°C	100		
Resistance tolerance	%	1, 2, 5		
Values		E24 & E96 preferred		
Thermal impedance	°C/watt	140	90	70
Ambient temperature range	°C	- 55 to 155		

## Physical Data

Dimensions (mm) and Weight (g)							
Type	L max.	D max.	f min.	d nom.	PCB mounting centres	Min bend radius	Wt nom.
GC55	6.2	2.5	21.0	0.6	10.2	0.6	0.3
GC65	9.0	3.6	19.6	0.8	13.7	1.2	0.6
GC70	14.5	5.3	23.6	0.8	20.3	1.2	1.1



### Construction

Thick film material is fired on to high grade ceramic rods. Nickel plated steel caps are force fitted and the termination wires are welded to the caps. The value is obtained by a helical cut in the film and finally the resistor body is given a high temperature protective coating.

### Terminations

- Material** Solder coated copper wire.
- Strength** The terminations satisfy the requirements of IEC 68.2.21.

**Solderability** The terminations meet the requirements of IEC 115-1, Clause 4.17.3.2.

### Marking

1% tolerance resistors are colour coded with 5 bands, 2% and 5% tolerance have 4, IEC 62 colours are used.

### Solvent Resistance

The body protection and marking are resistant to all normal industrial cleaning fluids suitable for printed circuit boards.

### 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 at rated power: 1000 hrs at 70°C	ΔR%	1	0.5
Derating		Zero at 155°C	
Overload	ΔR%	1	0.2
Climatic	ΔR%	1	0.25
Climatic category	ΔR%	55/155/56	
Temperature rapid change	ΔR%	1	0.15
Resistance to Solder Heat	ΔR%	0.2	0.03
Vibration and bump	ΔR%	0.1	0.02
Voltage proof	volts	1000 min.	

N.B. This product can be custom built to meet specific voltage coefficient or pulse requirements.

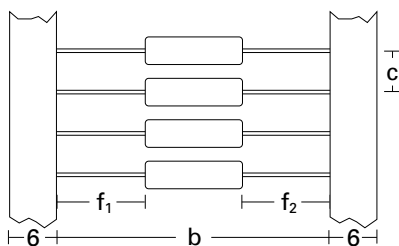
### Packaging

The standard method of packaging GC resistors is taped in ammo packs. Taped resistors on reel or loose packed components can also be supplied by special request. In the case of tape packed components the usable lead length is reduced by the width of the tape. A detailed taping specification is available on request.

### Standard Quantities Per Spool/Box

Type	GC55	GC65	GC70
Taped (Reeled)	5000	2500	1500
Ammo pack	5000	2500	1000
Small box	250	125	25
Large box	1000	500	250

Figure 2



Body Location  $f_1 - f_2 \leq 1.4 \text{ mm}$

Type	b	c
GC55/GC65	52	5
GC70	67	10