**INTEGRATED POWER SOURCE FOR ELECTRON GUN FOR LINAC**

**35kV, 1kW**

This power source was designed and developed for electron gun load to be connected to linac. This integrated power source includes a power supply for gun injection, cathode heating, , a DC and pulsed section for grid control.

**Features:**

* Compact
* Consists of DC & pulsed section
* Good regulation

**Gun Injection Power Supply:**

|  |
| --- |
| **Technical Specifications** |
| **PARAMETER** | SPECIFICATION |
| Pulse height | Variable from 0kV to -35kV peak(max) |
| Maximum Current | 3A peak |
| Pulse shape | Rectangular |
| Pulse width (measured at the flat top) | Adjustable from 4μS to 12μS |
| Ruse time | 2.5μS |
| Flat top variation (peak to peak) | Flatness within 1% with initial overshoot less than 5% of the set value |
| Pulse Repetition Frequency (RPF) | Variable from 1 to 250 pps |
| Maximum reverse voltage | Less than 1.5kV |
| Maximum average power | 360W |

**Cathode Heater Power Supply:**

|  |
| --- |
| **Technical Specifications** |
| **PARAMETER** | SPECIFICATION |
| Output Voltage | 10V A.C. max |
| Output Current | 10V A.C. max |
| Regulation  | Poor regulation |
| Output Reference | Floating at -40kV (output of the gun injection power supply) |
| Output isolation | Minimum -40kV w.r.t. earth under pulsed condition. (Pulsed width: 12μS, PRF:250Hz) |
| Trip | 10Amp |

**Grid Power Supply**

|  |
| --- |
| -1kV DC Section |
| **PARAMETER** | SPECIFICATION |
| Output Voltage | -1kV DC settable in steps of 100V; the Grid is at negative potential with respect to the cathode |
| Output Current | 200mA DC max |
| Pulse shape | Rectangular |
| Type of control | Voltage regulated with load regulation <\_ ±0.1% |
| Output reference | Floating at -40kV (output of the pulsed gun injection power supply section) |
| Output isolation | Minimum -45kV w.r.t earth under DC condition. |

|  |
| --- |
| 1kV PULSED Section |
| Output Voltage (pulsed) | Pulsed amplitude settable from 1V to 1kV DC precisely variable in continuous manner. This pulse overrides the -1kV DC voltage at the grid |
| Pulse Shape | Rectangular  |
| Pulse width (measured at the flat top) | Adjustable from 4μS to 10μS |
| Rise time | 0.5μS |
| Flat top variation (peak to peak) | Flatness within 1% with initial overshoot less than 5% of the set value. |
| Output Current | 10mA max. |

For any queries or customization requests contact us at info@ionics.co.in

For product line information visit us at [www.ionics.co.in](http://www.ionics.co.in)