

NT57T - Radar Silica Transmitting Triode



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Here is the latest silica tube entered in service in metric radar transmitters to replace the widely used [NT57](#). With its double tungsten hairpin filamentary cathode, NT57 was used in several early radar sets from 1937 to 1940, in the MB1 and MB2 mobile ground systems, in the GL1 and GL2 gun-laying sets and in the Type 79 shipborne early warning set. The tungsten filamentary cathode was capable of producing 5 A saturated current at 15 V, 18 A. The development of the improved version NT57T fitted with thoriated-tungsten filament began in January 1939 and led to the first samples in April. Its heating power was two fifth that of the tungsten filament NT57 and its emission was 50 percent greater.

Filament was operated at 9 V and 35 A, giving 18 A total emission. Plate could operate up to 10 kV max and dissipate 1.75 kW.

In 1939 an improved variant of NT57T with three hairpin thoriated-tungsten filaments was developed with the designation NT86. We also know of a standardized [CV14](#), capable of peak emission in the order of 50 A. Anyway the increase wartime demand for radar sets made impractical the use of silica tubes, replaced by the new external anode types and the expensive and painstaking technology of silica valves was readily abandoned.