

ELECTRONIC TUBE REFERENCE

1910

Specialized - Ballast electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION  
CONSTRUCTION  
BALLAST

Philips current-regulator ballast tube designed to maintain approximately 1.4 A over a 5-15 V operating range.

GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | —                 | BASE PINS            | —             |
| NOMINAL HEATER      | — / —             | PARALLEL HEATER      | — / —         |
| HEATING             | Indirect          | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Similar       |

SECTION RATINGS

|                                                                                               |        |
|-----------------------------------------------------------------------------------------------|--------|
| SECTION 1 Ballast                                                                             |        |
| MINIMUM REGULATOR CURRENT                                                                     | 1.35 A |
| MAXIMUM REGULATOR CURRENT                                                                     | 1.5 A  |
| MAINTAINING VOLTAGE                                                                           | 8.5 V  |
| Published ratings and characteristics promoted semantically from the approved Philips source. |        |

## 1910 Current Regulator

The **1910** is a current regulator (also designated as *Régulateur de courant* or *Stromregler*) designed to maintain a stable current of approximately 1.4 A across a regulating voltage range of 5 V to 15 V.

### Physical Construction and Base Configurations

The device is constructed with a tubular glass envelope. Its physical dimensions are characterized by a maximum diameter of 35 mm and a maximum height (excluding pins) of 92 mm. The pins have a maximum length of 18 mm, resulting in a maximum overall length of 110 mm.

The 1910 is documented with two different base configurations:

- **3-pin base (type 40465):** The filament (*f*) is connected to pins 1 and 4, while pins 2 and 3 are connected together internally.
- **2-pin base:** The pinout diagram shows two active terminals designated as 'f' and 'f' connected directly to the internal regulating element.

## Electrical Operating Characteristics and Tolerances

The primary function of the 1910 is current regulation. It operates over a regulating voltage range of 5 V to 15 V with a nominal regulated current of 1.4 A (or 1.400 A). To account for tube-to-tube variations, the following current tolerances are specified at key voltage points:

| Voltage | Minimum Current | Maximum Current |
|---------|-----------------|-----------------|
| 5 V     | 1.3 A           | 1.5 A           |
| 8.5 V   | 1.35 A          | 1.5 A           |
| 15 V    | 1.35 A          | 1.5 A           |

## Regulation Curve Behavior

The current (*I*) versus voltage (*V*) characteristic curve demonstrates excellent regulation across the entire 5 V to 15 V operating range. The curve is extremely flat, maintaining a regulated current of approximately 1.40 A to 1.42 A.

Depending on the specific device configuration, the curve exhibits minor variations:

- In some cases, the current is approximately 1.38 A at 5 V, rising slightly to a peak of approximately 1.41 A between 9 V and 10 V, before settling back to 1.40 A at 15 V.
- In other cases, the curve shows a very slight peak around 7 V to 8 V and a minor upward trend as it approaches 15 V.

## Technical Summary

| Parameter                       | Value                                                   |
|---------------------------------|---------------------------------------------------------|
| Device Type                     | Current Regulator (Régulateur de courant / Stromregler) |
| Nominal Regulated Current       | 1.4 A                                                   |
| Regulating Voltage Range        | 5 to 15 V                                               |
| Maximum Diameter                | 35 mm                                                   |
| Maximum Height (excluding pins) | 92 mm                                                   |

| Parameter              | Value  |
|------------------------|--------|
| Maximum Overall Length | 110 mm |

## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1957 Philips Receiving and Amplifying Tubes

Published test conditions and operating points. Values on this page are preserved as reported by this source.

## 1957 PHILIPS RECEIVING AND AMPLIFYING TUBES

## Section 1 · Ballast

| CHARACTERISTIC                 |                 |                   |
|--------------------------------|-----------------|-------------------|
| PARAMETER                      | PUBLISHED VALUE | CONDITION / NOTE  |
| Nominal Regulating Current     | 1.4 A           | —                 |
| Operating Voltage Minimum      | 5 V             | —                 |
| Operating Voltage Maximum      | 15 V            | —                 |
| Current-Tolerance Test Voltage | 8.5 V           | —                 |
| Current Tolerance Minimum      | 1.35 A          | From tube to tube |
| Current Tolerance Maximum      | 1.5 A           | From tube to tube |

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and their source documents.

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