

Directly heated mercury-vapor half-wave industrial rectifier for high-voltage power conversion, using low arc voltage to provide efficient ampere-class DC output.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	4 V / 7 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Rectifier	
PEAK INVERSE VOLTAGE	13000 V
NOMINAL OUTPUT CURRENT	1.25 A
PEAK FORWARD CURRENT	5 A
FORWARD VOLTAGE DROP	12 V
WARM-UP TIME	30 s
Single-anode mercury-vapour industrial rectifier.	

DCG45000 is a Rectifier device in the supplied Philips industrial literature. Single-anode mercury-vapour industrial rectifier.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Philips Electron Tubes Handbook V4

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

1963 PHILIPS ELECTRON TUBES HANDBOOK V4

Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak inverse voltage at 150 Hz	13 kV	—
Peak inverse voltage alternate	10 kV	—
Maximum average current	1.25 A	—
Maximum peak current	5 A	—
Maximum surge current	40 A	Duration<=0.1s
Condensed mercury temperature range at 13kV	25–55 degC	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Arc voltage drop	12 V	—



SOURCE OPERATING CONDITIONS

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1999 Philips 0-D

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OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	4 V	—
Heater current	7 A	—
Maximum peak inverse voltage	13000 V	—
Maximum rectified current	1.25 A	—
Maximum peak forward current	5 A	—
Maximum surge current	40 A	—
Minimum warm-up time	30 s	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Forward voltage drop	12 V	—

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