



**SLOVENSKI STANDARD**  
**SIST EN 60188:1999/A1:1999**  
**01-julij-1999**

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**High-pressure mercury vapour lamps - Amendment A1 (IEC 60188:1974/A4:1988)**

High-pressure mercury vapour lamps

Quecksilberdampf-Hochdrucklampen

Lampes à décharge à vapeur de mercure à haute pression

**Ta slovenski standard je istoveten z: EN 60188:1988/A1:1990**

[SIST EN 60188:1999/A1:1999](https://standards.iteh.ai/catalog/standards/sist/2996184f-fd78-4a2b-94b2-7bd59dca50ce/sist-en-60188-1999-a1-1999)

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**ICS:**

29.140.30 Fluorescent lamps.  
Discharge lamps

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

EN 60188/A1

September 1990

UDC 621.327.534.2:620.1

Descriptors: Lighting fitting, mercury vapour lamp, definition, dimension, electrical characteristic, test conditions, luminous flux, torsion test, electrical starting test

Amendment 1 to the English version of EN 60188

## High-pressure mercury vapour lamps

(Amendment 4 to IEC 188 : 1974, modified)

Lampes à décharge à vapeur de  
mercure à haute pression

(Modification 4 à la CEI 188 : 1974, modifiée)

Quecksilberdampf-Hochdrucklampen

(Änderung 4 zur IEC 188 : 1974, modifiziert)

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This Amendment 1 modifies the European Standard EN 60188 : 1988. It was approved by CENELEC on 11 June, 1990. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxemburg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

## CENELEC

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue Bréderode 2, B-1000 Brussels

## Foreword

The proposal to endorse Amendment 4 to IEC 188 : 1974 was circulated under the CENELEC Questionnaire Procedure. The reference document was submitted to the CENELEC members for formal vote.

At the time of ratification, it became evident that a common modification was required, deleting all references to E26 and E39 caps, to be consistent with other previously approved European Standards.

The text of the draft was approved by CENELEC as Amendment 1 to EN 60188 : 1988 on 11 June 1990.

Note: Amendments 1, 2 and 3 to IEC 188 : 1974 were already endorsed by EN 60188 : 1988.

The following dates were fixed:

- latest date of announcement of the amendment at national level (doa) 1990-12-15
- latest date of publication of an identical amendment to the national standard (dop) 1991-06-15
- latest date of withdrawal of conflicting national standards (dow) 1991-06-15

For products which have complied with EN 60188 : 1988 before 1991-06-15, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 1996-06-15.

In the consolidated text of the amendment, the common modifications are indicated by a vertical line in the left margin.

## Endorsement notice

The text of Amendment 4 to the International Standard IEC 188 : 1974 was approved by CENELEC as an amendment to the European Standard with agreed common modifications as given as below:

## Common modifications

Delete all references to E26 and E39 caps in clause 9 and in all of the data sheets in this document.

## SECTION TWO -- LAMP DATA SHEETS

## 8. General principles of numbering sheets

The technical data sheets are numbered as follows: 188-IEC-1-3, 188-IEC-2-3, 188-IEC-3-3, etc.

The first number is the number of this publication. The second number is the number of the sheet allocated in order of publication of the sheets. The third number is the number of the issue of the sheet, i.e. 1 = first issue, 2 = second issue, etc.

## 9. List of specific lamp types

Wattage (W)	Cap	Sheet number
50	E26 or E27	188-IEC-1-3
80	E26 or E27	188-IEC-2-3
125	E26 or E27	188-IEC-3-3
175	E39 or E40	188-IEC-4-3
250	E39 or E40	188-IEC-5-3
400	E39 or E40	188-IEC-6-3
700 (HV)	E39 or E40	188-IEC-7-3
700 (LV)	E39 or E40	188-IEC-8-3
1 000 (HV)	E39 or E40	188-IEC-9-3
1 000 (LV)	E39 or E40	188-IEC-10-3
1 000 (LV)	E39 or E40	188-IEC-11-3
2 000	E39 or E40	188-IEC-12-3

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## SECTION THREE — MAXIMUM LAMP OUTLINES

## 10. General

Maximum lamp outline requirements are provided for the guidance of designers of luminaires based on a maximum sized lamp inclusive of bulb to cap eccentricity. Mechanical acceptance of the lamp cap and the adjoining part of the lamp neck in the holder is ensured by compliance of the lamp with the gauges for testing contact making as given in IEC Publication 61-3: Lamps Caps and Holders together with Gauges for the Control of Interchangeability and Safety, Part 3: Gauges.

Observance of these requirements in luminaire design will ensure mechanical acceptance of lamps complying with this standard.

## 11. List of maximum lamp outlines

Wattage (W)	Cap	Sheet number
50	E27	188-IEC-3-2-2
80	E27	188-IEC-3-3-2
125	E27	188-IEC-3-4-2
175 } 250 }	E40	188-IEC-3-5-2
400	E40	188-IEC-3-6-2
700	E40	188-IEC-3-7-2
1 000	E40	188-IEC-3-8-2
2 000	E40	188-IEC-3-9-2

<https://standards.iteh.ai/catalog/standards/sist/2996184f-6f78-4a2b-94b2-7bd59dca50ce/sist-en-60188-1999-a1-1999>

## MERCURY LAMP TECHNICAL DATA SHEET

Rated wattage 50 W

### STARTING AND OPERATING CHARACTERISTICS — 50 Hz & 60 Hz

	Objective	Min.	Max.
Lamp starting voltage (V)	—	—	180
Warm-up lamp current (A)	0.58	—	—
Warm-up voltage at lamp terminals (V)	—	72	—
Warm-up time (min)	—	—	12
Minimum voltage for stable operation (V)	—	198	—
Lamp wattage (W)	50	—	53
Voltage at lamp terminals (V)	95	85	105
Lamp current (A)	0.61	—	—

### REFERENCE BALLAST CHARACTERISTICS

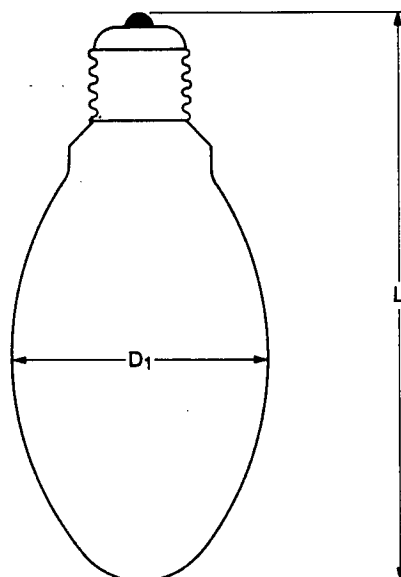
Rated frequency (Hz)	50	60
Rated voltage (V)	220	220
Calibration current (A)	0.62	0.62
Voltage/current ratio	$297 \pm 0.5\%$	$297 \pm 0.5\%$
Power factor	$0.075 \pm 0.005$	$0.075 \pm 0.005$

### INFORMATION FOR BALLAST DESIGN

Short-circuit current (r.m.s.) max. (A)	Open-circuit voltage (r.m.s.) min. (V)
1.22	198

### Dimensions (mm)\*

Cap	Overall length (max.) L	Bulb diameter (max.) D <sub>1</sub>
E27	130	56



\* The corresponding maximum lamp outline requirements are given in Section Three.

**MERCURY LAMP  
TECHNICAL DATA SHEET**

**Rated wattage 80 W**

**STARTING AND OPERATING CHARACTERISTICS — 50 Hz & 60 Hz**

	Objective	Min.	Max.
Lamp starting voltage (V)	—	—	180
Warm-up lamp current (A)	0.72	—	—
Warm-up voltage at lamp terminals (V)	—	85	—
Warm-up time (min)	—	—	12
Minimum voltage for stable operation (V)	—	198	—
Lamp wattage (W)	80	—	84
Voltage at lamp terminals (V)	115	100	130
Lamp current (A)	0.80	—	—

**REFERENCE BALLAST CHARACTERISTICS**

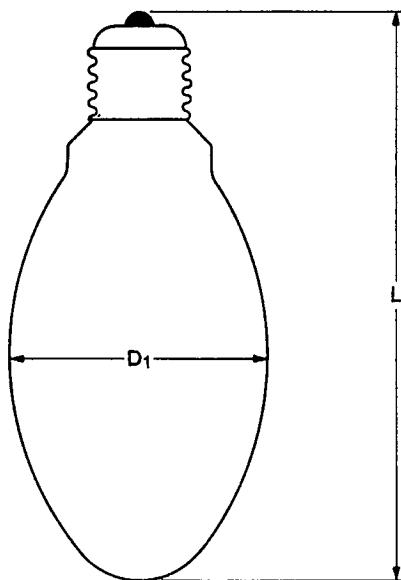
Rated frequency (Hz)	50	60
Rated voltage (V)	220	220
Calibration current (A)	0.80	0.80
Voltage/current ratio	206 ± 0.5%	206 ± 0.5%
Power factor	0.075 ± 0.005	0.075 ± 0.005

**INFORMATION FOR BALLAST DESIGN**

Short-circuit current (r.m.s.) max. (A)	Open-circuit voltage (r.m.s.) min. (V)
1.60	198

**Dimensions (mm)\***

Cap	Overall length (max.) L	Bulb diameter (max.) D <sub>1</sub>
E27	166	71



\* The corresponding maximum lamp outline requirements are given in Section Three.



## MERCURY LAMP TECHNICAL DATA SHEET

Rated wattage 125 W

### STARTING AND OPERATING CHARACTERISTICS -- 50 Hz & 60 Hz

	Objective	Min.	Max.
Lamp starting voltage (V)	—	—	180
Warm-up lamp current (A)	1.04	—	—
Warm-up voltage at lamp terminals (V)	—	93	—
Warm-up time (min)	—	—	12
Minimum voltage for stable operation (V)	—	198	—
Lamp wattage (W)	125	—	132
Voltage at lamp terminals (V)	125	110	140
Lamp current (A)	1.15	—	—

### REFERENCE BALLAST CHARACTERISTICS

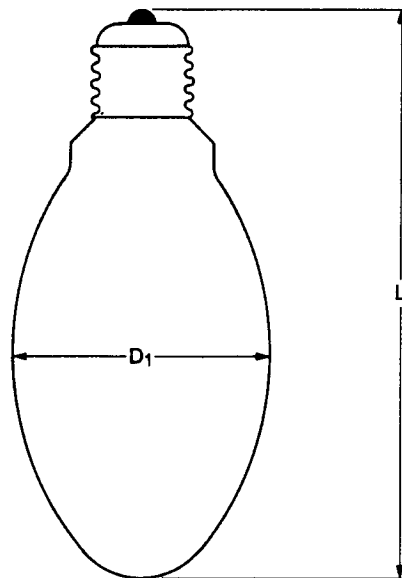
Rated frequency (Hz)	50	60
Rated voltage (V)	220	220
Calibration current (A)	1.15	1.15
Voltage/current ratio	134 ± 0.5%	134 ± 0.5%
Power factor	0.075 ± 0.005	0.075 ± 0.005

### INFORMATION FOR BALLAST DESIGN

Short-circuit current (r.m.s.) max. (A)	Open-circuit voltage (r.m.s.) min. (V)
2.30	198

### Dimensions (mm)\*

Cap	Overall length (max.) L	Bulb diameter (max.) D <sub>1</sub>
E27	178	76



\* The corresponding maximum lamp outline requirements are given in Section Three.